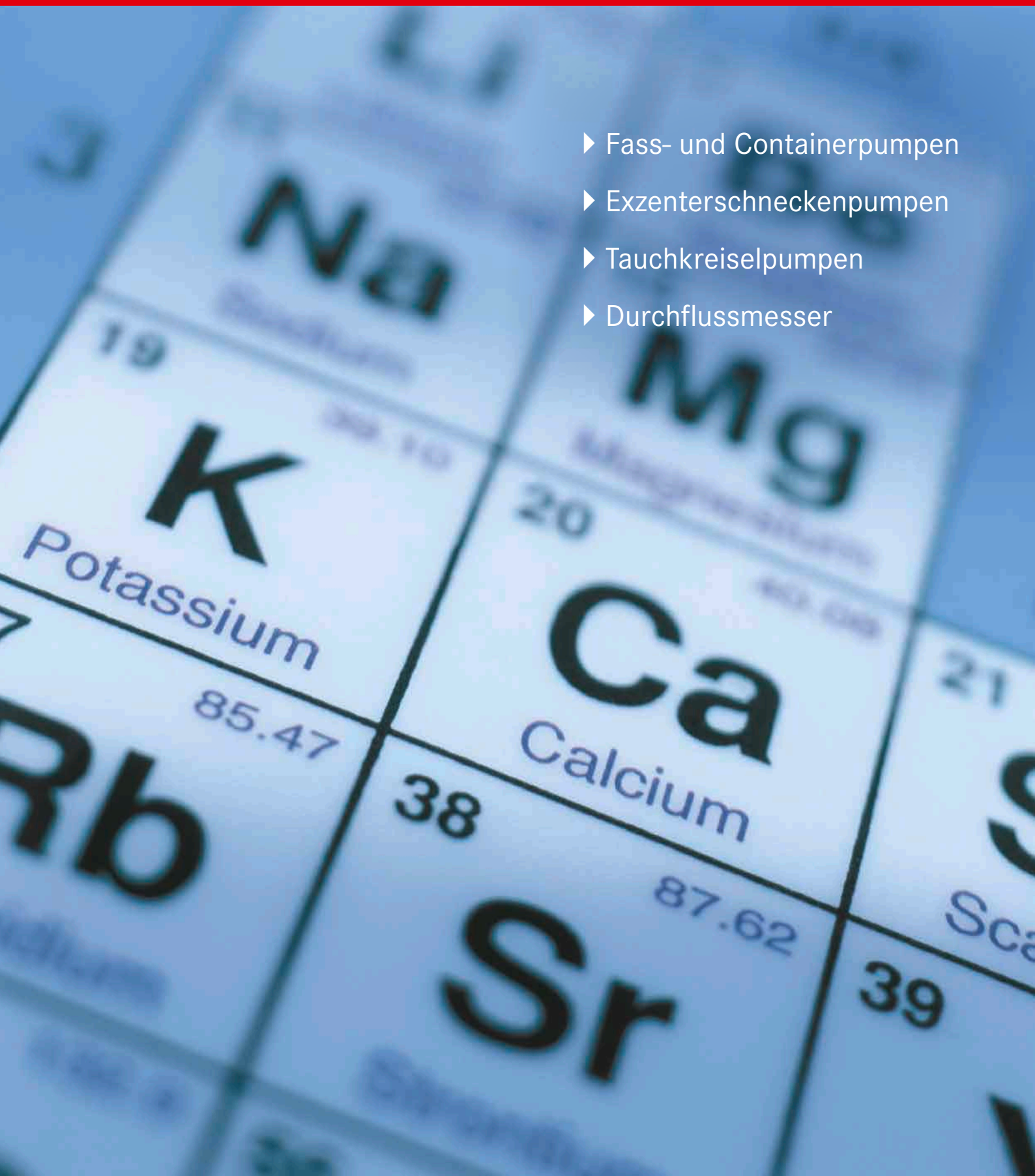


# Beständigkeitsliste



Mehr als nur Pumpen

- ▶ Fass- und Containerpumpen
- ▶ Exzentrerschneckenpumpen
- ▶ Tauchkreislumpen
- ▶ Durchflussmesser



# Die Stoffe, aus denen Pumpen und Durchflussmesser sind...



**...haben sehr unterschiedliche Eigenschaften. Nicht jeder Werkstoff ist für jedes Medium gleich gut geeignet. Trotzdem gibt es – FLUX sei Dank – für annähernd jedes Medium ein geeignetes Gerät.**

**Denn das umfassende FLUX-Sortiment bietet für fast jede Leistungsanforderung unterschiedliche Varianten.**

Die neue FLUX-Beständigkeitsliste hilft Ihnen, Ihre Pumpe und Ihren Durchflussmesser nach Maß zu finden. Sie ist ein übersichtlicher Wegweiser, der Ihnen zeigt, welches Medium sich mit welchem Werkstoff verträgt bzw. welche „Konstellationen“ Sie lieber meiden sollten. Dabei ist zu berücksichtigen, dass die Beständigkeit der einzelnen Werkstoffe von vielen Faktoren abhängig ist. So können bereits geringfügige Veränderungen einer Flüssigkeit (beispielsweise leichte Verunreinigungen) die Werkstoff-Beständigkeit erheblich beeinflussen.

Sind in der nachfolgenden Tabelle keine besonderen Hinweise gegeben, haben wir bei den aufgeführten Flüssigkeiten handelsübliche Reinheit und Konzentration vorausgesetzt. Im Zweifelsfall, insbesondere bei nicht erprobten oder neuen Anwendungsfällen, bitten wir Sie, sich mit uns in Verbindung zu setzen – damit wir gegebenenfalls spezielle Untersuchungen durchführen können.

Die Angaben in der Beständigkeitsliste sind durch Empfehlungen unserer Lieferanten, Berichte unserer Kunden und eigene Erfahrungen zu Stande gekommen. Sie wurden mit viel Sorgfalt von unseren Fachleuten zusammengestellt. Trotzdem kann die Liste nur zur Orientierung dienen. Unsere Beurteilung der einzelnen Werkstoffe ist nicht ohne weiteres auf alle Umstände übertragbar. Bei der Vielzahl der einwirkenden Faktoren stellt die chemische Beständigkeit zwar einen sehr wichtigen, aber eben doch nur einen Teil der Gesamtbetriebsverhältnisse dar. Aus diesem Grund können wir für die Angaben unserer Beständigkeitsliste leider auch keine Gewähr übernehmen.

## **Die einzelnen Angaben bedeuten:**

+ = beständig

0 = bedingt beständig

– = nicht beständig

## **Hinweis**

**Für brennbare Flüssigkeiten, die in der Beständigkeitsliste rot unterlegt sind, dürfen nur Fass- und Containerpumpen aus Edelstahl und Hastelloy C verwendet werden, die eine Zulassung für den Einsatz in Zone 0 gemäß ATEX-Richtlinie 2014/34/EU, Kategorie 1, haben. Als Antrieb dürfen nur explosionsgeschützte Elektro- oder Druckluftmotoren der Kategorie 2 eingesetzt werden. Beachten Sie dazu auch die Richtlinien für brennbare Flüssigkeiten.**



## Beständigkeitsliste

| Bezeichnung          | Formel                                                | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°]           | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP             | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|----------------------|-------------------------------------------------------|--------------------|-----------------|--------------------|------------------------------|--------------------|----------------------|-----------|----------------|------|------|-----|-----|-----|------|----------|------|
| Acetaldehyd          | CH <sub>3</sub> -CHO                                  | 40                 |                 |                    | 20                           | +                  | +                    | +         | +              | +    | +    | +   | +   | -   | +    | +        | +    |
| Acetaldehyd          | CH <sub>3</sub> -CHO                                  | 40                 |                 |                    | 40                           | +                  | +                    | +         | o              | +    | +    | +   | +   | -   | +    | +        | +    |
| Acetaldehyd          | CH <sub>3</sub> -CHO                                  | 40                 |                 |                    | 60                           | +                  | +                    | o         | o              | +    | +    | +   | o   | -   | +    | +        | +    |
| Acetaldehyd          | CH <sub>3</sub> -CHO                                  | TR                 | 0,79            | B                  | 20                           | +                  | +                    | o         | o              | +    | +    | +   | o   | -   | o    | +        | +    |
| Acetaldehyd          | CH <sub>3</sub> -CHO                                  | TR                 |                 |                    | 40                           | +                  | +                    | -         | -              | o    | +    | +   | -   | -   | o    | +        | +    |
| Acetamid             | CH <sub>3</sub> -CO-NH <sub>2</sub>                   | TR                 | 0,98            |                    | 20                           | +                  | +                    | o         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Acetamid             | CH <sub>3</sub> -CO-NH <sub>2</sub>                   | TR                 |                 |                    | 40                           | +                  | +                    | o         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Acetamid             | CH <sub>3</sub> -CO-NH <sub>2</sub>                   | TR                 |                 |                    | 60                           | +                  | +                    | -         | o              | +    | +    | +   | +   | -   | o    | +        | +    |
| Acetanhydrid         | (CH <sub>3</sub> CO) <sub>2</sub> O                   | TR                 | 1,09            | AII                | 20                           | +                  | +                    | +         | o              | o    | +    | +   | o   | -   | o    | +        | +    |
| Acetanhydrid         | (CH <sub>3</sub> CO) <sub>2</sub> O                   | TR                 |                 |                    | 40                           | +                  | +                    | +         | o              | -    | +    | +   | -   | -   | -    | +        | +    |
| Acetanhydrid         | (CH <sub>3</sub> CO) <sub>2</sub> O                   | TR                 |                 |                    | 60                           | +                  | +                    | o         | o              | -    | +    | +   | -   | -   | -    | +        | +    |
| Acetylendichlorid    |                                                       |                    |                 |                    | siehe Dichlorethylen 1,1     |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Aceton               | CH <sub>3</sub> -CO-CH <sub>3</sub> +H <sub>2</sub> O | 10                 |                 | B                  | 20                           | +                  | +                    | +         | +              | +    | +    | +   | o   | -   | +    | +        | +    |
| Aceton               | CH <sub>3</sub> -CO-CH <sub>3</sub> +H <sub>2</sub> O | 10                 |                 |                    | 40                           | +                  | +                    | +         | +              | +    | +    | +   | o   | -   | o    | +        | +    |
| Aceton               | CH <sub>3</sub> -CO-CH <sub>3</sub> +H <sub>2</sub> O | 10                 |                 |                    | 60                           | +                  | +                    | o         | o              | +    | +    | +   | -   | -   | -    | +        | +    |
| Aceton               | CH <sub>3</sub> -CO-CH <sub>3</sub>                   | TR                 | 0,79            | B                  | 20                           | +                  | +                    | +         | +              | o    | +    | +   | -   | -   | +    | +        | +    |
| Aceton               | CH <sub>3</sub> -CO-CH <sub>3</sub>                   | TR                 |                 |                    | 40                           | +                  | +                    | o         | +              | o    | +    | +   | -   | -   | o    | +        | +    |
| Aceton               | CH <sub>3</sub> -CO-CH <sub>3</sub>                   | TR                 |                 |                    | 60                           | +                  | +                    | o         | o              | -    | +    | +   | -   | -   | -    | +        | +    |
| Acetonitril          | CH <sub>3</sub> -CN                                   | TR                 | 0,78            | B                  | 20                           | +                  | +                    | +         | +              | o    | +    | +   | o   | -   | o    | +        | +    |
| Acetonitril          | CH <sub>3</sub> -CN                                   | TR                 |                 |                    | 40                           | +                  | +                    | +         | +              | -    | +    | +   | o   | -   | -    | +        | +    |
| Acetonitril          | CH <sub>3</sub> -CN                                   | TR                 |                 |                    | 60                           | -                  | +                    | +         | +              | -    | +    | +   | o   | -   | -    | +        | +    |
| Acrylnitril          | CH <sub>2</sub> =CH-CN                                | TR                 | 0,81            | AI                 | 20                           | +                  | +                    | +         | +              | +    | +    | +   | o   | -   | o    | +        | +    |
| Acrylnitril          | CH <sub>2</sub> =CH-CN                                | TR                 |                 |                    | 40                           | <sup>+1)</sup>     | +                    | +         | o              | o    | +    | o   | o   | -   | o    | +        | +    |
| Acrylnitril          | CH <sub>2</sub> =CH-CN                                | TR                 |                 |                    | 60                           | <sup>+1)</sup>     | +                    | +         | o              | o    | +    | o   | o   | -   | -    | +        | +    |
| Acrylsäurebutylester | C <sub>8</sub> H <sub>16</sub> O <sub>2</sub>         | TR                 |                 | AI                 | 20                           | +                  | +                    | o         | -              | o    | +    | +   | -   | -   | o    | +        | +    |
| Adipinsäure          | C <sub>10</sub> H <sub>18</sub> O <sub>4</sub>        | GL                 | 0,89            | AII                | 20                           | +                  | +                    | o         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Adipinsäure          | C <sub>10</sub> H <sub>18</sub> O <sub>4</sub>        | GL                 |                 |                    | 40                           | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Adipinsäure          | C <sub>10</sub> H <sub>18</sub> O <sub>4</sub>        | GL                 |                 |                    | 60                           | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Akkusäure            |                                                       |                    |                 |                    | siehe Schwefelsäure 40 %     |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Alaun                |                                                       |                    |                 |                    | siehe Kalium-Aluminiumsulfat |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Allylalkohol         | H <sub>2</sub> C=CH-CH <sub>2</sub> -OH               | 96                 | 0,87            | B                  | 20                           | +                  | +                    | o         | +              | +    | +    | +   | o   | +   | o    | +        | +    |
| Allylalkohol         | H <sub>2</sub> C=CH-CH <sub>2</sub> -OH               | 96                 |                 |                    | 40                           | +                  | +                    | o         | +              | +    | +    | +   | -   | +   | o    | +        | +    |
| Allylalkohol         | H <sub>2</sub> C=CH-CH <sub>2</sub> -OH               | 96                 |                 |                    | 60                           | +                  | +                    | o         | +              | +    | +    | +   | -   | +   | o    | +        | +    |
| Aluminiumchlorid     | AlCl <sub>3</sub>                                     | 10                 |                 |                    | 20                           | o                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumchlorid     | AlCl <sub>3</sub>                                     | 10                 |                 |                    | 40                           | o                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumchlorid     | AlCl <sub>3</sub>                                     | 10                 |                 |                    | 60                           | o                  | +                    | -         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Aluminiumchlorid     | AlCl <sub>3</sub>                                     | GL                 | 2,40            |                    | 20                           | -                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumchlorid     | AlCl <sub>3</sub>                                     | GL                 |                 |                    | 40                           | -                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumchlorid     | AlCl <sub>3</sub>                                     | GL                 |                 |                    | 60                           | -                  | o                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumnitrat      | Al(NO <sub>3</sub> ) <sub>3</sub>                     | GL                 |                 |                    | 20                           | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumnitrat      | Al(NO <sub>3</sub> ) <sub>3</sub>                     | GL                 |                 |                    | 40                           | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumnitrat      | Al(NO <sub>3</sub> ) <sub>3</sub>                     | GL                 |                 |                    | 60                           | o                  | +                    | -         | <sup>+1)</sup> | +    | +    | -   | +   | o   | +    | +        | +    |
| Aluminiumsulfat      | Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>       | 10                 |                 |                    | 20                           | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumsulfat      | Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>       | 10                 |                 |                    | 40                           | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumsulfat      | Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>       | 10                 |                 |                    | 60                           | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumsulfat      | Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>       | GL                 | 1,61            |                    | 20                           | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumsulfat      | Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>       | GL                 |                 |                    | 40                           | o                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Aluminiumsulfat      | Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>       | GL                 |                 |                    | 60                           | o                  | o                    | -         | +              | +    | +    | +   | +   | +   | o    | +        | +    |
| Ameisensäure         | HCOOH                                                 | 50                 |                 |                    | 20                           | +                  | +                    | -         | +              | +    | +    | +   | +   | -   | +    | +        | +    |
| Ameisensäure         | HCOOH                                                 | 50                 |                 |                    | 40                           | +                  | +                    | -         | o              | +    | +    | +   | +   | -   | o    | +        | +    |
| Ameisensäure         | HCOOH                                                 | 50                 |                 |                    | 60                           | o                  | +                    | -         | -              | +    | +    | +   | o   | -   | o    | +        | +    |
| Ameisensäure         | HCOOH                                                 | 85                 | 1,22            | AII                | 20                           | +                  | +                    | -         | +              | +    | +    | +   | -   | -   | +    | +        | +    |
| Ameisensäure         | HCOOH                                                 | 85                 |                 | AII                | 40                           | o                  | +                    | -         | o              | +    | +    | +   | -   | -   | +    | +        | +    |
| Ameisensäure         | HCOOH                                                 | 85                 |                 | AII                | 60                           | o                  | +                    | -         | -              | +    | +    | +   | -   | -   | +    | +        | +    |
| Ameisensäureamid     |                                                       |                    |                 |                    | siehe Formamid               |                    |                      |           |                |      |      |     |     |     |      |          |      |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

<sup>1)</sup> bei Durchflussmesser FMC nicht beständig, <sup>2)</sup> Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung             | Formel                                                            | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP             | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-------------------------|-------------------------------------------------------------------|--------------------|-----------------|--------------------|--------------------|--------------------|----------------------|-----------|----------------|------|------|-----|-----|-----|------|----------|------|
| Ammoniakwasser          | NH <sub>3</sub> OH                                                | GL                 |                 |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | -   | +   | +    | +        | +    |
| Ammoniakwasser          | NH <sub>3</sub> OH                                                | GL                 |                 |                    | 40                 | +                  | +                    | +         | +              | +    | +    | +   | -   | o   | +    | +        | +    |
| Ammoniakwasser          | NH <sub>3</sub> OH                                                | GL                 |                 |                    | 60                 | +                  | +                    | +         | +              | +    | +    | +   | -   | o   | +    | +        | +    |
| Ammoniumacetat          | CH <sub>3</sub> -COONH <sub>4</sub> +H <sub>2</sub> O             |                    |                 |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumacetat          | CH <sub>3</sub> -COONH <sub>4</sub> +H <sub>2</sub> O             |                    |                 |                    | 40                 | +                  | +                    | o         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumacetat          | CH <sub>3</sub> -COONH <sub>4</sub> +H <sub>2</sub> O             |                    |                 |                    | 60                 | <sup>+)1</sup>     | +                    | o         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Ammoniumbromid          | NH <sub>4</sub> Br+H <sub>2</sub> O                               | 40                 | 1,27            |                    | 20                 | o                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumbromid          | NH <sub>4</sub> Br+H <sub>2</sub> O                               | 40                 |                 |                    | 40                 | o                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumbromid          | NH <sub>4</sub> Br+H <sub>2</sub> O                               | 40                 |                 |                    | 60                 | -                  | o                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumcarbonat        | (NH <sub>4</sub> ) <sub>2</sub> CO <sub>3</sub> +H <sub>2</sub> O | 25                 |                 |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumcarbonat        | (NH <sub>4</sub> ) <sub>2</sub> CO <sub>3</sub> +H <sub>2</sub> O | 25                 |                 |                    | 40                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumcarbonat        | (NH <sub>4</sub> ) <sub>2</sub> CO <sub>3</sub> +H <sub>2</sub> O | 25                 |                 |                    | 60                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumchlorid         | NH <sub>4</sub> Cl+H <sub>2</sub> O                               | GL                 | 1,07            |                    | 20                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumchlorid         | NH <sub>4</sub> Cl+H <sub>2</sub> O                               | GL                 |                 |                    | 40                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumchlorid         | NH <sub>4</sub> Cl+H <sub>2</sub> O                               | GL                 |                 |                    | 60                 | o                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumfluorid         | NH <sub>4</sub> F+H <sub>2</sub> O                                | 14                 |                 |                    | 20                 | o                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumfluorid         | NH <sub>4</sub> F+H <sub>2</sub> O                                | 14                 |                 |                    | 40                 | o                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumfluorid         | NH <sub>4</sub> F+H <sub>2</sub> O                                | 14                 |                 |                    | 60                 | -                  | +                    | -         | +              | +    | +    | +   | +   | +   | o    | +        | +    |
| Ammoniumfluorsilikat    | (NH <sub>4</sub> )SiF <sub>6</sub> +H <sub>2</sub> O              | TR                 |                 |                    | 20                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumhydrogenfluorid | (NH <sub>4</sub> )HF                                              | 50                 |                 |                    | 20                 | o                  | o                    | -         | +              | +    | +    | +   | +   | -   | +    | +        | +    |
| Ammoniumhydrogenfluorid | (NH <sub>4</sub> )HF                                              | 50                 |                 |                    | 40                 | -                  | o                    | -         | +              | +    | +    | +   | o   | -   | -    | +        | +    |
| Ammoniumhydrogenfluorid | (NH <sub>4</sub> )HF                                              | 50                 |                 |                    | 60                 | -                  | o                    | -         | +              | +    | +    | +   | o   | -   | -    | +        | +    |
| Ammoniummonophosphat    | siehe Ammoniumphosphat                                            |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Ammoniumnitrat          | NH <sub>4</sub> NO <sub>3</sub> +H <sub>2</sub> O                 | 10                 |                 |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumnitrat          | NH <sub>4</sub> NO <sub>3</sub> +H <sub>2</sub> O                 | 10                 |                 |                    | 40                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumnitrat          | NH <sub>4</sub> NO <sub>3</sub> +H <sub>2</sub> O                 | 10                 |                 |                    | 60                 | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Ammoniumnitrat          | NH <sub>4</sub> NO <sub>3</sub> +H <sub>2</sub> O                 | 50                 | 1,23            |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumnitrat          | NH <sub>4</sub> NO <sub>3</sub> +H <sub>2</sub> O                 | 50                 |                 |                    | 40                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumnitrat          | NH <sub>4</sub> NO <sub>3</sub> +H <sub>2</sub> O                 | 50                 |                 |                    | 60                 | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Ammoniumnitrat          | NH <sub>4</sub> NO <sub>3</sub> +H <sub>2</sub> O                 | GL                 |                 |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumnitrat          | NH <sub>4</sub> NO <sub>3</sub> +H <sub>2</sub> O                 | GL                 |                 |                    | 40                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumnitrat          | NH <sub>4</sub> NO <sub>3</sub> +H <sub>2</sub> O                 | GL                 |                 |                    | 60                 | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Ammoniumoxalat          | (COONH <sub>4</sub> ) <sub>2</sub> +H <sub>2</sub> O              | TR                 | 1,50            |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumoxalat          | (COONH <sub>4</sub> ) <sub>2</sub> +H <sub>2</sub> O              | TR                 |                 |                    | 40                 | +                  | +                    | +         | o              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumoxalat          | (COONH <sub>4</sub> ) <sub>2</sub> +H <sub>2</sub> O              | TR                 |                 |                    | 60                 | +                  | +                    | +         | o              | +    | +    | +   | +   | +   | o    | +        | +    |
| Ammoniumperchlorat      | NH <sub>4</sub> ClO <sub>4</sub> +H <sub>2</sub> O                | 14                 | 1,07            |                    | 20                 | +                  | +                    | +         | o              | +    | +    | +   | +   | o   | o    | +        | +    |
| Ammoniumperchlorat      | NH <sub>4</sub> ClO <sub>4</sub> +H <sub>2</sub> O                | 14                 |                 |                    | 40                 | o                  | +                    | o         | o              | +    | +    | +   | +   | -   | o    | +        | +    |
| Ammoniumperchlorat      | NH <sub>4</sub> ClO <sub>4</sub> +H <sub>2</sub> O                | 14                 |                 |                    | 60                 | o                  | o                    | -         | o              | +    | +    | +   | +   | -   | o    | +        | +    |
| Ammoniumphosphat        | NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> +H <sub>2</sub> O  | 10                 |                 |                    | 20                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumphosphat        | NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> +H <sub>2</sub> O  | 10                 |                 |                    | 40                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumphosphat        | NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub> +H <sub>2</sub> O  | 10                 |                 |                    | 60                 | +                  | +                    | -         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Ammoniumsulfat          | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O | 10                 |                 |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumsulfat          | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O | 10                 |                 |                    | 40                 | +                  | +                    | o         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumsulfat          | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O | 10                 |                 |                    | 60                 | <sup>+)1</sup>     | +                    | o         | <sup>+)1</sup> | +    | +    | o   | +   | o   | +    | +        | +    |
| Ammoniumsulfat          | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O | 50                 | 1,28            |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumsulfat          | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O | 50                 |                 |                    | 40                 | <sup>+)1</sup>     | +                    | o         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Ammoniumsulfat          | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O | 50                 |                 |                    | 60                 | <sup>+)1</sup>     | +                    | o         | <sup>+)1</sup> | +    | +    | o   | +   | o   | +    | +        | +    |
| Ammoniumsulfat          | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O | GL                 | 1,30            |                    | 20                 | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Ammoniumsulfat          | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O | GL                 |                 |                    | 40                 | <sup>+)1</sup>     | +                    | o         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Ammoniumsulfat          | (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O | GL                 |                 |                    | 60                 | <sup>+)1</sup>     | +                    | -         | <sup>+)1</sup> | +    | +    | -   | +   | o   | +    | +        | +    |
| Ammoniumsulfid          | NH <sub>4</sub> S+H <sub>2</sub> O                                | 10                 |                 |                    | 20                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ammoniumsulfid          | NH <sub>4</sub> S+H <sub>2</sub> O                                | 10                 |                 |                    | 40                 | <sup>+)1</sup>     | +                    | -         | <sup>+)1</sup> | +    | +    | o   | +   | o   | +    | +        | +    |
| Ammoniumsulfid          | NH <sub>4</sub> S+H <sub>2</sub> O                                | 10                 |                 |                    | 60                 | <sup>+)1</sup>     | +                    | -         | <sup>+)1</sup> | +    | +    | o   | +   | o   | +    | +        | +    |
| Ammonsalpeter           | siehe Ammoniumnitrat                                              |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Amylacetat              | CH <sub>3</sub> -COOC <sub>4</sub> H <sub>9</sub>                 | TR                 | 0,88            | All                | 20                 | +                  | +                    | +         | o              | +    | +    | +   | -   | -   | o    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

<sup>1)</sup> bei Durchflussmesser FMC nicht beständig, <sup>2)</sup> Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung    | Formel                                             | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP             | PVDF | ETFE | PFS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|----------------|----------------------------------------------------|--------------------|-----------------|--------------------|--------------------|--------------------|----------------------|-----------|----------------|------|------|-----|-----|-----|------|----------|------|
| Amylacetat     | CH <sub>3</sub> -COOC <sub>4</sub> H <sub>9</sub>  | TR                 |                 |                    | 40                 | +                  | +                    | +         | -              | o    | +    | +   | -   | -   | -    | +        | +    |
| Amylacetat     | CH <sub>3</sub> -COOC <sub>4</sub> H <sub>9</sub>  | TR                 |                 |                    | 60                 | <sup>+)1</sup>     | +                    | +         | -              | o    | +    | o   | -   | -   | -    | +        | +    |
| Amylalkohol    | C <sub>4</sub> H <sub>9</sub> OH                   | TR                 | 0,82            | AII                | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Amylalkohol    | C <sub>4</sub> H <sub>9</sub> OH                   | TR                 |                 |                    | 40                 | +                  | +                    | o         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Amylalkohol    | C <sub>4</sub> H <sub>9</sub> OH                   | TR                 |                 |                    | 60                 | +                  | +                    | o         | +              | +    | +    | +   | o   | o   | +    | +        | +    |
| Amylchlorid    | CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> Cl | TR                 | 0,87            | AI                 | 20                 | o                  | +                    | -         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Amylchlorid    | CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> Cl | TR                 |                 |                    | 40                 | -                  | +                    | -         | o              | +    | +    | +   | +   | o   | +    | +        | +    |
| Amylchlorid    | CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> Cl | TR                 |                 |                    | 60                 | -                  | o                    | -         | o              | +    | +    | o   | o   | o   | o    | +        | +    |
| Anilin         | C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub>      | TR                 | 1,01            | AIII               | 20                 | +                  | +                    | +         | o              | +    | +    | +   | +   | -   | o    | +        | +    |
| Anilin         | C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub>      | TR                 |                 |                    | 40                 | +                  | +                    | +         | -              | o    | +    | +   | o   | -   | -    | +        | +    |
| Anilin         | C <sub>6</sub> H <sub>5</sub> NH <sub>2</sub>      | TR                 |                 |                    | 60                 | <sup>+)1</sup>     | +                    | +         | -              | o    | +    | o   | o   | -   | -    | +        | +    |
| Anon           | siehe Cyclohexanon                                 |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Apfelsäure     | siehe Hydroxybernsteinsäure                        |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Arsensäure     | H <sub>3</sub> ASO <sub>4</sub>                    | 10                 |                 |                    | 20                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Arsensäure     | H <sub>3</sub> ASO <sub>4</sub>                    | 10                 |                 |                    | 40                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Arsensäure     | H <sub>3</sub> ASO <sub>4</sub>                    | 10                 |                 |                    | 60                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Arsensäure     | H <sub>3</sub> ASO <sub>4</sub>                    | 80                 |                 |                    | 20                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Arsensäure     | H <sub>3</sub> ASO <sub>4</sub>                    | 80                 |                 |                    | 40                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Arsensäure     | H <sub>3</sub> ASO <sub>4</sub>                    | 80                 |                 |                    | 60                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ätzbaryt       | siehe Bariumhydroxid                               |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Ätzkali        | siehe Kaliumhydroxid                               |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Ätznatron      | siehe Natriumhydroxid                              |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Bariumchlorid  | BaCl <sub>2</sub>                                  | 10                 |                 |                    | 20                 | -                  | +                    | o         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Bariumchlorid  | BaCl <sub>2</sub>                                  | 10                 |                 |                    | 40                 | -                  | +                    | o         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Bariumchlorid  | BaCl <sub>2</sub>                                  | 25                 | 1,27            |                    | 20                 | o                  | +                    | o         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Bariumchlorid  | BaCl <sub>2</sub>                                  | 25                 |                 |                    | 40                 | o                  | +                    | o         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Bariumhydroxid | Ba(OH) <sub>2</sub>                                | GL                 |                 |                    | 20                 | <sup>+)1</sup>     | +                    | -         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Bariumhydroxid | Ba(OH) <sub>2</sub>                                | GL                 |                 |                    | 40                 | <sup>+)1</sup>     | +                    | -         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Bariumhydroxid | Ba(OH) <sub>2</sub>                                | GL                 |                 |                    | 60                 | <sup>+)1</sup>     | +                    | -         | <sup>+)1</sup> | o    | +    | o   | +   | +   | +    | +        | +    |
| Bariumsulfid   | BaS                                                | 10                 |                 |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Benzaldehyd    | C <sub>6</sub> H <sub>5</sub> CHO                  |                    | 1,05            |                    | 20                 | <sup>+)1</sup>     | +                    | +         | o              | +    | +    | o   | +   | o   | o    | +        | +    |
| Benzaldehyd    | C <sub>6</sub> H <sub>5</sub> CHO                  |                    |                 |                    | 40                 | <sup>+)1</sup>     | +                    | +         | o              | o    | +    | o   | +   | o   | o    | +        | +    |
| Benzaldehyd    | C <sub>6</sub> H <sub>5</sub> CHO                  |                    |                 |                    | 60                 | <sup>+)1</sup>     | +                    | +         | -              | o    | +    | -   | +   | o   | o    | +        | +    |
| Benzaldehyd    | C <sub>6</sub> H <sub>5</sub> CHO                  | 30                 |                 |                    | 20                 | <sup>+)1</sup>     | +                    | o         | -              | +    | +    | o   | +   | -   | -    | +        | +    |
| Benzaldehyd    | C <sub>6</sub> H <sub>5</sub> CHO                  | TR                 | 1,05            | AIII               | 20                 | +                  | +                    | o         | o              | +    | +    | +   | o   | -   | o    | +        | +    |
| Benzin         |                                                    | H                  | 0,73            | AI                 | 20                 | +                  | +                    | +         | -              | +    | +    | +   | +   | +   | -    | +        | +    |
| Benzin         |                                                    | H                  |                 |                    | 40                 | +                  | +                    | +         | -              | +    | +    | +   | +   | +   | -    | +        | +    |
| Benzin         |                                                    | H                  |                 |                    | 60                 | +                  | +                    | +         | -              | +    | +    | +   | +   | +   | -    | +        | +    |
| Benzoessäure   | C <sub>6</sub> H <sub>5</sub> COOH                 | 10                 | 1,27            |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | +   | -   | -    | +        | +    |
| Benzoessäure   | C <sub>6</sub> H <sub>5</sub> COOH                 | 10                 |                 |                    | 40                 | +                  | +                    | o         | +              | +    | +    | +   | +   | -   | -    | +        | +    |
| Benzoessäure   | C <sub>6</sub> H <sub>5</sub> COOH                 | 10                 |                 |                    | 60                 | +                  | +                    | o         | o              | +    | +    | +   | +   | -   | -    | +        | +    |
| Benzol         | C <sub>6</sub> H <sub>6</sub>                      | TR                 | 0,88            | AI                 | 20                 | +                  | +                    | +         | -              | +    | +    | +   | +   | -   | -    | +        | +    |
| Benzylalkohol  | C <sub>6</sub> H <sub>5</sub> -CH <sub>2</sub> OH  | TR                 | 1,04            |                    | 20                 | +                  | +                    | +         | +              | +    | +    | +   | o   | -   | +    | +        | +    |
| Benzylalkohol  | C <sub>6</sub> H <sub>5</sub> -CH <sub>2</sub> OH  | TR                 |                 |                    | 40                 | +                  | +                    | +         | +              | +    | +    | +   | o   | -   | o    | +        | +    |
| Benzylalkohol  | C <sub>6</sub> H <sub>5</sub> -CH <sub>2</sub> OH  | TR                 |                 |                    | 60                 | +                  | +                    | +         | o              | +    | +    | +   | o   | -   | o    | +        | +    |
| Benzylchlorid  | C <sub>6</sub> H <sub>5</sub> -CH <sub>2</sub> Cl  |                    | 1,11            | AIII               | 20                 | +                  | +                    | -         | -              | +    | +    | +   | +   | -   | -    | +        | +    |
| Benzylchlorid  | C <sub>6</sub> H <sub>5</sub> -CH <sub>2</sub> Cl  |                    |                 |                    | 40                 | +                  | +                    | -         | -              | +    | +    | +   | +   | -   | -    | +        | +    |
| Benzylchlorid  | C <sub>6</sub> H <sub>5</sub> -CH <sub>2</sub> Cl  |                    |                 |                    | 60                 | +                  | +                    | -         | -              | o    | +    | +   | +   | -   | -    | +        | +    |
| Bernsteinsäure | siehe Ethandicarbonsäure                           |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Bittermandelöl | siehe Benzaldehyd                                  |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Bittersalz     | siehe Magnesiumsulfat                              |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Blausäure      | siehe Cyanwasserstoffsäure                         |                    |                 |                    |                    |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Bleiacetat     | C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> Pb    | 10                 |                 |                    | 20                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Bleiacetat     | C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> Pb    | 10                 |                 |                    | 40                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Bleiacetat     | C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> Pb    | 10                 |                 |                    | 60                 | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

<sup>1)</sup> bei Durchflussmesser FMC nicht beständig, <sup>2)</sup> Fasspumpe F 424 mit Welle aus Titan beständig





## Beständigkeitsliste

| Bezeichnung          | Formel                                                             | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelsahl (1,4571) | Hastelloy C (2,4610) | Aluminium | PP              | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|----------------------|--------------------------------------------------------------------|--------------------|-----------------|--------------------|--------------------|-------------------|----------------------|-----------|-----------------|------|------|-----|-----|-----|------|----------|------|
| Bleiacetat           | C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> Pb                    | GL                 |                 |                    | 20                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Bleiacetat           | C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> Pb                    | GL                 |                 |                    | 40                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Bleiacetat           | C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> Pb                    | GL                 |                 |                    | 60                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Bleichlauge          | siehe Natriumhypochlorit                                           |                    |                 |                    |                    |                   |                      |           |                 |      |      |     |     |     |      |          |      |
| Bleinitrat           | Pb(NO <sub>3</sub> ) <sub>2</sub>                                  | 50                 |                 |                    | 20                 | +                 | +                    | +         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Bleitetraethyl       | Pb(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub>                    | TR                 | 1,66            | AIII               | 20                 | +                 | +                    | +         | +               | +    | +    | +   | +   | +   | o    | +        | +    |
| Bleizucker           | siehe Bleiacetat                                                   |                    |                 |                    |                    |                   |                      |           |                 |      |      |     |     |     |      |          |      |
| Borax                | Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10 H <sub>2</sub> O | 10                 | 1,03            |                    | 20                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borax                | Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10 H <sub>2</sub> O | 10                 |                 |                    | 40                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borax                | Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10 H <sub>2</sub> O | 10                 |                 |                    | 60                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borax                | Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10 H <sub>2</sub> O | GL                 |                 |                    | 20                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borax                | Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10 H <sub>2</sub> O | GL                 |                 |                    | 40                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borax                | Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ·10 H <sub>2</sub> O | GL                 |                 |                    | 60                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borsäure             | H <sub>2</sub> BO <sub>3</sub> ·H <sub>2</sub> O                   | 10                 | 1,01            |                    | 20                 | +                 | +                    | +         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borsäure             | H <sub>2</sub> BO <sub>3</sub> ·H <sub>2</sub> O                   | 10                 |                 |                    | 40                 | +                 | +                    | +         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borsäure             | H <sub>2</sub> BO <sub>3</sub> ·H <sub>2</sub> O                   | 10                 |                 |                    | 60                 | +                 | +                    | +         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borsäure             | H <sub>2</sub> BO <sub>3</sub> ·H <sub>2</sub> O                   | GL                 |                 |                    | 20                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borsäure             | H <sub>2</sub> BO <sub>3</sub> ·H <sub>2</sub> O                   | GL                 |                 |                    | 40                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Borsäure             | H <sub>2</sub> BO <sub>3</sub> ·H <sub>2</sub> O                   | GL                 |                 |                    | 60                 | +                 | +                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Bortrifluorid        | BF <sub>3</sub> ·H <sub>2</sub> O                                  | 10                 |                 |                    | 20                 | o                 | o                    | -         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Bremsflüssigkeit     | Glykolether                                                        |                    |                 |                    |                    | +                 | +                    | +         | +               | +    | +    | +   | -   | -   | +    | +        | +    |
| Brom                 | Br <sub>2</sub>                                                    | TR                 | 3,19            |                    | 20                 | -                 | +                    | -         | -               | +    | +    | -   | o   | -   | -    | +        | +    |
| Bromkali             | siehe Kaliumbromid                                                 |                    |                 |                    |                    |                   |                      |           |                 |      |      |     |     |     |      |          |      |
| Bromsäure            | HBrO <sub>3</sub>                                                  | 10                 |                 |                    | 20                 | o                 | +                    | -         | + <sup>1)</sup> | +    | +    | o   | +   | -   | +    | +        | +    |
| Bromsäure            | HBrO <sub>3</sub>                                                  | 10                 |                 |                    | 40                 | -                 | +                    | -         | + <sup>1)</sup> | +    | +    | o   | +   | -   | +    | +        | +    |
| Bromsäure            | HBrO <sub>3</sub>                                                  | 10                 |                 |                    | 60                 | -                 | +                    | -         | o               | +    | +    | o   | +   | -   | o    | +        | +    |
| Bromwasserstoffsäure | HBr + H <sub>2</sub> O                                             | 10                 | 1,07            |                    | 20                 | -                 | o                    | -         | + <sup>1)</sup> | +    | +    | o   | +   | -   | +    | +        | +    |
| Bromwasserstoffsäure | HBr + H <sub>2</sub> O                                             | 10                 |                 |                    | 40                 | -                 | o                    | -         | + <sup>1)</sup> | +    | +    | o   | +   | -   | +    | +        | +    |
| Bromwasserstoffsäure | HBr + H <sub>2</sub> O                                             | 10                 |                 |                    | 60                 | -                 | -                    | -         | + <sup>1)</sup> | +    | +    | o   | +   | -   | o    | +        | +    |
| Bromwasserstoffsäure | HBr + H <sub>2</sub> O                                             | 48                 | 1,44            |                    | 20                 | -                 | o                    | -         | + <sup>1)</sup> | +    | +    | o   | +   | o   | +    | +        | +    |
| Bromwasserstoffsäure | HBr + H <sub>2</sub> O                                             | 48                 |                 |                    | 40                 | -                 | o                    | -         | + <sup>1)</sup> | +    | +    | o   | +   | -   | +    | +        | +    |
| Bromwasserstoffsäure | HBr + H <sub>2</sub> O                                             | 48                 |                 |                    | 60                 | -                 | -                    | -         | + <sup>1)</sup> | +    | +    | o   | +   | -   | o    | +        | +    |
| Butancarbonsäure     | siehe Buttersäure                                                  |                    |                 |                    |                    |                   |                      |           |                 |      |      |     |     |     |      |          |      |
| Butanol              | C <sub>4</sub> H <sub>9</sub> OH                                   | TR                 | 0,81            | AII                | 20                 | +                 | +                    | +         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Butanol              | C <sub>4</sub> H <sub>9</sub> OH                                   | TR                 |                 |                    | 40                 | +                 | +                    | +         | o               | +    | +    | o   | o   | +   | +    | +        | +    |
| Butanol              | C <sub>4</sub> H <sub>9</sub> OH                                   | TR                 |                 |                    | 60                 | +                 | +                    | +         | o               | +    | +    | -   | o   | +   | +    | +        | +    |
| Butanon (MEK)        | C <sub>4</sub> H <sub>8</sub> O                                    | TR                 | 0,81            | AI                 | 20                 | +                 | +                    | -         | +               | -    | +    | o   | -   | -   | +    | +        | +    |
| Butanon (MEK)        | C <sub>4</sub> H <sub>8</sub> O                                    | TR                 |                 |                    | 40                 | +                 | +                    | -         | o               | -    | +    | -   | -   | -   | o    | +        | +    |
| Butanon (MEK)        | C <sub>4</sub> H <sub>8</sub> O                                    | TR                 |                 |                    | 60                 | +                 | +                    | -         | o               | -    | +    | -   | -   | -   | o    | +        | +    |
| Butantriol           | C <sub>4</sub> H <sub>10</sub> O <sub>3</sub>                      | TR                 |                 |                    | 20                 | +                 | +                    | -         | +               | +    | +    | +   | o   | +   | +    | +        | +    |
| Butenal, trans-2     | siehe Propylenaldehyd                                              |                    |                 |                    |                    |                   |                      |           |                 |      |      |     |     |     |      |          |      |
| Buttersäure          | C <sub>4</sub> H <sub>7</sub> COOH                                 | 20                 | 0,88            |                    | 20                 | +                 | +                    | +         | -               | +    | +    | +   | +   | -   | +    | +        | +    |
| Buttersäure          | C <sub>4</sub> H <sub>7</sub> COOH                                 | TR                 | 0,96            |                    | 20                 | +                 | +                    | +         | -               | +    | +    | +   | o   | -   | o    | +        | +    |
| Butylacetat          | C <sub>6</sub> H <sub>12</sub> O <sub>2</sub>                      | TR                 | 0,88            | AII                | 20                 | + <sup>1)</sup>   | +                    | +         | o               | +    | +    | +   | o   | -   | +    | +        | +    |
| Butylacrylat         | siehe Acrylsäurebutylester                                         |                    |                 |                    |                    |                   |                      |           |                 |      |      |     |     |     |      |          |      |
| Butylalkohol         | siehe Butanol                                                      |                    |                 |                    |                    |                   |                      |           |                 |      |      |     |     |     |      |          |      |
| Butylchlorid         | C <sub>4</sub> H <sub>9</sub> Cl                                   | TR                 | 0,89            | AI                 | 20                 | o                 | +                    | -         | +               | +    | +    | +   | -   | -   | -    | +        | +    |
| Butylchlorid         | C <sub>4</sub> H <sub>9</sub> Cl                                   | TR                 |                 |                    | 40                 | o                 | +                    | -         | + <sup>1)</sup> | +    | +    | o   | -   | -   | -    | +        | +    |
| Butylchlorid         | C <sub>4</sub> H <sub>9</sub> Cl                                   | TR                 |                 |                    | 60                 | o                 | +                    | -         | + <sup>1)</sup> | +    | +    | o   | -   | -   | -    | +        | +    |
| Butylenglykol        | HO(CH <sub>2</sub> ) <sub>2</sub> OH                               | 10                 |                 |                    | 20                 | +                 | +                    | +         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Butylenglykol        | HO(CH <sub>2</sub> ) <sub>2</sub> OH                               | 10                 |                 |                    | 40                 | +                 | +                    | +         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Butylenglykol        | HO(CH <sub>2</sub> ) <sub>2</sub> OH                               | 10                 |                 |                    | 60                 | +                 | +                    | +         | +               | +    | +    | +   | +   | +   | +    | +        | +    |
| Butylenglykol        | HO(CH <sub>2</sub> ) <sub>2</sub> OH                               | TR                 |                 |                    | 20                 | +                 | +                    | +         | o               | +    | +    | +   | +   | -   | +    | +        | +    |
| Butylenglykol        | HO(CH <sub>2</sub> ) <sub>2</sub> OH                               | TR                 |                 |                    | 40                 | +                 | +                    | o         | o               | +    | +    | +   | +   | -   | +    | +        | +    |
| Butylenglykol        | HO(CH <sub>2</sub> ) <sub>2</sub> OH                               | TR                 |                 |                    | 60                 | +                 | +                    | -         | o               | +    | +    | +   | o   | -   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung               | Formel                                             | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelsstahl (1.4571)      | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|---------------------------|----------------------------------------------------|--------------------|-----------------|--------------------|--------------------|--------------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Butylether                |                                                    |                    |                 |                    |                    | siehe Dibutylether       |                      |           |    |      |      |     |     |     |      |          |      |
| Butylphen                 |                                                    |                    |                 |                    |                    | siehe Butylphenol        |                      |           |    |      |      |     |     |     |      |          |      |
| Butylphenol               | HOCH <sub>2</sub> C(CH <sub>3</sub> ) <sub>2</sub> | TR                 |                 |                    | 20                 | +                        | +                    | -         | +  | +    | +    | +   | o   | -   | -    | +        | +    |
| Calciumbisulfit           | Ca(HSO <sub>3</sub> ) <sub>2</sub>                 | 10                 |                 |                    | 20                 | +                        | +                    | o         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Calciumbisulfit           | Ca(HSO <sub>3</sub> ) <sub>2</sub>                 | GL                 |                 |                    | 20                 | +                        | +                    | o         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Calciumbisulfit           | Ca(HSO <sub>3</sub> ) <sub>2</sub>                 | GL                 |                 |                    | 40                 | +                        | +                    | o         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Calciumbisulfit           | Ca(HSO <sub>3</sub> ) <sub>2</sub>                 | GL                 |                 |                    | 60                 | +                        | +                    | o         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Calciumchlorat            | CaClO <sub>4</sub> ·H <sub>2</sub> O               | 10                 |                 |                    | 20                 | +                        | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumchlorid            | CaCl <sub>2</sub> ·H <sub>2</sub> O                | 10                 |                 |                    | 20                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumchlorid            | CaCl <sub>2</sub> ·H <sub>2</sub> O                | 10                 |                 |                    | 40                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumchlorid            | CaCl <sub>2</sub> ·H <sub>2</sub> O                | 10                 |                 |                    | 60                 | o                        | o                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumchlorid            | CaCl <sub>2</sub> ·H <sub>2</sub> O                | GL                 | 1,40            |                    | 20                 | +                        | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumchlorid            | CaCl <sub>2</sub> ·H <sub>2</sub> O                | GL                 |                 |                    | 40                 | +                        | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumchlorid            | CaCl <sub>2</sub> ·H <sub>2</sub> O                | GL                 |                 |                    | 60                 | o                        | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumhydroxyd           | Ca(OH) <sub>2</sub>                                | 15                 |                 |                    | 20                 | +                        | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumhydroxyd           | Ca(OH) <sub>2</sub>                                | 15                 |                 |                    | 40                 | +                        | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumhydroxyd           | Ca(OH) <sub>2</sub>                                | 15                 |                 |                    | 60                 | +                        | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Calciumhypochlorit        | Ca(OCl) <sub>2</sub>                               | 10                 |                 |                    | 20                 | o                        | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumhypochlorit        | Ca(OCl) <sub>2</sub>                               | 10                 |                 |                    | 40                 | o                        | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Calciumhypochlorit        | Ca(OCl) <sub>2</sub>                               | 10                 |                 |                    | 60                 | -                        | o                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Calciumnitrat             | Ca(NO <sub>3</sub> ) <sub>2</sub>                  | 50                 | 1,48            |                    | 20                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Calciumnitrat             | Ca(NO <sub>3</sub> ) <sub>2</sub>                  | 50                 |                 |                    | 40                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Caprylsäure               |                                                    |                    |                 |                    |                    | siehe Octansäure         |                      |           |    |      |      |     |     |     |      |          |      |
| Carbamid                  |                                                    |                    |                 |                    |                    | siehe Harnstoff          |                      |           |    |      |      |     |     |     |      |          |      |
| Carbonsäuren              |                                                    |                    |                 |                    |                    | siehe Fettsäuren         |                      |           |    |      |      |     |     |     |      |          |      |
| Cellosolve                |                                                    |                    |                 |                    |                    | siehe Ethylglykol        |                      |           |    |      |      |     |     |     |      |          |      |
| Chlorbenzol               | C <sub>6</sub> H <sub>5</sub> Cl                   | TR                 | 1,11            | AII                | 20                 | +                        | +                    | +         | o  | +    | +    | +   | +   | -   | -    | +        | +    |
| Chlorbenzol               | C <sub>6</sub> H <sub>5</sub> Cl                   | TR                 |                 |                    | 40                 | +                        | +                    | +         | o  | +    | +    | +   | -   | -   | -    | +        | +    |
| Chlorbenzol               | C <sub>6</sub> H <sub>5</sub> Cl                   | TR                 |                 |                    | 60                 | +                        | +                    | +         | -  | +    | +    | +   | -   | -   | -    | +        | +    |
| Chlorbleichlauge          |                                                    |                    |                 |                    |                    | siehe Natriumhypochlorit |                      |           |    |      |      |     |     |     |      |          |      |
| Chlorbutan                |                                                    |                    |                 |                    |                    | siehe Butylchlorid       |                      |           |    |      |      |     |     |     |      |          |      |
| Chlorcalcium              |                                                    |                    |                 |                    |                    | siehe Calciumchlorid     |                      |           |    |      |      |     |     |     |      |          |      |
| Chlordiphenyl             | C <sub>12</sub> H <sub>9</sub> Cl                  | TR                 |                 |                    | 20                 | +                        | +                    | +         | -  | +    | +    | +   | +   | -   | -    | +        | +    |
| Chloressigsäure           | C <sub>2</sub> H <sub>3</sub> ClO <sub>2</sub>     | 85                 | 1,36            |                    | 20                 | -                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Chloressigsäure           | C <sub>2</sub> H <sub>3</sub> ClO <sub>2</sub>     | 85                 |                 |                    | 40                 | -                        | o                    | -         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Chloressigsäure           | C <sub>2</sub> H <sub>3</sub> ClO <sub>2</sub>     | 85                 |                 |                    | 60                 | -                        | o                    | -         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Chloressigsäure           | C <sub>2</sub> H <sub>3</sub> ClO <sub>2</sub>     | 98                 |                 |                    | 20                 | -                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Chloressigsäure           | C <sub>2</sub> H <sub>3</sub> ClO <sub>2</sub>     | 98                 |                 |                    | 40                 | -                        | o                    | -         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Chloressigsäure           | C <sub>2</sub> H <sub>3</sub> ClO <sub>2</sub>     | 98                 |                 |                    | 60                 | -                        | o                    | -         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Chloressigsäureethylester |                                                    |                    |                 |                    |                    | siehe Ethylchloracetat   |                      |           |    |      |      |     |     |     |      |          |      |
| Chlorethan                | C <sub>2</sub> H <sub>5</sub> Cl                   | TR                 | 0,92            |                    | 20                 | +                        | +                    | +         | -  | +    | +    | +   | +   | -   | o    | +        | +    |
| Chlorethanol              | ClH <sub>2</sub> C-CH <sub>2</sub> OH              | TR                 | 1,20            |                    | 20                 | +                        | +                    | -         | +  | +    | +    | +   | -   | +   | o    | +        | +    |
| Chlorethanol              | ClH <sub>2</sub> C-CH <sub>2</sub> OH              | TR                 |                 |                    | 40                 | +                        | +                    | -         | +  | +    | +    | +   | -   | o   | o    | +        | +    |
| Chlorethanol              | ClH <sub>2</sub> C-CH <sub>2</sub> OH              | TR                 |                 |                    | 60                 | +                        | +                    | -         | +  | +    | +    | +   | -   | -   | o    | +        | +    |
| Chloritbleiche            |                                                    |                    |                 |                    |                    | siehe Natriumchlorit     |                      |           |    |      |      |     |     |     |      |          |      |
| Chloroform                | CHCl <sub>3</sub>                                  | TR                 | 1,48            |                    | 20                 | +                        | +                    | -         | o  | +    | +    | -   | o   | -   | -    | +        | +    |
| Chlorothene               |                                                    |                    |                 |                    |                    | siehe Trichlorethan      |                      |           |    |      |      |     |     |     |      |          |      |
| Chlorsäure                | HClO <sub>2</sub>                                  | 10                 |                 |                    | 20                 | o                        | +                    | -         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Chlorsäure                | HClO <sub>2</sub>                                  | 10                 |                 |                    | 40                 | o                        | o                    | -         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Chlorsäure                | HClO <sub>2</sub>                                  | 10                 |                 |                    | 60                 | o                        | o                    | -         | o  | +    | +    | -   | +   | -   | +    | +        | +    |
| Chlorschwefelsäure        |                                                    |                    |                 |                    |                    | siehe Chlorsulfonsäure   |                      |           |    |      |      |     |     |     |      |          |      |
| Chlorsulfonsäure          | HOSO <sub>2</sub> Cl                               | TR                 | 1,77            |                    | 20                 | +                        | +                    | -         | -  | -    | +    | -   | o   | -   | -    | +        | +    |
| Chlortoluol               |                                                    |                    |                 |                    |                    | siehe Benzylchlorid      |                      |           |    |      |      |     |     |     |      |          |      |
| Chlorwasser               | Cl <sub>2</sub> + H <sub>2</sub> O                 | GL                 |                 |                    | 20                 | o                        | +                    | -         | o  | +    | +    | +   | -   | -   | +    | +        | +    |
| Chlorwasser               | Cl <sub>2</sub> + H <sub>2</sub> O                 | GL                 |                 |                    | 40                 | o                        | +                    | -         | o  | +    | +    | +   | -   | -   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung           | Formel                                                                                       | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in °C] | Edelsahl (1,4571) | Hastelloy C (2,4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-----------------------|----------------------------------------------------------------------------------------------|--------------------|-----------------|--------------------|--------------------|-------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Chlorwasser           | Cl <sub>2</sub> + H <sub>2</sub> O                                                           | GL                 |                 |                    | 60                 | o                 | o                    | -         | o  | +    | +    | -   | -   | -   | o    | +        | +    |
| Chlorwasserstoffsäure | siehe Salzsäure                                                                              |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Chlorzinklauge        | siehe Zinkchlorid                                                                            |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Chromsäure            | CrO <sub>3</sub> +H <sub>2</sub> O                                                           | 30                 |                 |                    | 20                 | o                 | +                    | -         | o  | +    | +    | o   | +   | -   | -    | +        | +    |
| Chromsäure            | CrO <sub>3</sub> +H <sub>2</sub> O                                                           | 50                 |                 |                    | 20                 | o                 | o                    | -         | -  | +    | +    | o   | +   | -   | -    | +        | +    |
| Chromsäure            | CrO <sub>3</sub> +H <sub>2</sub> O                                                           | 50                 |                 |                    | 40                 | o                 | o                    | -         | -  | +    | +    | -   | +   | -   | -    | +        | +    |
| Chromsäure            | CrO <sub>3</sub> +H <sub>2</sub> O                                                           | 50                 |                 |                    | 60                 | o                 | o                    | -         | -  | +    | +    | -   | +   | -   | -    | +        | +    |
| Chromschwefelsäure    | H <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O+CrO <sub>3</sub>                            | 50                 |                 |                    | 20                 | o                 | o                    | -         | o  | +    | +    | -   | +   | -   | -    | +        | +    |
| Chromschwefelsäure    | H <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O+CrO <sub>3</sub>                            | 50                 |                 |                    | 40                 | o                 | o                    | -         | -  | +    | +    | -   | +   | -   | -    | +        | +    |
| Chromschwefelsäure    | H <sub>2</sub> SO <sub>4</sub> +H <sub>2</sub> O+CrO <sub>3</sub>                            | 50                 |                 |                    | 60                 | o                 | o                    | -         | -  | +    | +    | -   | +   | -   | -    | +        | +    |
| Chromtrioxid          | siehe Chromsäure                                                                             |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Clophen               | siehe Chlordiphenyl                                                                          |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Crotonaldehyd         | siehe Propylenaldehyd                                                                        |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Cyanwasserstoff       | HCN                                                                                          | TR                 | 0,69            |                    | 20                 | +                 | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Cyanwasserstoffsäure  | HCN                                                                                          | GL                 |                 |                    | 20                 | +                 | +                    | -         | +  | +    | +    | +   | o   | -   | o    | +        | +    |
| Cyanwasserstoffsäure  | HCN                                                                                          | GL                 |                 |                    | 40                 | +                 | +                    | -         | +  | +    | +    | o   | o   | -   | o    | +        | +    |
| Cyanwasserstoffsäure  | HCN                                                                                          | GL                 |                 |                    | 60                 | o                 | +                    | -         | +  | +    | +    | o   | o   | -   | o    | +        | +    |
| Cyclohexan            | C <sub>6</sub> H <sub>12</sub>                                                               | TR                 | 0,78            | AI                 | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Cyclohexan            | C <sub>6</sub> H <sub>12</sub>                                                               | TR                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Cyclohexan            | C <sub>6</sub> H <sub>12</sub>                                                               | TR                 |                 |                    | 60                 | +                 | +                    | +         | o  | +    | +    | +   | o   | -   | -    | +        | +    |
| Cyclohexanol          | C <sub>6</sub> H <sub>12</sub> O                                                             | TR                 | 0,94            | AIII               | 20                 | +                 | +                    | -         | +  | +    | +    | +   | o   | o   | o    | +        | +    |
| Cyclohexanol          | C <sub>6</sub> H <sub>12</sub> O                                                             | TR                 |                 |                    | 40                 | +                 | +                    | -         | +  | +    | +    | +   | o   | o   | o    | +        | +    |
| Cyclohexanon          | C <sub>6</sub> H <sub>10</sub> O                                                             | TR                 | 0,95            | AII                | 20                 | +                 | +                    | +         | +  | +    | +    | +   | -   | -   | o    | +        | +    |
| Decahydronaphthalin   | siehe Dekalin                                                                                |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Dekalin               | C <sub>10</sub> H <sub>18</sub>                                                              | TR                 | 0,88            | AIII               | 20                 | +                 | +                    | +         | o  | +    | +    | +   | +   | o   | -    | +        | +    |
| Dekalin               | C <sub>10</sub> H <sub>18</sub>                                                              | TR                 |                 |                    | 40                 | +                 | +                    | +         | o  | +    | +    | o   | +   | o   | -    | +        | +    |
| Dekalin               | C <sub>10</sub> H <sub>18</sub>                                                              | TR                 |                 |                    | 60                 | +                 | +                    | +         | o  | +    | +    | o   | +   | o   | -    | +        | +    |
| Dextrin               | C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> +H <sub>2</sub> O                              | 18                 |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Dextrin               | C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> +H <sub>2</sub> O                              | 18                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Dextrin               | C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> +H <sub>2</sub> O                              | 18                 |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Dextrin               | C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> +H <sub>2</sub> O                              | GL                 |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Dextronsäure          | siehe Gluconsäure                                                                            |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Diacetonalkohol       | (CH <sub>3</sub> ) <sub>2</sub> C(OH)CH <sub>2</sub> COCH <sub>3</sub>                       | TR                 |                 | B                  | 20                 | +                 | +                    | -         | -  | +    | +    | +   | +   | -   | +    | +        | +    |
| Diacetonalkohol       | (CH <sub>3</sub> ) <sub>2</sub> C(OH)CH <sub>2</sub> COCH <sub>3</sub>                       | TR                 |                 |                    | 40                 | +                 | +                    | -         | -  | +    | +    | +   | +   | -   | +    | +        | +    |
| Diacetonalkohol       | (CH <sub>3</sub> ) <sub>2</sub> C(OH)CH <sub>2</sub> COCH <sub>3</sub>                       | TR                 |                 |                    | 60                 | +                 | +                    | -         | -  | +    | +    | +   | +   | -   | +    | +        | +    |
| Diamidhydrat          | siehe Hydrazin                                                                               |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Dibromethan           | siehe Ethylenbromid                                                                          |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Dibutylether          | C <sub>8</sub> H <sub>18</sub> O                                                             | TR                 | 0,77            | AII                | 20                 | +                 | +                    | -         | o  | +    | +    | o   | -   | +   | o    | +        | +    |
| Dibutylether          | C <sub>8</sub> H <sub>18</sub> O                                                             | TR                 |                 |                    | 40                 | +                 | +                    | -         | -  | +    | +    | -   | -   | o   | o    | +        | +    |
| Dibutylether          | C <sub>8</sub> H <sub>18</sub> O                                                             | TR                 |                 |                    | 60                 | +                 | +                    | -         | -  | +    | +    | -   | -   | -   | o    | +        | +    |
| Dibutylphthalat       | C <sub>8</sub> H <sub>10</sub> (CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> | TR                 | 1,05            |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | o   | -   | o    | +        | +    |
| Dibutylphthalat       | C <sub>8</sub> H <sub>10</sub> (CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> | TR                 |                 |                    | 40                 | +                 | +                    | +         | o  | +    | +    | +   | -   | -   | -    | +        | +    |
| Dibutylphthalat       | C <sub>8</sub> H <sub>10</sub> (CO <sub>2</sub> C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> | TR                 |                 |                    | 60                 | +                 | +                    | +         | o  | o    | +    | +   | -   | -   | -    | +        | +    |
| Dibutylsebacat        | C <sub>18</sub> H <sub>34</sub> O <sub>4</sub>                                               | TR                 | 0,94            |                    | 20                 | +                 | +                    | -         | +  | +    | +    | o   | o   | -   | -    | +        | +    |
| Dibutylsebacat        | C <sub>18</sub> H <sub>34</sub> O <sub>4</sub>                                               | TR                 |                 |                    | 40                 | +                 | +                    | -         | +  | +    | +    | o   | o   | -   | -    | +        | +    |
| Dibutylsebacat        | C <sub>18</sub> H <sub>34</sub> O <sub>4</sub>                                               | TR                 |                 |                    | 60                 | +                 | +                    | -         | +  | +    | +    | o   | o   | -   | -    | +        | +    |
| Dichloridfluormethan  | CF <sub>2</sub> Cl <sub>2</sub>                                                              | TR                 | 1,32            |                    | 20                 | +                 | +                    | -         | -  | +    | +    | +   | o   | o   | o    | +        | +    |
| Dichloressigsäure     | CHCl <sub>2</sub> CO <sub>2</sub> H                                                          | TR                 | 1,56            |                    | 20                 | -                 | +                    | -         | +  | +    | +    | -   | o   | -   | +    | +        | +    |
| Dichloressigsäure     | CHCl <sub>2</sub> CO <sub>2</sub> H                                                          | TR                 |                 |                    | 40                 | -                 | o                    | -         | +  | +    | +    | -   | o   | -   | +    | +        | +    |
| Dichloressigsäure     | CHCl <sub>2</sub> CO <sub>2</sub> H                                                          | TR                 |                 |                    | 60                 | -                 | o                    | -         | o  | +    | +    | -   | -   | -   | o    | +        | +    |
| Dichlorethan          | siehe Ethylenchlorid                                                                         |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Dichlorethylen 1,1    | C <sub>2</sub> H <sub>2</sub> Cl <sub>2</sub>                                                | TR                 | 1,22            | AI                 | 20                 | +                 | +                    | -         | o  | +    | +    | -   | +   | +   | -    | +        | +    |
| Dichlorethylen 1,1    | C <sub>2</sub> H <sub>2</sub> Cl <sub>2</sub>                                                | TR                 |                 |                    | 40                 | +                 | +                    | -         | o  | +    | +    | -   | +   | +   | -    | +        | +    |
| Dichlorethylen 1,1    | C <sub>2</sub> H <sub>2</sub> Cl <sub>2</sub>                                                | TR                 |                 |                    | 60                 | +                 | +                    | -         | o  | +    | +    | -   | +   | +   | -    | +        | +    |
| Dichlormethan         | siehe Methylenchlorid                                                                        |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig





## Beständigkeitsliste

| Bezeichnung              | Formel                                                                                | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelsahl (1,4571) | Hastelloy C (2,4610) | Aluminium | PP               | PVDF             | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|--------------------------|---------------------------------------------------------------------------------------|--------------------|-----------------|--------------------|--------------------|-------------------|----------------------|-----------|------------------|------------------|------|-----|-----|-----|------|----------|------|
| Diesel                   |                                                                                       | H                  |                 | AIII               | 20                 | +                 | +                    | +         | o                | +                | +    | +   | +   | +   | -    | +        | +    |
| Diesel                   |                                                                                       | H                  |                 |                    | 40                 | +                 | +                    | +         | o                | +                | +    | +   | +   | +   | -    | +        | +    |
| Diesel                   |                                                                                       | H                  |                 |                    | 60                 | +                 | +                    | +         | +                | +                | +    | +   | +   | +   | -    | +        | +    |
| Diethanolamin            | HN(CH <sub>2</sub> CH <sub>2</sub> OH) <sub>2</sub>                                   |                    | 1,10            |                    | 20                 | +                 | +                    | -         | +                | o                | +    | +   | o   | -   | +    | +        | +    |
| Diethanolamin            | HN(CH <sub>2</sub> CH <sub>2</sub> OH) <sub>2</sub>                                   |                    |                 |                    | 40                 | <sup>+</sup> (1)  | +                    | -         | <sup>+</sup> (1) | o                | +    | o   | o   | -   | +    | +        | +    |
| Diethanolamin            | HN(CH <sub>2</sub> CH <sub>2</sub> OH) <sub>2</sub>                                   |                    |                 |                    | 60                 | <sup>+</sup> (1)  | +                    | -         | <sup>+</sup> (1) | -                | +    | o   | o   | -   | +    | +        | +    |
| Diethylamin              | C <sub>4</sub> H <sub>11</sub> N                                                      | 10                 | 0,70            | B                  | 20                 | <sup>+</sup> (1)  | +                    | +         | <sup>+</sup> (1) | o                | +    | -   | -   | -   | +    | +        | +    |
| Diethylcellosolve        | siehe Ethylglykol                                                                     |                    |                 |                    |                    |                   |                      |           |                  |                  |      |     |     |     |      |          |      |
| Diethylenoxid            | siehe Tetrahydrofuran                                                                 |                    |                 |                    |                    |                   |                      |           |                  |                  |      |     |     |     |      |          |      |
| Diethylether             | siehe Ether                                                                           |                    |                 |                    |                    |                   |                      |           |                  |                  |      |     |     |     |      |          |      |
| Diglykolsäure            | C <sub>4</sub> H <sub>6</sub> O <sub>6</sub>                                          | 30                 |                 |                    | 20                 | <sup>+</sup> (1)  | +                    | -         | <sup>+</sup> (1) | +                | +    | -   | +   | o   | +    | +        | +    |
| Diglykolsäure            | C <sub>4</sub> H <sub>6</sub> O <sub>6</sub>                                          | 30                 |                 |                    | 40                 | <sup>+</sup> (1)  | +                    | -         | <sup>+</sup> (1) | +                | +    | -   | +   | o   | o    | +        | +    |
| Diglykolsäure            | C <sub>4</sub> H <sub>6</sub> O <sub>6</sub>                                          | 30                 |                 |                    | 60                 | <sup>+</sup> (1)  | +                    | -         | <sup>+</sup> (1) | +                | +    | -   | +   | o   | o    | +        | +    |
| Diglykolsäure            | C <sub>4</sub> H <sub>6</sub> O <sub>6</sub>                                          | GL                 |                 |                    | 20                 | <sup>+</sup> (1)  | +                    | -         | <sup>+</sup> (1) | +                | +    | -   | +   | o   | +    | +        | +    |
| Diisobutylketon          | siehe Dimethyl-4-heptanon 2.6.                                                        |                    |                 |                    |                    |                   |                      |           |                  |                  |      |     |     |     |      |          |      |
| Diisopropylether         | siehe Isopropylether                                                                  |                    |                 |                    |                    |                   |                      |           |                  |                  |      |     |     |     |      |          |      |
| Dimethyl-4-heptanon 2.6. | C <sub>8</sub> H <sub>16</sub> O                                                      | TR                 |                 |                    | 20                 | +                 | +                    | -         | +                | +                | +    | +   | +   | -   | +    | +        | +    |
| Dimethyl-4-heptanon 2.6. | C <sub>8</sub> H <sub>16</sub> O                                                      | TR                 |                 |                    | 40                 | +                 | +                    | -         | +                | +                | +    | +   | -   | -   | +    | +        | +    |
| Dimethyl-4-heptanon 2.6. | C <sub>8</sub> H <sub>16</sub> O                                                      | TR                 |                 |                    | 60                 | +                 | +                    | -         | +                | +                | +    | +   | -   | -   | +    | +        | +    |
| Dimethylamin             | (CH <sub>3</sub> ) <sub>2</sub> NH                                                    | TR                 | 0,73            |                    | 20                 | +                 | +                    | -         | +                | o                | +    | +   | o   | -   | o    | +        | +    |
| Dimethylbenzol           | siehe Xylol                                                                           |                    |                 |                    |                    |                   |                      |           |                  |                  |      |     |     |     |      |          |      |
| Dimethylformamid (DMF)   | C <sub>3</sub> H <sub>7</sub> NO                                                      | TR                 | 0,95            |                    | 20                 | +                 | +                    | -         | +                | -                | +    | +   | -   | o   | +    | +        | +    |
| Dimethylformamid (DMF)   | C <sub>3</sub> H <sub>7</sub> NO                                                      | TR                 |                 |                    | 40                 | +                 | +                    | -         | +                | -                | +    | +   | -   | -   | +    | +        | +    |
| Dimethylformamid (DMF)   | C <sub>3</sub> H <sub>7</sub> NO                                                      | TR                 |                 |                    | 60                 | +                 | +                    | -         | +                | -                | +    | +   | -   | -   | +    | +        | +    |
| Dimethylphthalat (DMP)   | C <sub>8</sub> H <sub>6</sub> (COOCH <sub>3</sub> ) <sub>2</sub>                      | TR                 |                 |                    | 20                 | +                 | +                    | -         | +                | +                | +    | +   | -   | -   | -    | +        | +    |
| Dimethylphthalat (DMP)   | C <sub>8</sub> H <sub>6</sub> (COOCH <sub>3</sub> ) <sub>2</sub>                      | TR                 |                 |                    | 40                 | +                 | +                    | -         | +                | +                | +    | +   | -   | -   | -    | +        | +    |
| Dimethylphthalat (DMP)   | C <sub>8</sub> H <sub>6</sub> (COOCH <sub>3</sub> ) <sub>2</sub>                      | TR                 |                 |                    | 60                 | +                 | +                    | -         | +                | +                | +    | +   | -   | -   | -    | +        | +    |
| Dinonylphthalat          | $\begin{smallmatrix} \text{C} & \text{H} & \text{O} \\ 26 & 42 & 4 \end{smallmatrix}$ | TR                 |                 |                    | 20                 | +                 | +                    | -         | +                | +                | +    | +   | -   | -   | -    | +        | +    |
| Dinonylphthalat          | $\begin{smallmatrix} \text{C} & \text{H} & \text{O} \\ 26 & 42 & 4 \end{smallmatrix}$ | TR                 |                 |                    | 30                 | +                 | +                    | -         | +                | +                | +    | +   | -   | -   | -    | +        | +    |
| Diethylphthalat          | $\begin{smallmatrix} \text{C} & \text{H} & \text{O} \\ 24 & 38 & 4 \end{smallmatrix}$ | TR                 |                 |                    | 20                 | +                 | +                    | -         | o                | +                | +    | +   | +   | -   | -    | +        | +    |
| Diethylphthalat          | $\begin{smallmatrix} \text{C} & \text{H} & \text{O} \\ 24 & 38 & 4 \end{smallmatrix}$ | TR                 |                 |                    | 40                 | +                 | +                    | -         | o                | +                | +    | +   | +   | -   | -    | +        | +    |
| Diethylphthalat          | $\begin{smallmatrix} \text{C} & \text{H} & \text{O} \\ 24 & 38 & 4 \end{smallmatrix}$ | TR                 |                 |                    | 60                 | +                 | +                    | -         | o                | o                | +    | +   | +   | -   | -    | +        | +    |
| Dioxan                   | C <sub>8</sub> H <sub>16</sub> O                                                      | TR                 | 1,03            | B                  | 20                 | +                 | +                    | +         | -                | +                | +    | +   | -   | o   | +    | +        | +    |
| Dioxan                   | C <sub>8</sub> H <sub>16</sub> O                                                      | TR                 |                 |                    | 40                 | +                 | +                    | +         | -                | o                | +    | +   | -   | -   | +    | +        | +    |
| Dioxan                   | C <sub>8</sub> H <sub>16</sub> O                                                      | TR                 |                 |                    | 60                 | <sup>+</sup> (1)  | +                    | +         | -                | -                | +    | o   | -   | -   | +    | +        | +    |
| DMF                      | siehe Dimethylformamid                                                                |                    |                 |                    |                    |                   |                      |           |                  |                  |      |     |     |     |      |          |      |
| DMP                      | siehe Dimethylphthalat                                                                |                    |                 |                    |                    |                   |                      |           |                  |                  |      |     |     |     |      |          |      |
| Dyethylamin              | C <sub>4</sub> H <sub>11</sub> N                                                      | 10                 | 0,70            | B                  | 20                 | +                 | +                    | +         | +                | o                | +    | -   | -   | -   | +    | +        | +    |
| Eisen-II-Chlorid         | FeCl <sub>2</sub> +H <sub>2</sub> O                                                   | 10                 | 1,09            |                    | 20                 | +                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-II-Chlorid         | FeCl <sub>2</sub> +H <sub>2</sub> O                                                   | 10                 |                 |                    | 40                 | o                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-II-Chlorid         | FeCl <sub>2</sub> +H <sub>2</sub> O                                                   | 10                 |                 |                    | 60                 | o                 | o                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-II-Chlorid         | FeCl <sub>2</sub> +H <sub>2</sub> O                                                   | 50                 |                 |                    | 20                 | +                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-II-Chlorid         | FeCl <sub>2</sub> +H <sub>2</sub> O                                                   | 50                 |                 |                    | 40                 | o                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-II-Chlorid         | FeCl <sub>2</sub> +H <sub>2</sub> O                                                   | 50                 |                 |                    | 60                 | o                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-II-Nitrat          | Fe(NO <sub>3</sub> ) <sub>2</sub>                                                     | TR                 |                 |                    | 20                 | +                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-II-Nitrat          | Fe(NO <sub>3</sub> ) <sub>2</sub>                                                     | TR                 |                 |                    | 40                 | +                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-II-Nitrat          | Fe(NO <sub>3</sub> ) <sub>2</sub>                                                     | TR                 |                 |                    | 60                 | +                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-II-Sulfat          | FeSO <sub>4</sub>                                                                     | 20                 | 1,21            |                    | 20                 | <sup>+</sup> (1)  | +                    | +         | <sup>+</sup> (1) | +                | +    | o   | +   | +   | +    | +        | +    |
| Eisen-II-Sulfat          | FeSO <sub>4</sub>                                                                     | 20                 |                 |                    | 40                 | <sup>+</sup> (1)  | +                    | +         | <sup>+</sup> (1) | +                | +    | o   | +   | +   | +    | +        | +    |
| Eisen-II-Sulfat          | FeSO <sub>4</sub>                                                                     | 20                 |                 |                    | 60                 | <sup>+</sup> (1)  | +                    | +         | <sup>+</sup> (1) | +                | +    | -   | +   | +   | +    | +        | +    |
| Eisen-III-Chlorid        | FeCl <sub>3</sub> +H <sub>2</sub> O                                                   | 50                 | 1,55            |                    | 20                 | -                 | +                    | -         | <sup>+</sup> (2) | <sup>+</sup> (2) | +    | +   | +   | +   | +    | +        | +    |
| Eisen-III-Chlorid        | FeCl <sub>3</sub> +H <sub>2</sub> O                                                   | 50                 |                 |                    | 40                 | -                 | o                    | -         | <sup>+</sup> (2) | <sup>+</sup> (2) | +    | +   | +   | +   | +    | +        | +    |
| Eisen-III-Chlorid        | FeCl <sub>3</sub> +H <sub>2</sub> O                                                   | 50                 |                 |                    | 60                 | -                 | -                    | -         | <sup>+</sup> (2) | <sup>+</sup> (2) | +    | +   | +   | +   | +    | +        | +    |
| Eisen-III-Sulfat         | Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>                                       | 50                 | 1,61            |                    | 20                 | +                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |
| Eisen-III-Sulfat         | Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>                                       | 50                 |                 |                    | 40                 | +                 | +                    | -         | +                | +                | +    | +   | +   | +   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig.

1) bei Durchflussmesser FMC nicht beständig, 2) Fassungspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung           | Formel                                                       | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°]     | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP             | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-----------------------|--------------------------------------------------------------|--------------------|-----------------|--------------------|------------------------|--------------------|----------------------|-----------|----------------|------|------|-----|-----|-----|------|----------|------|
| Eisen-III-Sulfat      | Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>              | 50                 |                 |                    | 60                     | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Eisengallustinte      |                                                              |                    |                 |                    | siehe Tinte            |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Eisenvitriol          |                                                              |                    |                 |                    | siehe Eisen-II-Sulfat  |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Eisessig              |                                                              |                    |                 |                    | siehe Essigsäure 100 % |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Epichlorhydrin        | H <sub>2</sub> C-O-CH-CH <sub>2</sub> Cl                     |                    |                 | AII                | 20                     | o                  | +                    | -         | +              | +    | +    | +   | -   | -   | -    | +        | +    |
| Epichlorhydrin        | H <sub>2</sub> C-O-CH-CH <sub>2</sub> Cl                     |                    |                 |                    | 40                     | o                  | +                    | -         | +              | +    | +    | +   | -   | -   | -    | +        | +    |
| Epichlorhydrin        | H <sub>2</sub> C-O-CH-CH <sub>2</sub> Cl                     |                    |                 |                    | 60                     | o                  | +                    | -         | +              | +    | +    | +   | -   | -   | -    | +        | +    |
| Erdöl                 |                                                              |                    |                 |                    | 20                     | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | -    | +        | +    |
| Erdöl                 |                                                              |                    |                 |                    | 40                     | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | -    | +        | +    |
| Erdöl                 |                                                              |                    |                 |                    | 60                     | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | -    | +        | +    |
| Essig                 |                                                              |                    |                 |                    | siehe Weinessig        |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 10                 |                 |                    | 20                     | +                  | +                    | o         | +              | +    | +    | +   | o   | o   | +    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 10                 |                 |                    | 40                     | +                  | +                    | o         | +              | +    | +    | +   | -   | -   | +    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 10                 |                 |                    | 60                     | +                  | +                    | -         | +              | +    | +    | +   | -   | -   | o    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 25                 |                 |                    | 20                     | +                  | +                    | o         | +              | +    | +    | +   | -   | -   | +    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 25                 |                 |                    | 40                     | +                  | +                    | o         | +              | +    | +    | +   | -   | -   | o    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 25                 |                 |                    | 60                     | +                  | +                    | -         | +              | +    | +    | +   | -   | -   | -    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 50                 |                 |                    | 20                     | +                  | +                    | o         | +              | +    | +    | +   | -   | -   | o    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 50                 |                 |                    | 40                     | -                  | +                    | o         | +              | +    | +    | +   | -   | -   | o    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 50                 |                 |                    | 60                     | -                  | +                    | -         | +              | +    | +    | +   | -   | -   | -    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 80                 |                 |                    | 20                     | -                  | +                    | -         | +              | +    | +    | +   | -   | -   | o    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 80                 |                 |                    | 40                     | -                  | +                    | -         | +              | +    | +    | +   | -   | -   | o    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 80                 |                 |                    | 60                     | -                  | +                    | -         | o              | +    | +    | +   | -   | -   | -    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 100                | 1,05            |                    | 20                     | -                  | +                    | -         | o              | +    | +    | +   | -   | -   | o    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 100                |                 |                    | 40                     | -                  | +                    | -         | o              | +    | +    | +   | -   | -   | -    | +        | +    |
| Essigsäure            | CH <sub>3</sub> COOH                                         | 100                |                 |                    | 60                     | -                  | +                    | -         | o              | o    | +    | +   | -   | -   | -    | +        | +    |
| Essigsäureanhydrid    |                                                              |                    |                 |                    | siehe Acetanhydrid     |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Essigsäurebuthylester |                                                              |                    |                 |                    | siehe Butylacetat      |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Essigsäureethylester  |                                                              |                    |                 |                    | siehe Ethylacetat      |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Essigsäuremethylester |                                                              |                    |                 |                    | siehe Methylacetat     |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Ethanal               |                                                              |                    |                 |                    | siehe Acetaldehyd      |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Ethandicarbonsäure    | C <sub>2</sub> H <sub>2</sub> O <sub>4</sub>                 | 50                 | 1,06            |                    | 20                     | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ethandicarbonsäure    | C <sub>2</sub> H <sub>2</sub> O <sub>4</sub>                 | 50                 |                 |                    | 40                     | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ethandicarbonsäure    | C <sub>2</sub> H <sub>2</sub> O <sub>4</sub>                 | 50                 |                 |                    | 60                     | +                  | +                    | -         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ethandisäure          |                                                              |                    |                 |                    | siehe Oxalsäure        |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Ethanol               | CH <sub>3</sub> -CH <sub>2</sub> -OH                         | TR                 | 0,79            | B                  | 20                     | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Ethanol               | CH <sub>3</sub> -CH <sub>2</sub> -OH                         | TR                 |                 |                    | 40                     | +                  | +                    | +         | +              | +    | +    | +   | o   | +   | +    | +        | +    |
| Ethanol               | CH <sub>3</sub> -CH <sub>2</sub> -OH                         | TR                 |                 |                    | 60                     | +                  | +                    | +         | +              | +    | +    | +   | o   | +   | +    | +        | +    |
| Ether                 | (C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> O              | TR                 | 0,71            | AI                 | 20                     | +                  | +                    | +         | -              | +    | +    | +   | o   | o   | o    | +        | +    |
| Etherische Öle        |                                                              |                    |                 |                    | 20                     | +                  | +                    | +         | +              | +    | +    | +   | +   | -   | -    | +        | +    |
| Etherische Öle        |                                                              |                    |                 |                    | 40                     | +                  | +                    | +         | +              | +    | +    | +   | o   | -   | -    | +        | +    |
| Etherische Öle        |                                                              |                    |                 |                    | 60                     | +                  | +                    | +         | +              | +    | +    | +   | -   | -   | -    | +        | +    |
| Ethylacetat           | H <sub>3</sub> C-COOC <sub>2</sub> H <sub>5</sub>            | TR                 | 0,90            | AI                 | 20                     | +                  | +                    | +         | o              | o    | +    | +   | -   | -   | o    | +        | +    |
| Ethylacetat           | H <sub>3</sub> C-COOC <sub>2</sub> H <sub>5</sub>            | TR                 |                 |                    | 40                     | +                  | +                    | +         | -              | o    | +    | +   | -   | -   | o    | +        | +    |
| Ethylacetat           | H <sub>3</sub> C-COOC <sub>2</sub> H <sub>5</sub>            | TR                 |                 |                    | 60                     | +                  | +                    | +         | -              | o    | +    | +   | -   | -   | -    | +        | +    |
| Ethylalkohol          |                                                              |                    |                 |                    | siehe Ethanol          |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Ethylbenzol           | C <sub>6</sub> H <sub>5</sub> -C <sub>2</sub> H <sub>5</sub> | TR                 | 0,87            | AII                | 20                     | <sup>+)1</sup>     | +                    | +         | o              | +    | +    | -   | o   | -   | -    | +        | +    |
| Ethylbenzol           | C <sub>6</sub> H <sub>5</sub> -C <sub>2</sub> H <sub>5</sub> | TR                 |                 |                    | 40                     | <sup>+)1</sup>     | +                    | +         | -              | +    | +    | -   | -   | -   | -    | +        | +    |
| Ethylbenzol           | C <sub>6</sub> H <sub>5</sub> -C <sub>2</sub> H <sub>5</sub> | TR                 |                 |                    | 60                     | <sup>+)1</sup>     | +                    | +         | -              | +    | +    | -   | -   | -   | -    | +        | +    |
| Ethylchloracetat      | ClH <sub>2</sub> C-CO-OC <sub>2</sub> H <sub>5</sub>         |                    |                 | AII                | 20                     | o                  | +                    | -         | +              | o    | +    | +   | -   | -   | +    | +        | +    |
| Ethylchloracetat      | ClH <sub>2</sub> C-CO-OC <sub>2</sub> H <sub>5</sub>         |                    |                 |                    | 40                     | o                  | +                    | -         | +              | o    | +    | +   | -   | -   | +    | +        | +    |
| Ethylchloracetat      | ClH <sub>2</sub> C-CO-OC <sub>2</sub> H <sub>5</sub>         |                    |                 |                    | 60                     | o                  | +                    | -         | +              | o    | +    | +   | -   | -   | +    | +        | +    |
| Ethylchlorid          |                                                              |                    |                 |                    | siehe Chlorethan       |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Ethylenbromid         | CH <sub>2</sub> Br-CH <sub>2</sub> Br                        | TR                 | 2,18            |                    | 20                     | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | o    | +    | o   | +   | o   | o    | +        | +    |
| Ethylenbromid         | CH <sub>2</sub> Br-CH <sub>2</sub> Br                        | TR                 |                 |                    | 40                     | <sup>+)1</sup>     | +                    | +         | o              | o    | +    | o   | +   | -   | o    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

<sup>1)</sup> bei Durchflussmesser FMC nicht beständig, <sup>2)</sup> Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung           | Formel                                                               | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in °C] | Edelsahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-----------------------|----------------------------------------------------------------------|--------------------|-----------------|--------------------|--------------------|-------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Ethylenbromid         | CH <sub>2</sub> Br-CH <sub>2</sub> Br                                | TR                 |                 |                    | 60                 | +                 | +                    | +         | -  | o    | +    | o   | o   | -   | -    | +        | +    |
| Ethylenchlorhydrin    |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Ethylenchlorid        | H <sub>2</sub> C-CHCl <sub>2</sub>                                   |                    | 1,20            | AI                 | 20                 | +                 | +                    | +         | o  | +    | +    | +   | +   | o   | o    | +        | +    |
| Ethylenchlorid        | H <sub>2</sub> C-CHCl <sub>2</sub>                                   |                    |                 |                    | 40                 | +                 | +                    | +         | o  | +    | +    | +   | +   | -   | o    | +        | +    |
| Ethylenchlorid        | H <sub>2</sub> C-CHCl <sub>2</sub>                                   |                    |                 |                    | 60                 | +                 | +                    | +         | -  | +    | +    | +   | o   | -   | -    | +        | +    |
| Ethylendiamin         | H <sub>2</sub> N-CH <sub>2</sub> -CH <sub>2</sub> -NH <sub>2</sub>   | TR                 | 0,98            |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | o   | o   | +    | +        | +    |
| Ethylendiamin         | H <sub>2</sub> N-CH <sub>2</sub> -CH <sub>2</sub> -NH <sub>2</sub>   | TR                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | o   | o   | +    | +        | +    |
| Ethylendiamin         | H <sub>2</sub> N-CH <sub>2</sub> -CH <sub>2</sub> -NH <sub>2</sub>   | TR                 |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | -   | -   | +    | +        | +    |
| Ethylendikarbonsäure  |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Ethylenglykol         | C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>                         | TR                 | 1,11            |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Ethylenglykol         | C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>                         | TR                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Ethylenglykol         | C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>                         | TR                 |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Ethylether            |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Ethylfluid            |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Ethylglykol           | C <sub>2</sub> H <sub>4</sub> -O-CH <sub>2</sub> -HC <sub>2</sub> OH | TR                 | 0,93            | AII                | 20                 | +                 | +                    | -         | -  | +    | +    | +   | +   | +   | -    | +        | +    |
| Ethylglykol           | C <sub>2</sub> H <sub>4</sub> -O-CH <sub>2</sub> -HC <sub>2</sub> OH | TR                 |                 |                    | 40                 | +                 | +                    | -         | -  | +    | +    | +   | +   | +   | -    | +        | +    |
| Ethylglykol           | C <sub>2</sub> H <sub>4</sub> -O-CH <sub>2</sub> -HC <sub>2</sub> OH | TR                 |                 |                    | 60                 | +                 | +                    | -         | -  | +    | +    | +   | +   | +   | -    | +        | +    |
| Ferricyankalium       |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Ferro                 |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Ferrochlorid          |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Ferrocyankalium       |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Fettsäuren            | C <sub>18</sub> H <sub>36</sub> CO <sub>2</sub> H                    | 100                | 0,90            |                    | 20                 | +                 | +                    | -         | o  | +    | +    | +   | +   | o   | -    | +        | +    |
| Fettsäuren            | C <sub>18</sub> H <sub>36</sub> CO <sub>2</sub> H                    | 100                |                 |                    | 40                 | +                 | +                    | -         | o  | +    | +    | +   | +   | -   | -    | +        | +    |
| Fettsäuren            | C <sub>18</sub> H <sub>36</sub> CO <sub>2</sub> H                    | 100                |                 |                    | 60                 | +                 | +                    | -         | o  | +    | +    | +   | +   | -   | -    | +        | +    |
| Fichtennadelöl        |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Fluorammon            |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Fluorkieselsäure      | H <sub>2</sub> SiF <sub>6</sub>                                      | 32                 | 1,17            |                    | 20                 | -                 | +                    | -         | +  | +    | +    | -   | +   | o   | +    | +        | +    |
| Fluorkieselsäure      | H <sub>2</sub> SiF <sub>6</sub>                                      | 32                 |                 |                    | 40                 | -                 | o                    | -         | +  | +    | +    | -   | +   | -   | o    | +        | +    |
| Fluorkieselsäure      | H <sub>2</sub> SiF <sub>6</sub>                                      | 32                 |                 |                    | 60                 | -                 | o                    | -         | +  | +    | +    | -   | +   | -   | o    | +        | +    |
| Fluorwasserstoffsäure | HF                                                                   | 40                 | 1,06            |                    | 20                 | -                 | o                    | -         | +  | +    | +    | -   | +   | -   | o    | +        | +    |
| Fluorwasserstoffsäure | HF                                                                   | 40                 |                 |                    | 40                 | -                 | o                    | -         | +  | +    | +    | -   | +   | -   | -    | +        | +    |
| Fluorwasserstoffsäure | HF                                                                   | 40                 |                 |                    | 60                 | -                 | o                    | -         | o  | +    | +    | -   | o   | -   | -    | +        | +    |
| Fluorwasserstoffsäure | HF                                                                   | 60                 |                 |                    | 20                 | -                 | o                    | -         | +  | +    | +    | -   | +   | -   | o    | +        | +    |
| Fluorwasserstoffsäure | HF                                                                   | 70                 | 1,23            |                    | 20                 | -                 | o                    | -         | o  | +    | +    | -   | o   | -   | o    | +        | +    |
| Fluorwasserstoffsäure | HF                                                                   | 70                 |                 |                    | 40                 | -                 | o                    | -         | o  | +    | +    | -   | o   | -   | -    | +        | +    |
| Fluorwasserstoffsäure | HF                                                                   | 70                 |                 |                    | 60                 | -                 | o                    | -         | o  | o    | +    | -   | o   | -   | -    | +        | +    |
| Flußsäure             |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Formaldehyd           | CH <sub>2</sub> O+H <sub>2</sub> O                                   | 10                 |                 |                    | 20                 | +                 | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Formaldehyd           | CH <sub>2</sub> O+H <sub>2</sub> O                                   | 10                 |                 |                    | 40                 | +                 | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Formaldehyd           | CH <sub>2</sub> O+H <sub>2</sub> O                                   | 10                 |                 |                    | 60                 | +                 | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Formaldehyd           | CH <sub>2</sub> O+H <sub>2</sub> O                                   | 35                 | 1,10            | AIII               | 20                 | +                 | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Formaldehyd           | CH <sub>2</sub> O+H <sub>2</sub> O                                   | 40                 |                 | AIII               | 20                 | +                 | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Formalin              |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Formamid              | HCONH <sub>2</sub>                                                   | 100                |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | o   | +   | +    | +        | +    |
| Formamid              | HCONH <sub>2</sub>                                                   | 100                |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | -   | o   | +    | +        | +    |
| Formamid              | HCONH <sub>2</sub>                                                   | 100                |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | -   | -   | +    | +        | +    |
| Freon 12              |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Fruchtsäfte           |                                                                      | H                  |                 |                    | 20                 | +                 | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Fruchtsäfte           |                                                                      | H                  |                 |                    | 40                 | +                 | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Fruchtsäfte           |                                                                      | H                  |                 |                    | 60                 | +                 | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Furfurylalkohol       | C <sub>4</sub> H <sub>4</sub> O <sub>2</sub>                         | TR                 | 1,13            | AIII               | 20                 | +                 | +                    | +         | +  | +    | +    | +   | o   | -   | +    | +        | +    |
| Furfurylalkohol       | C <sub>4</sub> H <sub>4</sub> O <sub>2</sub>                         | TR                 |                 |                    | 40                 | +                 | +                    | +         | o  | +    | +    | +   | -   | -   | +    | +        | +    |
| Furfurylalkohol       | C <sub>4</sub> H <sub>4</sub> O <sub>2</sub>                         | TR                 |                 |                    | 60                 | +                 | +                    | +         | o  | o    | +    | +   | -   | -   | +    | +        | +    |
| Gallusgerbsäure       |                                                                      |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Gallussäure           | C <sub>6</sub> H <sub>4</sub> (OH) <sub>2</sub> CO <sub>2</sub> H    | 50                 |                 |                    | 20                 | +                 | +                    | -         | +  | +    | -    | +   | +   | +   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fassungspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung             | Formel                                         | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°]            | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-------------------------|------------------------------------------------|--------------------|-----------------|--------------------|-------------------------------|--------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Gerbextrakte pflanzlich |                                                | H                  |                 |                    | 20                            | +                  | +                    | +         | +  | +    | +    | -   | +   | +   | +    | +        | +    |
| Gerbextrakte pflanzlich |                                                | H                  |                 |                    | 40                            | +                  | +                    | o         | +  | +    | +    | -   | +   | o   | +    | +        | +    |
| Gerbextrakte pflanzlich |                                                | H                  |                 |                    | 60                            | +                  | +                    | -         | o  | +    | +    | -   | +   | -   | o    | +        | +    |
| Gerbsäure               | C <sub>6</sub> O <sub>4</sub> H <sub>6</sub>   | 50                 |                 |                    | 20                            | +                  | +                    | +         | +  | +    | +    | -   | +   | +   | +    | +        | +    |
| Gerbsäure               | C <sub>6</sub> O <sub>4</sub> H <sub>6</sub>   | 50                 |                 |                    | 40                            | +                  | +                    | -         | +  | +    | +    | -   | +   | o   | +    | +        | +    |
| Gerbsäure               | C <sub>6</sub> O <sub>4</sub> H <sub>6</sub>   | 50                 |                 |                    | 60                            | +                  | +                    | -         | +  | +    | +    | -   | +   | -   | +    | +        | +    |
| Glasätzinte             |                                                |                    |                 |                    | siehe Ammoniumhydrogenfluorid |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Glaubersalz             |                                                |                    |                 |                    | siehe Natriumsulfat           |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Gluconsäure             | C <sub>6</sub> H <sub>12</sub> O <sub>7</sub>  |                    |                 |                    | 20                            | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Gluconsäure             | C <sub>6</sub> H <sub>12</sub> O <sub>7</sub>  |                    |                 |                    | 40                            | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Gluconsäure             | C <sub>6</sub> H <sub>12</sub> O <sub>7</sub>  |                    |                 |                    | 60                            | +                  | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Glucose                 |                                                |                    |                 |                    | siehe Traubenzuckerlösung     |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Glycerin                | C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>   | TR                 | 1,26            |                    | 20                            | +                  | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Glycerin                | C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>   | TR                 |                 |                    | 40                            | +                  | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Glycerin                | C <sub>3</sub> H <sub>8</sub> O <sub>3</sub>   | TR                 |                 |                    | 60                            | +                  | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Glykol                  |                                                |                    |                 |                    | siehe Ethylenglykol           |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Glykolsäure             | C <sub>2</sub> H <sub>4</sub> O <sub>3</sub>   | 37                 |                 |                    | 20                            | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Glykolsäure             | C <sub>2</sub> H <sub>4</sub> O <sub>3</sub>   | 70                 |                 |                    | 20                            | +                  | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Glykolsäure             | C <sub>2</sub> H <sub>4</sub> O <sub>3</sub>   | 70                 |                 |                    | 40                            | +                  | +                    | -         | o  | o    | +    | +   | o   | -   | o    | +        | +    |
| Glykolsäure             | C <sub>2</sub> H <sub>4</sub> O <sub>3</sub>   | 70                 |                 |                    | 60                            | +                  | +                    | -         | -  | o    | +    | +   | o   | -   | -    | +        | +    |
| Glykose                 |                                                |                    |                 |                    | siehe Glycerin                |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Harnstoff               | CH <sub>4</sub> N <sub>2</sub> O               | 10                 |                 |                    | 20                            | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Harnstoff               | CH <sub>4</sub> N <sub>2</sub> O               | 10                 |                 |                    | 40                            | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Harnstoff               | CH <sub>4</sub> N <sub>2</sub> O               | 10                 |                 |                    | 60                            | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Harnstoff               | CH <sub>4</sub> N <sub>2</sub> O               | 33                 |                 |                    | 20                            | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Harnstoff               | CH <sub>4</sub> N <sub>2</sub> O               | 33                 |                 |                    | 40                            | +                  | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Harnstoff               | CH <sub>4</sub> N <sub>2</sub> O               | 33                 |                 |                    | 60                            | +                  | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Heizöl                  |                                                | H                  |                 | AIII               | 20                            | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Heizöl                  |                                                | H                  |                 |                    | 40                            | +                  | +                    | +         | o  | +    | +    | +   | +   | +   | o    | +        | +    |
| Heizöl                  |                                                | H                  |                 |                    | 60                            | +                  | +                    | +         | o  | +    | +    | +   | +   | +   | -    | +        | +    |
| Heptan                  | C <sub>7</sub> H <sub>16</sub>                 | TR                 | 0,68            | AI                 | 20                            | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Heptan                  | C <sub>7</sub> H <sub>16</sub>                 | TR                 |                 |                    | 40                            | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Heptan                  | C <sub>7</sub> H <sub>16</sub>                 | TR                 |                 |                    | 60                            | +                  | +                    | +         | o  | +    | +    | +   | +   | +   | -    | +        | +    |
| Hexahydrobenzol         |                                                |                    |                 |                    | siehe Cyclohexan              |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Hexalin                 |                                                |                    |                 |                    | siehe Cyclohexanol            |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Hexamethylentetramin    | (CH <sub>2</sub> ) <sub>6</sub> N <sub>4</sub> | 10                 |                 |                    | 20                            | +                  | +                    | +         | -  | +    | +    | +   | o   | -   | -    | +        | +    |
| Hexamethylentetramin    | (CH <sub>2</sub> ) <sub>6</sub> N <sub>4</sub> | 10                 |                 |                    | 40                            | +                  | +                    | +         | -  | +    | +    | +   | -   | -   | -    | +        | +    |
| Hexamethylentetramin    | (CH <sub>2</sub> ) <sub>6</sub> N <sub>4</sub> | 10                 |                 |                    | 60                            | +                  | +                    | +         | -  | o    | +    | +   | -   | -   | -    | +        | +    |
| Hexamin                 |                                                |                    |                 |                    | siehe Hexamethylentetramin    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Hexan                   | C <sub>6</sub> H <sub>14</sub>                 | TR                 |                 | AI                 | 20                            | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Hexan                   | C <sub>6</sub> H <sub>14</sub>                 | TR                 |                 |                    | 40                            | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Hexan                   | C <sub>6</sub> H <sub>14</sub>                 | TR                 |                 |                    | 60                            | +                  | +                    | +         | o  | +    | +    | +   | +   | +   | -    | +        | +    |
| Hexandisäure            |                                                |                    |                 |                    | siehe Adipinsäure             |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Hexanol                 | C <sub>6</sub> H <sub>13</sub> OH              |                    | 0,82            | AIII               | 20                            | +                  | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Hexylalkohol            |                                                |                    |                 |                    | siehe Hexanol                 |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Hirschhornsalz          |                                                |                    |                 |                    | siehe Ammoniumcarbonat        |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Höllenstein             |                                                |                    |                 |                    | siehe Silbernitrat            |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Hydrazin                | H <sub>2</sub> N-NH <sub>2</sub>               | TR                 | 1,08            | B                  | 20                            | +                  | +                    | -         | +  | +    | +    | -   | +   | +   | +    | +        | +    |
| Hydrazin                | H <sub>2</sub> N-NH <sub>2</sub>               | TR                 |                 |                    | 40                            | o                  | +                    | -         | o  | +    | +    | -   | +   | o   | o    | +        | +    |
| Hydrazin                | H <sub>2</sub> N-NH <sub>2</sub>               | TR                 |                 |                    | 60                            | -                  | o                    | -         | -  | +    | +    | -   | o   | -   | -    | +        | +    |
| Hydrogenbromidlösung    |                                                |                    |                 |                    | siehe Bromwasserstoffsäure    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Hydroxybenzol           |                                                |                    |                 |                    | siehe Phenol                  |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Hydroxybernsteinsäure   | HOOC-CH <sub>2</sub> -CHOH-COOH                | 50                 |                 |                    | 20                            | +                  | +                    | -         | +  | +    | +    | o   | +   | +   | +    | +        | +    |
| Hydroxybernsteinsäure   | HOOC-CH <sub>2</sub> -CHOH-COOH                | 50                 |                 |                    | 40                            | +                  | +                    | -         | +  | +    | +    | o   | +   | +   | +    | +        | +    |
| Hydroxybernsteinsäure   | HOOC-CH <sub>2</sub> -CHOH-COOH                | 50                 |                 |                    | 60                            | +                  | +                    | -         | +  | +    | +    | o   | +   | +   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung            | Formel                                                             | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelsstahl (1.4571)     | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|------------------------|--------------------------------------------------------------------|--------------------|-----------------|--------------------|--------------------|-------------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Hydroxyessigsäure      |                                                                    |                    |                 |                    |                    | siehe Glykolsäure       |                      |           |    |      |      |     |     |     |      |          |      |
| Isobutanol             |                                                                    |                    |                 |                    |                    | siehe Isobutylalkohol   |                      |           |    |      |      |     |     |     |      |          |      |
| Isobutylalkohol        | C <sub>4</sub> H <sub>10</sub> O                                   | 100                | 0,81            | AII                | 20                 | +                       | +                    | +         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Isobutylalkohol        | C <sub>4</sub> H <sub>10</sub> O                                   | 100                |                 |                    | 40                 | +                       | +                    | +         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Isobutylalkohol        | C <sub>4</sub> H <sub>10</sub> O                                   | 100                |                 |                    | 60                 | +                       | +                    | +         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Isocyanat              |                                                                    |                    |                 |                    | 20                 | +                       | +                    | +         | -  | -    | +    | 0   | +   | +   | -    | +        | +    |
| Isooctan               | C <sub>8</sub> H <sub>18</sub>                                     | TR                 |                 | AI                 | 20                 | +                       | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Isooctanol             | C <sub>8</sub> H <sub>18</sub> -CH(C <sub>2</sub> H <sub>5</sub> ) | TR                 | 0,83            | AIII               | 20                 | +                       | +                    | +         | +  | +    | +    | +   | +   | 0   | +    | +        | +    |
| Isopropanol            |                                                                    |                    |                 |                    |                    | siehe Propanol          |                      |           |    |      |      |     |     |     |      |          |      |
| Isopropylacetat        | C <sub>6</sub> H <sub>12</sub> O <sub>2</sub>                      |                    | 0,87            | AI                 | 20                 | +                       | +                    | 0         | 0  | +    | +    | 0   | -   | +   | +    | +        | +    |
| Isopropylether         | C <sub>6</sub> H <sub>14</sub> O                                   | TR                 | 0,73            | AI                 | 20                 | +                       | +                    | 0         | 0  | +    | +    | -   | -   | -   | -    | +        | +    |
| Isopropylether         | C <sub>6</sub> H <sub>14</sub> O                                   | TR                 |                 |                    | 40                 | +                       | +                    | 0         | 0  | 0    | +    | -   | -   | -   | -    | +        | +    |
| Isopropylether         | C <sub>6</sub> H <sub>14</sub> O                                   | TR                 |                 |                    | 60                 | +                       | +                    | 0         | 0  | 0    | +    | -   | -   | -   | -    | +        | +    |
| Jodoform               |                                                                    |                    |                 |                    |                    | siehe Trijodmethan      |                      |           |    |      |      |     |     |     |      |          |      |
| Jodtinktur             |                                                                    | H                  |                 |                    | 20                 | 0                       | +                    | 0         | +  | +    | +    | +   | +   | +   | +    | +        | 0    |
| Jodtinktur             |                                                                    | H                  |                 |                    | 40                 | 0                       | +                    | 0         | +  | +    | +    | +   | +   | +   | +    | +        | 0    |
| Jodtinktur             |                                                                    | H                  |                 |                    | 60                 | 0                       | +                    | 0         | +  | +    | +    | +   | +   | +   | +    | +        | 0    |
| Jodwasserstoffsäure    | HJ                                                                 | TR                 |                 |                    | 20                 | 0                       | 0                    | -         | +  | +    | -    | +   | +   | +   | +    | +        | +    |
| Jodwasserstoffsäure    | HJ                                                                 | TR                 |                 |                    | 40                 | 0                       | 0                    | -         | +  | +    | -    | +   | 0   | +   | +    | +        | +    |
| Jodwasserstoffsäure    | HJ                                                                 | TR                 |                 |                    | 60                 | -                       | 0                    | -         | +  | +    | -    | +   | 0   | +   | +    | +        | +    |
| Kalibleichlauge        |                                                                    |                    |                 |                    |                    | siehe Kaliumhypochlorit |                      |           |    |      |      |     |     |     |      |          |      |
| Kalilauge              |                                                                    |                    |                 |                    |                    | siehe Kaliumhydroxid    |                      |           |    |      |      |     |     |     |      |          |      |
| Kalisalpeter           |                                                                    |                    |                 |                    |                    | siehe Kaliumnitrat      |                      |           |    |      |      |     |     |     |      |          |      |
| Kalium-Aluminiumsulfat | KAl(SO <sub>4</sub> )·2H <sub>2</sub> O                            | 50                 |                 |                    | 20                 | +                       | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kalium-Aluminiumsulfat | KAl(SO <sub>4</sub> )·2H <sub>2</sub> O                            | 50                 |                 |                    | 40                 | +                       | +                    | +         | +  | +    | +    | +   | +   | 0   | +    | +        | +    |
| Kalium-Aluminiumsulfat | KAl(SO <sub>4</sub> )·2H <sub>2</sub> O                            | 50                 |                 |                    | 60                 | +                       | +                    | +         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Kaliumbichromat        |                                                                    |                    |                 |                    |                    | siehe Kaliumdichromat   |                      |           |    |      |      |     |     |     |      |          |      |
| Kaliumbromat           | KBrO <sub>3</sub> +H <sub>2</sub> O                                | GL                 |                 |                    | 20                 | +                       | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumbromat           | KBrO <sub>3</sub> +H <sub>2</sub> O                                | GL                 |                 |                    | 40                 | +                       | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumbromat           | KBrO <sub>3</sub> +H <sub>2</sub> O                                | GL                 |                 |                    | 60                 | +                       | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumbromid           | KBr + H <sub>2</sub> O                                             | 10                 | 1,37            |                    | 20                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumbromid           | KBr + H <sub>2</sub> O                                             | 10                 |                 |                    | 40                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumbromid           | KBr + H <sub>2</sub> O                                             | 10                 |                 |                    | 60                 | 0                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumbromid           | KBr + H <sub>2</sub> O                                             | GL                 |                 |                    | 20                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumbromid           | KBr + H <sub>2</sub> O                                             | GL                 |                 |                    | 40                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumbromid           | KBr + H <sub>2</sub> O                                             | GL                 |                 |                    | 60                 | 0                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumcarbonat         | K <sub>2</sub> CO <sub>3</sub>                                     | GL                 |                 |                    | 20                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumcarbonat         | K <sub>2</sub> CO <sub>3</sub>                                     | GL                 |                 |                    | 40                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumcarbonat         | K <sub>2</sub> CO <sub>3</sub>                                     | GL                 |                 |                    | 60                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumchlorat          | KClO <sub>3</sub>                                                  | 50                 |                 |                    | 20                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumchlorat          | KClO <sub>3</sub>                                                  | 50                 |                 |                    | 40                 | +                       | +                    | -         | +  | +    | +    | +   | 0   | +   | +    | +        | +    |
| Kaliumchlorat          | KClO <sub>3</sub>                                                  | 50                 |                 |                    | 60                 | 0                       | +                    | -         | +  | +    | +    | +   | -   | +   | +    | +        | +    |
| Kaliumchlorid          | KCl                                                                | 10                 |                 |                    | 20                 | 0                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumchlorid          | KCl                                                                | 10                 |                 |                    | 40                 | 0                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumchlorid          | KCl                                                                | 10                 |                 |                    | 60                 | 0                       | 0                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumchlorid          | KCl                                                                | GL                 | 1,17            |                    | 20                 | 0                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumchlorid          | KCl                                                                | GL                 |                 |                    | 40                 | 0                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumchlorid          | KCl                                                                | GL                 |                 |                    | 60                 | 0                       | 0                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumcyanid           | KCN                                                                | 50                 |                 |                    | 20                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumcyanid           | KCN                                                                | 50                 |                 |                    | 40                 | +                       | +                    | -         | +  | +    | +    | +   | 0   | +   | +    | +        | +    |
| Kaliumcyanid           | KCN                                                                | 50                 |                 |                    | 60                 | +                       | +                    | -         | +  | +    | +    | +   | 0   | +   | +    | +        | +    |
| Kaliumcyanid           | KCN                                                                | GL                 | 1,31            |                    | 20                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumcyanid           | KCN                                                                | GL                 |                 |                    | 40                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumcyanid           | KCN                                                                | GL                 |                 |                    | 60                 | +                       | +                    | -         | +  | 0    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumdichromat        | K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>                      | 40                 |                 |                    | 20                 | +                       | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, 0 = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung       | Formel                                         | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°]    | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP             | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-------------------|------------------------------------------------|--------------------|-----------------|--------------------|-----------------------|--------------------|----------------------|-----------|----------------|------|------|-----|-----|-----|------|----------|------|
| Kaliumferricyanid | K <sub>3</sub> Fe(CN) <sub>6</sub>             | 10                 |                 |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumferricyanid | K <sub>3</sub> Fe(CN) <sub>6</sub>             | 10                 |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumferricyanid | K <sub>3</sub> Fe(CN) <sub>6</sub>             | 10                 |                 |                    | 60                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumferricyanid | K <sub>3</sub> Fe(CN) <sub>6</sub>             | 20                 | 1,11            |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumferricyanid | K <sub>3</sub> Fe(CN) <sub>6</sub>             | 20                 |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumferricyanid | K <sub>3</sub> Fe(CN) <sub>6</sub>             | 20                 |                 |                    | 60                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumferricyanid | K <sub>3</sub> Fe(CN) <sub>6</sub>             | GL                 |                 |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumferricyanid | K <sub>3</sub> Fe(CN) <sub>6</sub>             | GL                 |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumferricyanid | K <sub>3</sub> Fe(CN) <sub>6</sub>             | GL                 |                 |                    | 60                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumferrocyanid | K <sub>4</sub> Fe(CN) <sub>6</sub>             | 10                 |                 |                    | 20                    | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Kaliumferrocyanid | K <sub>4</sub> Fe(CN) <sub>6</sub>             | 10                 |                 |                    | 40                    | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Kaliumferrocyanid | K <sub>4</sub> Fe(CN) <sub>6</sub>             | 10                 |                 |                    | 60                    | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Kaliumferrocyanid | K <sub>4</sub> Fe(CN) <sub>6</sub>             | 16                 | 1,11            |                    | 20                    | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Kaliumferrocyanid | K <sub>4</sub> Fe(CN) <sub>6</sub>             | 16                 |                 |                    | 40                    | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Kaliumferrocyanid | K <sub>4</sub> Fe(CN) <sub>6</sub>             | 16                 |                 |                    | 60                    | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Kaliumferrocyanid | K <sub>4</sub> Fe(CN) <sub>6</sub>             | GL                 |                 |                    | 20                    | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Kaliumferrocyanid | K <sub>4</sub> Fe(CN) <sub>6</sub>             | GL                 |                 |                    | 40                    | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Kaliumferrocyanid | K <sub>4</sub> Fe(CN) <sub>6</sub>             | GL                 |                 |                    | 60                    | <sup>+)1</sup>     | +                    | +         | <sup>+)1</sup> | +    | +    | o   | +   | +   | +    | +        | +    |
| Kaliumhydroxid    | KOH                                            | 20                 | 1,19            |                    | 20                    | +                  | +                    | -         | +              | +    | +    | +   | -   | o   | +    | +        | +    |
| Kaliumhydroxid    | KOH                                            | 20                 |                 |                    | 40                    | +                  | +                    | -         | +              | +    | +    | +   | -   | o   | o    | +        | +    |
| Kaliumhydroxid    | KOH                                            | 20                 |                 |                    | 60                    | +                  | +                    | -         | +              | +    | +    | +   | -   | o   | o    | +        | +    |
| Kaliumhydroxid    | KOH                                            | 30                 | 1,29            |                    | 20                    | +                  | +                    | -         | +              | +    | +    | +   | -   | o   | +    | +        | +    |
| Kaliumhydroxid    | KOH                                            | 30                 |                 |                    | 40                    | +                  | +                    | -         | +              | +    | +    | +   | -   | o   | o    | +        | +    |
| Kaliumhydroxid    | KOH                                            | 30                 |                 |                    | 60                    | +                  | +                    | -         | +              | +    | +    | +   | -   | o   | o    | +        | +    |
| Kaliumhydroxid    | KOH                                            | 60                 | 1,63            |                    | 20                    | +                  | +                    | -         | +              | +    | +    | +   | -   | -   | +    | +        | +    |
| Kaliumhydroxid    | KOH                                            | 60                 |                 |                    | 40                    | +                  | +                    | -         | +              | +    | +    | +   | -   | -   | +    | +        | +    |
| Kaliumhydroxid    | KOH                                            | 60                 |                 |                    | 60                    | +                  | +                    | -         | +              | +    | +    | +   | -   | -   | +    | +        | +    |
| Kaliumhypochlorit | KClO                                           | 15                 |                 |                    | 20                    | o                  | +                    | -         | o              | +    | +    | +   | +   | -   | o    | +        | +    |
| Kaliumhypochlorit | KClO                                           | 15                 |                 |                    | 40                    | o                  | +                    | -         | o              | +    | +    | +   | +   | -   | o    | +        | +    |
| Kaliumhypochlorit | KClO                                           | 15                 |                 |                    | 60                    | o                  | o                    | -         | -              | +    | +    | +   | +   | -   | -    | +        | +    |
| Kaliumjodid       | KJ                                             | 50                 | 1,55            |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumjodid       | KJ                                             | 50                 |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Kaliumjodid       | KJ                                             | 50                 |                 |                    | 60                    | o                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Kaliumjodid       | KJ                                             | GL                 |                 |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumjodid       | KJ                                             | GL                 |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Kaliumjodid       | KJ                                             | GL                 |                 |                    | 60                    | o                  | +                    | o         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Kaliumnitrat      | KNO <sub>3</sub>                               | 10                 |                 |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumnitrat      | KNO <sub>3</sub>                               | 10                 |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumnitrat      | KNO <sub>3</sub>                               | 10                 |                 |                    | 60                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumnitrat      | KNO <sub>3</sub>                               | 24                 | 1,17            |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumnitrat      | KNO <sub>3</sub>                               | 24                 |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumnitrat      | KNO <sub>3</sub>                               | 24                 |                 |                    | 60                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumoxalat      | K <sub>2</sub> (CO <sub>3</sub> ) <sub>2</sub> |                    |                 |                    | 20                    | +                  | +                    | -         | +              | +    | +    | +   | +   | -   | +    | +        | +    |
| Kaliumoxalat      | K <sub>2</sub> (CO <sub>3</sub> ) <sub>2</sub> |                    |                 |                    | 40                    | +                  | +                    | -         | +              | +    | +    | +   | +   | -   | +    | +        | +    |
| Kaliumoxalat      | K <sub>2</sub> (CO <sub>3</sub> ) <sub>2</sub> |                    |                 |                    | 60                    | +                  | +                    | -         | +              | +    | +    | +   | +   | -   | +    | +        | +    |
| Kaliumpermanganat | KMnO <sub>4</sub>                              | 6                  | 1,04            |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Kaliumpermanganat | KMnO <sub>4</sub>                              | 6                  |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Kaliumpermanganat | KMnO <sub>4</sub>                              | 6                  |                 |                    | 60                    | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Kaliumpermanganat | KMnO <sub>4</sub>                              | 18                 |                 |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Kaliumpermanganat | KMnO <sub>4</sub>                              | 18                 |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | +        | +    |
| Kaliumsulfat      | K <sub>2</sub> SO <sub>4</sub>                 | 10                 | 1,08            |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumsulfat      | K <sub>2</sub> SO <sub>4</sub>                 | 10                 |                 |                    | 40                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kaliumsulfat      | K <sub>2</sub> SO <sub>4</sub>                 | 10                 |                 |                    | 60                    | +                  | +                    | +         | +              | +    | +    | +   | +   | +   | +    | +        | +    |
| Kalkmilch         |                                                |                    |                 |                    | siehe Calciumhydroxid |                    |                      |           |                |      |      |     |     |     |      |          |      |
| Kampfer           | C <sub>10</sub> H <sub>16</sub> O              |                    |                 |                    | 20                    | +                  | +                    | +         | +              | +    | +    | +   | +   | o   | +    | o        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

<sup>1)</sup> bei Durchflussmesser FMC nicht beständig, <sup>2)</sup> Fasspumpe F 424 mit Welle aus Titan beständig





## Beständigkeitsliste

| Bezeichnung             | Formel                                 | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°]          | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP  | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-------------------------|----------------------------------------|--------------------|-----------------|--------------------|-----------------------------|--------------------|----------------------|-----------|-----|------|------|-----|-----|-----|------|----------|------|
| Kampfer                 | $\text{C}_{10}\text{H}_{16}\text{O}$   |                    |                 |                    | 40                          | +                  | +                    | +         | +   | +    | +    | +   | o   | o   | o    | +        | +    |
| Kampfer                 | $\text{C}_{10}\text{H}_{16}\text{O}$   |                    |                 |                    | 60                          | +                  | +                    | +         | +   | +    | +    | +   | o   | o   | o    | +        | +    |
| Karbolsäure             |                                        |                    |                 |                    | siehe Phenol                |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Kastoröl                |                                        |                    |                 |                    | siehe Rizinusöl             |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Kerosene                |                                        |                    |                 |                    | siehe Petroleum             |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Kerosin                 |                                        |                    |                 |                    | siehe Petroleum             |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Kiefernadelöl           |                                        |                    |                 |                    | siehe Etherische Öle        |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Kieselflußsäure         |                                        |                    |                 |                    | siehe Fluorkieselsäure      |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Kieselsäure             | $\text{Si(OH)}_4$                      | TR                 |                 |                    | 20                          | +                  | +                    | -         | +   | +    | +    | +   | +   | -   | +    | +        | +    |
| Kieselsäure             | $\text{Si(OH)}_4$                      | TR                 |                 |                    | 40                          | +                  | +                    | -         | +   | +    | +    | +   | +   | -   | +    | +        | +    |
| Kieselsäure             | $\text{Si(OH)}_4$                      | TR                 |                 |                    | 60                          | +                  | +                    | -         | +   | +    | +    | +   | +   | -   | +    | +        | +    |
| Kochsalz                | $\text{NaCl}$                          | 20                 |                 |                    | 20                          | o                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kochsalz                | $\text{NaCl}$                          | 20                 |                 |                    | 40                          | o                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kochsalz                | $\text{NaCl}$                          | 20                 |                 |                    | 60                          | o                  | o                    | o         | o   | +    | +    | +   | +   | o   | +    | +        | +    |
| Kohlenstoffdisulfid     |                                        |                    |                 |                    | siehe Schwefelkohlenstoff   |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Kohlenstofftetrachlorid |                                        |                    |                 |                    | siehe Tetrachlorkohlenstoff |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Königswasser            | $3\text{HCl} + \text{HNO}_3$           |                    |                 |                    | 20                          | -                  | -                    | -         | -   | o    | +    | -   | o   | -   | o    | +        | +    |
| Königswasser            | $3\text{HCl} + \text{HNO}_3$           |                    |                 |                    | 40                          | -                  | -                    | -         | -   | -    | +    | -   | -   | -   | -    | +        | +    |
| Königswasser            | $3\text{HCl} + \text{HNO}_3$           |                    |                 |                    | 60                          | -                  | -                    | -         | -   | -    | +    | -   | -   | -   | -    | +        | +    |
| Kupfer-I-chlorid        | $\text{CuCl}$                          | 10                 |                 |                    | 20                          | o                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfer-I-chlorid        | $\text{CuCl}$                          | 10                 |                 |                    | 40                          | o                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfer-I-chlorid        | $\text{CuCl}$                          | 10                 |                 |                    | 60                          | o                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfer-II-chlorid       | $\text{CuCl}_2$                        | 20                 | 1,21            |                    | 20                          | o                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfer-II-chlorid       | $\text{CuCl}_2$                        | 20                 |                 |                    | 40                          | o                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfer-II-chlorid       | $\text{CuCl}_2$                        | 20                 |                 |                    | 60                          | o                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupferacetat            | $(\text{CH}_3\text{CO}_2)_2\text{Cu}$  | 50                 |                 |                    | 20                          | +                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupferacetat            | $(\text{CH}_3\text{CO}_2)_2\text{Cu}$  | 50                 |                 |                    | 40                          | +                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupferacetat            | $(\text{CH}_3\text{CO}_2)_2\text{Cu}$  | 50                 |                 |                    | 60                          | +                  | +                    | -         | +   | +    | +    | +   | +   | o   | +    | +        | +    |
| Kupferchlorür           |                                        |                    |                 |                    | siehe Kupfer-I-chlorid      |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Kupfernitrat            | $\text{Cu(NO}_3)_2$                    | 25                 | 1,25            |                    | 20                          | +                  | +                    | +         | o   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfernitrat            | $\text{Cu(NO}_3)_2$                    | 25                 |                 |                    | 40                          | +                  | +                    | +         | o   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfernitrat            | $\text{Cu(NO}_3)_2$                    | 25                 |                 |                    | 60                          | +                  | +                    | +         | o   | +    | +    | +   | +   | o   | +    | +        | +    |
| Kupfersulfat            | $\text{CuSO}_4$                        | 18                 | 1,21            |                    | 20                          | +                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfersulfat            | $\text{CuSO}_4$                        | 18                 |                 |                    | 40                          | +                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfersulfat            | $\text{CuSO}_4$                        | 18                 |                 |                    | 60                          | +                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfersulfat            | $\text{CuSO}_4$                        | GL                 |                 |                    | 20                          | +                  | +                    | -         | o   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfersulfat            | $\text{CuSO}_4$                        | GL                 |                 |                    | 40                          | +                  | +                    | -         | o   | +    | +    | +   | +   | +   | +    | +        | +    |
| Kupfersulfat            | $\text{CuSO}_4$                        | GL                 |                 |                    | 60                          | +                  | +                    | -         | o   | +    | +    | +   | +   | o   | +    | +        | +    |
| Kupfervitriol           |                                        |                    |                 |                    | siehe Kupfersulfat          |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Lanolin                 |                                        | TR                 |                 |                    | 20                          | +                  | +                    | +         | o   | +    | +    | +   | +   | +   | o    | +        | +    |
| Lanolin                 |                                        | TR                 |                 |                    | 40                          | +                  | +                    | +         | -   | +    | +    | +   | +   | +   | -    | +        | +    |
| Lanolin                 |                                        | TR                 |                 |                    | 60                          | +                  | +                    | +         | -   | +    | +    | +   | +   | o   | -    | +        | +    |
| Laurinsäure             | $\text{C}_{12}\text{H}_{24}\text{O}_2$ | TR                 |                 |                    | 20                          | +                  | +                    | -         | +1) | +    | +    | -   | +   | -   | -    | +        | +    |
| Laurinsäure             | $\text{C}_{12}\text{H}_{24}\text{O}_2$ | TR                 |                 |                    | 40                          | +1)                | +                    | -         | +1) | +    | +    | -   | +   | -   | -    | +        | +    |
| Laurinsäure             | $\text{C}_{12}\text{H}_{24}\text{O}_2$ | TR                 |                 |                    | 60                          | +1)                | +                    | -         | +1) | +    | +    | -   | +   | -   | -    | +        | +    |
| Leinöl                  |                                        | TR                 |                 |                    | 20                          | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Leinöl                  |                                        | TR                 |                 |                    | 40                          | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | o    | +        | +    |
| Leinöl                  |                                        | TR                 |                 |                    | 60                          | +                  | +                    | +         | o   | +    | +    | +   | +   | +   | -    | +        | +    |
| Lithiumchlorid          | $\text{LiCl}$                          | 45                 | 1,30            |                    | 20                          | o                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Lithiumchlorid          | $\text{LiCl}$                          | 45                 |                 |                    | 40                          | o                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Lithiumchlorid          | $\text{LiCl}$                          | 45                 |                 |                    | 60                          | -                  | o                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Lithiumsulfat           | $\text{Li}_2\text{SO}_4$               | 25                 | 1,23            |                    | 20                          | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Lithiumsulfat           | $\text{Li}_2\text{SO}_4$               | 25                 |                 |                    | 40                          | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Lithiumsulfat           | $\text{Li}_2\text{SO}_4$               | 25                 |                 |                    | 60                          | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumchlorid        | $\text{MgCl}_2$                        | 10                 |                 |                    | 20                          | o                  | +                    | -         | +   | +    | +    | +   | +   | +   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig.

1) bei Durchflussmesser FMC nicht beständig, 2) Fassungspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung                | Formel                                             | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°]        | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|----------------------------|----------------------------------------------------|--------------------|-----------------|--------------------|---------------------------|--------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Magnesiumchlorid           | MgCl <sub>2</sub>                                  | 10                 |                 |                    | 40                        | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumchlorid           | MgCl <sub>2</sub>                                  | 10                 |                 |                    | 60                        | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumchlorid           | MgCl <sub>2</sub>                                  | GL                 |                 |                    | 20                        | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumchlorid           | MgCl <sub>2</sub>                                  | GL                 |                 |                    | 40                        | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumchlorid           | MgCl <sub>2</sub>                                  | GL                 |                 |                    | 60                        | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumnitrat            | Mg(NO <sub>3</sub> ) <sub>2</sub>                  | 25                 | 1,21            |                    | 20                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumnitrat            | Mg(NO <sub>3</sub> ) <sub>2</sub>                  | 25                 |                 |                    | 40                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumnitrat            | Mg(NO <sub>3</sub> ) <sub>2</sub>                  | 25                 |                 |                    | 60                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumsulfat            | MgSO <sub>4</sub>                                  | 10                 |                 |                    | 20                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumsulfat            | MgSO <sub>4</sub>                                  | 10                 |                 |                    | 40                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumsulfat            | MgSO <sub>4</sub>                                  | 10                 |                 |                    | 60                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumsulfat            | MgSO <sub>4</sub>                                  | GL                 | 1,28            |                    | 20                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumsulfat            | MgSO <sub>4</sub>                                  | GL                 |                 |                    | 40                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Magnesiumsulfat            | MgSO <sub>4</sub>                                  | GL                 |                 |                    | 60                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Maisöl                     |                                                    | TR                 |                 |                    | 20                        | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Maisöl                     |                                                    | TR                 |                 |                    | 40                        | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | o    | +        | +    |
| Maisöl                     |                                                    | TR                 |                 |                    | 60                        | +                  | +                    | -         | o  | +    | +    | +   | +   | +   | -    | +        | +    |
| Maleinsäure                | C <sub>4</sub> H <sub>2</sub> O <sub>4</sub>       | 35                 |                 |                    | 20                        | +                  | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Maleinsäure                | C <sub>4</sub> H <sub>2</sub> O <sub>4</sub>       | 35                 |                 |                    | 40                        | +                  | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Maleinsäure                | C <sub>4</sub> H <sub>2</sub> O <sub>4</sub>       | GL                 |                 |                    | 20                        | +                  | +                    | -         | +  | +    | +    | +   | +   | -   | o    | +        | +    |
| Maleinsäure                | C <sub>4</sub> H <sub>2</sub> O <sub>4</sub>       | GL                 |                 |                    | 40                        | +                  | +                    | -         | +  | +    | +    | +   | +   | -   | -    | +        | +    |
| Maleinsäure                | C <sub>4</sub> H <sub>2</sub> O <sub>4</sub>       | GL                 |                 |                    | 60                        | +                  | +                    | -         | +  | +    | +    | +   | +   | -   | -    | +        | +    |
| Mangan-II-chlorid          | MnCl <sub>2</sub>                                  | 20                 | 1,19            |                    | 20                        | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Mangan-II-chlorid          | MnCl <sub>2</sub>                                  | 20                 |                 |                    | 40                        | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Mangan-II-chlorid          | MnCl <sub>2</sub>                                  | 20                 |                 |                    | 60                        | -                  | o                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Manganchlorür              |                                                    |                    |                 |                    | siehe Mangan-II-chlorid   |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Meerwasser                 |                                                    |                    |                 |                    | 20                        | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Meerwasser                 |                                                    |                    |                 |                    | 40                        | o                  | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Meerwasser                 |                                                    |                    |                 |                    | 60                        | o                  | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Methanol                   | CH <sub>3</sub> OH                                 | TR                 |                 | B                  | 20                        | +                  | +                    | +         | +  | +    | +    | +   | o   | o   | +    | +        | +    |
| Methanol                   | CH <sub>3</sub> OH                                 | TR                 |                 |                    | 40                        | +                  | +                    | +         | +  | +    | +    | +   | o   | o   | +    | +        | +    |
| Methanol                   | CH <sub>3</sub> OH                                 | TR                 |                 |                    | 60                        | +                  | +                    | o         | +  | +    | +    | +   | o   | -   | o    | +        | +    |
| Methylacetat               | CH <sub>3</sub> CO <sub>2</sub> CH <sub>3</sub>    | 100                | 0,93            | AI                 | 20                        | +                  | +                    | -         | +  | +    | +    | +   | -   | -   | -    | +        | +    |
| Methylacetat               | CH <sub>3</sub> CO <sub>2</sub> CH <sub>3</sub>    | 100                |                 |                    | 40                        | +                  | +                    | -         | +  | o    | +    | +   | -   | -   | -    | +        | +    |
| Methylacetat               | CH <sub>3</sub> CO <sub>2</sub> CH <sub>3</sub>    | 100                |                 |                    | 60                        | +                  | +                    | -         | +  | -    | +    | +   | -   | -   | -    | +        | +    |
| Methylalkohol              |                                                    |                    |                 |                    | siehe Methanol            |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Methylbenzol               |                                                    |                    |                 |                    | siehe Toluol              |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Methylcellosolve           |                                                    |                    |                 |                    | siehe Methylglykol        |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Methylcyanid               |                                                    |                    |                 |                    | siehe Acetonitril         |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Methylenchlorid            | CH <sub>2</sub> Cl <sub>2</sub>                    |                    | 1,33            |                    | 20                        | +                  | +                    | -         | o  | o    | +) ) | +   | o   | -   | o    | +        | +    |
| Methylenchlorid            | CH <sub>2</sub> Cl <sub>2</sub>                    |                    |                 |                    | 40                        | +                  | +                    | -         | o  | o    | +) ) | +   | o   | -   | -    | +        | +    |
| Methylester                |                                                    |                    |                 |                    | siehe Methylacetat        |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Methylethylketon (MEK)     |                                                    |                    |                 |                    | siehe Butanon             |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Methylglykol               | (CH <sub>3</sub> ) <sub>2</sub> OHOCH <sub>2</sub> |                    | 0,98            |                    | 20                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Methylglykol               | (CH <sub>3</sub> ) <sub>2</sub> OHOCH <sub>2</sub> |                    |                 |                    | 40                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Methylglykol               | (CH <sub>3</sub> ) <sub>2</sub> OHOCH <sub>2</sub> |                    |                 |                    | 60                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Methylisobutylketon (MIBK) | C <sub>4</sub> H <sub>8</sub> O                    |                    |                 | AI                 | 20                        | +                  | +                    | -         | -  | +    | +    | +   | o   | o   | o    | +        | +    |
| Methylpentanon             |                                                    |                    |                 |                    | siehe Methylisobutylketon |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Methylschwefelsäure        | H <sub>2</sub> SO <sub>4</sub> -CH <sub>3</sub>    | 50                 |                 |                    | 20                        | o                  | o                    | -         | o  | +    | +    | -   | o   | -   | +    | +        | +    |
| Methylschwefelsäure        | H <sub>2</sub> SO <sub>4</sub> -CH <sub>3</sub>    | 50                 |                 |                    | 40                        | -                  | o                    | -         | o  | +    | +    | -   | o   | -   | +    | +        | +    |
| Methylschwefelsäure        | H <sub>2</sub> SO <sub>4</sub> -CH <sub>3</sub>    | 50                 |                 |                    | 60                        | -                  | -                    | -         | -  | +    | +    | -   | -   | -   | o    | +        | +    |
| Methylschwefelsäure        | H <sub>2</sub> SO <sub>4</sub> -CH <sub>3</sub>    | TR                 |                 |                    | 20                        | o                  | o                    | -         | -  | +    | +    | -   | o   | -   | +    | +        | +    |
| Methylschwefelsäure        | H <sub>2</sub> SO <sub>4</sub> -CH <sub>3</sub>    | TR                 |                 |                    | 40                        | -                  | o                    | -         | -  | +    | +    | -   | o   | -   | +    | +        | +    |
| Methylschwefelsäure        | H <sub>2</sub> SO <sub>4</sub> -CH <sub>3</sub>    | TR                 |                 |                    | 60                        | -                  | o                    | -         | -  | +    | +    | -   | -   | -   | o    | +        | +    |
| Milch                      |                                                    |                    |                 |                    | 20                        | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung         | Formel                                         | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in °C] | Edelsahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|---------------------|------------------------------------------------|--------------------|-----------------|--------------------|--------------------|-------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Milchsäure          | C <sub>3</sub> H <sub>5</sub> O <sub>3</sub>   | 10                 |                 |                    | 20                 | +                 | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Milchsäure          | C <sub>3</sub> H <sub>5</sub> O <sub>3</sub>   | 10                 |                 |                    | 40                 | +                 | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Milchsäure          | C <sub>3</sub> H <sub>5</sub> O <sub>3</sub>   | 10                 |                 |                    | 60                 | +                 | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Milchsäure          | C <sub>3</sub> H <sub>5</sub> O <sub>3</sub>   | 90                 |                 |                    | 20                 | +                 | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Milchsäure          | C <sub>3</sub> H <sub>5</sub> O <sub>3</sub>   | 90                 |                 |                    | 40                 | o                 | +                    | -         | +  | o    | +    | +   | +   | -   | +    | +        | +    |
| Milchsäure          | C <sub>3</sub> H <sub>5</sub> O <sub>3</sub>   | 90                 |                 |                    | 60                 | o                 | +                    | -         | +  | o    | +    | +   | +   | -   | o    | +        | +    |
| Mineralöle          |                                                |                    |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Mineralöle          |                                                |                    |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Mineralöle          |                                                |                    |                 |                    | 60                 | +                 | +                    | +         | o  | +    | +    | +   | +   | +   | -    | +        | +    |
| Mineralwasser       |                                                |                    |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Mineralwasser       |                                                |                    |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Mineralwasser       |                                                |                    |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Mirbanöl            | siehe Nitrobenzol                              |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Monochloressigsäure | siehe Chloressigsäure                          |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Nagellackentferner  | siehe Aceton                                   |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Naphtha             | siehe Erdöl                                    |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Naphtensäure        | siehe Fettsäuren                               |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Natriumacetat       | CH <sub>3</sub> COONa                          | 10                 |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumacetat       | CH <sub>3</sub> COONa                          | 10                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumacetat       | CH <sub>3</sub> COONa                          | 10                 |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumbenzoat      | C <sub>6</sub> H <sub>5</sub> NaO <sub>2</sub> | 10                 |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbenzoat      | C <sub>6</sub> H <sub>5</sub> NaO <sub>2</sub> | 10                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbenzoat      | C <sub>6</sub> H <sub>5</sub> NaO <sub>2</sub> | 10                 |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumbenzoat      | C <sub>6</sub> H <sub>5</sub> NaO <sub>2</sub> | 36                 |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbenzoat      | C <sub>6</sub> H <sub>5</sub> NaO <sub>2</sub> | 36                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbenzoat      | C <sub>6</sub> H <sub>5</sub> NaO <sub>2</sub> | 36                 |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumbenzoat      | C <sub>6</sub> H <sub>5</sub> NaO <sub>2</sub> | GL                 |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbenzoat      | C <sub>6</sub> H <sub>5</sub> NaO <sub>2</sub> | GL                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbenzoat      | C <sub>6</sub> H <sub>5</sub> NaO <sub>2</sub> | GL                 |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbicarbonat   | NaHCO <sub>3</sub>                             |                    | 1,07            |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbicarbonat   | NaHCO <sub>3</sub>                             | 10                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbicarbonat   | NaHCO <sub>3</sub>                             | 10                 |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbichromat    | Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> | 10                 |                 |                    | 20                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbichromat    | Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> | 10                 |                 |                    | 40                 | +                 | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumbichromat    | Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> | 10                 |                 |                    | 60                 | +                 | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumchlorat      | NaClO <sub>3</sub>                             | 25                 | 1,23            |                    | 20                 | +                 | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumchlorat      | NaClO <sub>3</sub>                             | 25                 |                 |                    | 40                 | +                 | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumchlorat      | NaClO <sub>3</sub>                             | 25                 |                 |                    | 60                 | o                 | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Natriumchlorid      | siehe Kochsalz                                 |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Natriumchlorit      | NaClO <sub>2</sub>                             | 5                  |                 |                    | 20                 | o                 | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumchlorit      | NaClO <sub>2</sub>                             | 5                  |                 |                    | 40                 | -                 | o                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumchlorit      | NaClO <sub>2</sub>                             | 5                  |                 |                    | 60                 | -                 | o                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumdichromat    | siehe Natriumbichromat                         |                    |                 |                    |                    |                   |                      |           |    |      |      |     |     |     |      |          |      |
| Natriumfluorid      | NaF                                            | 4                  | 1,04            |                    | 20                 | +                 | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumfluorid      | NaF                                            | 4                  |                 |                    | 40                 | +                 | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumfluorid      | NaF                                            | 4                  |                 |                    | 60                 | o                 | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumhydroxid     | NaOH                                           | 10                 | 1,16            |                    | 20                 | +                 | +                    | -         | +  | o    | +    | +   | +   | +   | +    | +        | +    |
| Natriumhydroxid     | NaOH                                           | 10                 |                 |                    | 40                 | +                 | +                    | -         | +  | o    | +    | +   | +   | +   | +    | +        | +    |
| Natriumhydroxid     | NaOH                                           | 10                 |                 |                    | 60                 | +                 | +                    | -         | +  | o    | +    | +   | o   | o   | +    | +        | +    |
| Natriumhydroxid     | NaOH                                           | 30                 | 1,33            |                    | 20                 | +                 | +                    | -         | +  | o    | +    | +   | o   | +   | +    | +        | +    |
| Natriumhydroxid     | NaOH                                           | 30                 |                 |                    | 40                 | +                 | +                    | -         | +  | o    | +    | +   | o   | o   | +    | +        | +    |
| Natriumhydroxid     | NaOH                                           | 30                 |                 |                    | 60                 | +                 | +                    | -         | +  | o    | +    | +   | o   | o   | +    | +        | +    |
| Natriumhydroxid     | NaOH                                           | 50                 | 1,53            |                    | 20                 | +                 | +                    | -         | +  | o    | +    | +   | o   | o   | +    | +        | +    |
| Natriumhydroxid     | NaOH                                           | 50                 |                 |                    | 40                 | +                 | +                    | -         | +  | o    | +    | +   | o   | -   | +    | +        | +    |
| Natriumhydroxid     | NaOH                                           | 50                 |                 |                    | 60                 | o                 | +                    | -         | +  | o    | +    | +   | -   | -   | +    | +        | +    |
| Natriumhypochlorit  | NaOCl                                          | 10                 |                 |                    | 20                 | o                 | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung        | Formel                                                                                | Konzentration in %       | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|--------------------|---------------------------------------------------------------------------------------|--------------------------|-----------------|--------------------|--------------------|--------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Natriumhypochlorit | NaOCl                                                                                 | 12,5                     |                 |                    | 20                 | o                  | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Natriumhypochlorit | NaOCl                                                                                 | 12,5                     |                 |                    | 40                 | o                  | +                    | -         | o  | +    | +    | +   | o   | -   | o    | +        | +    |
| Natriumhypochlorit | NaOCl                                                                                 | 20                       |                 |                    | 20                 | o                  | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Natriumhypochlorit | NaOCl                                                                                 | 20                       |                 |                    | 40                 | o                  | +                    | -         | o  | +    | +    | +   | o   | -   | o    | +        | +    |
| Natriumhypochlorit | NaOCl                                                                                 | 20                       |                 |                    | 60                 | o                  | +                    | -         | -  | +    | +    | +   | o   | -   | o    | +        | +    |
| Natriumhyposulfit  |                                                                                       | siehe Natriumthiosulfat  |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Natriumnitrat      | NaNO <sub>3</sub>                                                                     | 45                       | 1,37            |                    | 20                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumnitrat      | NaNO <sub>3</sub>                                                                     | 45                       |                 |                    | 40                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumnitrat      | NaNO <sub>3</sub>                                                                     | 45                       |                 |                    | 60                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumnitrit      | NaNO <sub>2</sub>                                                                     | 50                       |                 |                    | 20                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumnitrit      | NaNO <sub>2</sub>                                                                     | 50                       |                 |                    | 40                 | +                  | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumnitrit      | NaNO <sub>2</sub>                                                                     | 50                       |                 |                    | 60                 | +                  | +                    | +         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Natriumperchlorat  | NaClO <sub>4</sub>                                                                    | 25                       | 1,18            |                    | 20                 | o                  | +                    | +         | +  | +    | +    | -   | +   | +   | +    | +        | +    |
| Natriumperchlorat  | NaClO <sub>4</sub>                                                                    | 25                       |                 |                    | 40                 | o                  | +                    | +         | +  | +    | +    | -   | +   | +   | +    | +        | +    |
| Natriumperchlorat  | NaClO <sub>4</sub>                                                                    | 25                       |                 |                    | 60                 | o                  | +                    | o         | +  | +    | +    | -   | +   | o   | +    | +        | +    |
| Natriumphosphat    | Na <sub>3</sub> PO <sub>4</sub>                                                       | 10                       |                 |                    | 20                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumphosphat    | Na <sub>3</sub> PO <sub>4</sub>                                                       | 10                       |                 |                    | 40                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumphosphat    | Na <sub>3</sub> PO <sub>4</sub>                                                       | 10                       |                 |                    | 60                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumsilikat     |                                                                                       | siehe Wasserglas         |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Natriumsulfat      | Na <sub>2</sub> SO <sub>4</sub>                                                       | 50                       | 1,46            |                    | 20                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumsulfat      | Na <sub>2</sub> SO <sub>4</sub>                                                       | 50                       |                 |                    | 40                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumsulfat      | Na <sub>2</sub> SO <sub>4</sub>                                                       | 50                       |                 |                    | 60                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumsulfit      | Na <sub>2</sub> SO <sub>3</sub>                                                       | GL                       | 1,18            |                    | 20                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Natriumsulfit      | Na <sub>2</sub> SO <sub>3</sub>                                                       | GL                       |                 |                    | 40                 | +                  | +                    | o         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Natriumsulfit      | Na <sub>2</sub> SO <sub>3</sub>                                                       | GL                       |                 |                    | 60                 | +                  | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Natriumtetraborat  |                                                                                       | siehe Borax              |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Natriumthiosulfat  | Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub>                                         | 40                       |                 |                    | 20                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | o    | +        | +    |
| Natriumthiosulfat  | Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub>                                         | 40                       |                 |                    | 40                 | +                  | +                    | +         | +  | +    | +    | +   | +   | o   | -    | +        | +    |
| Natriumthiosulfat  | Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub>                                         | 40                       |                 |                    | 60                 | +                  | +                    | +         | o  | +    | +    | +   | +   | -   | -    | +        | +    |
| Natronbleichlauge  |                                                                                       | siehe Natriumhypochlorit |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Natronlauge        |                                                                                       | siehe Natriumhydroxid    |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Nelkenöl           |                                                                                       | siehe Etherische Öle     |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Nickelchlorid      | NiCl <sub>2</sub>                                                                     | 20                       | 1,22            |                    | 20                 | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Nickelchlorid      | NiCl <sub>2</sub>                                                                     | 20                       |                 |                    | 40                 | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Nickelchlorid      | NiCl <sub>2</sub>                                                                     | 20                       |                 |                    | 60                 | o                  | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Nickelnitrat       | Ni(NO <sub>3</sub> ) <sub>2</sub>                                                     | 35                       | 1,38            |                    | 20                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Nickelnitrat       | Ni(NO <sub>3</sub> ) <sub>2</sub>                                                     | 35                       |                 |                    | 40                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Nickelnitrat       | Ni(NO <sub>3</sub> ) <sub>2</sub>                                                     | 35                       |                 |                    | 60                 | +                  | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Nickelsulfat       | NiSO <sub>4</sub>                                                                     | 10                       | 1,21            |                    | 20                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Nickelsulfat       | NiSO <sub>4</sub>                                                                     | 10                       |                 |                    | 40                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Nickelsulfat       | NiSO <sub>4</sub>                                                                     | 10                       |                 |                    | 60                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Nikotin            | $\begin{smallmatrix} \text{C} & \text{H} & \text{N} \\ 10 & 14 & 2 \end{smallmatrix}$ |                          |                 |                    | 20                 | +                  | +                    | -         | -  | -    | +    | +   | +   | o   | +    | +        | +    |
| Nitrobenzol        | C <sub>6</sub> H <sub>5</sub> NO <sub>2</sub>                                         | TR                       | 1,21            | AIII               | 20                 | +                  | +                    | +         | +  | +    | +    | +   | o   | o   | o    | +        | +    |
| Nitrobenzol        | C <sub>6</sub> H <sub>5</sub> NO <sub>2</sub>                                         | TR                       |                 |                    | 40                 | +                  | +                    | +         | o  | +    | +    | +   | o   | o   | -    | +        | +    |
| Nitrobenzol        | C <sub>6</sub> H <sub>5</sub> NO <sub>2</sub>                                         | TR                       |                 |                    | 60                 | +                  | +                    | +         | o  | +    | +    | +   | o   | -   | -    | +        | +    |
| Nitrosensäure      |                                                                                       | siehe Salpetersäure      |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Nitrotoluol        | C <sub>7</sub> H <sub>7</sub> CH <sub>3</sub> NO <sub>2</sub>                         | TR                       |                 |                    | 20                 | +                  | +                    | +         | +  | +    | +    | +   | o   | o   | o    | +        | +    |
| Nitrotoluol        | C <sub>7</sub> H <sub>7</sub> CH <sub>3</sub> NO <sub>2</sub>                         | TR                       |                 |                    | 40                 | +                  | +                    | +         | +  | +    | +    | +   | o   | o   | -    | +        | +    |
| Nitrotoluol        | C <sub>7</sub> H <sub>7</sub> CH <sub>3</sub> NO <sub>2</sub>                         | TR                       |                 |                    | 60                 | +                  | +                    | +         | o  | +    | +    | +   | o   | o   | -    | +        | +    |
| Octal              |                                                                                       | siehe Dioctylphthalat    |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Octan              | $\begin{smallmatrix} \text{C} & \text{H} \\ 8 & 18 \end{smallmatrix}$                 | TR                       |                 | AI                 | 20                 | +                  | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Octansäure         | CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> COOH                                  |                          | 0,92            |                    | 20                 | +                  | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Octansäure         | CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> COOH                                  |                          |                 |                    | 40                 | +                  | +                    | -         | o  | +    | +    | +   | +   | -   | o    | +        | +    |
| Octansäure         | CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> COOH                                  |                          |                 |                    | 60                 | +                  | +                    | -         | -  | +    | +    | +   | +   | -   | -    | +        | +    |
| Öl                 |                                                                                       | siehe Mineralöle         |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |

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+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung         | Formel                                          | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelstahl (1.4571)       | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|---------------------|-------------------------------------------------|--------------------|-----------------|--------------------|--------------------|--------------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Oleinsäure          |                                                 |                    |                 |                    |                    | siehe Ölsäure            |                      |           |    |      |      |     |     |     |      |          |      |
| Oleum               | H <sub>2</sub> SO <sub>4</sub> +SO <sub>3</sub> |                    |                 |                    | 20                 | +                        | +                    | -         | -  | -    | +    | -   | +   | -   | -    | +        | +    |
| Ölsäure             | $\text{C}_{18}\text{H}_{34}\text{O}_2$          | TR                 | 0,90            |                    | 20                 | +                        | +                    | -         | +  | +    | +    | +   | +   | o   | -    | +        | +    |
| Ölsäure             | $\text{C}_{18}\text{H}_{34}\text{O}_2$          | TR                 |                 |                    | 40                 | +                        | +                    | -         | +  | +    | +    | +   | o   | o   | -    | +        | +    |
| Ölsäure             | $\text{C}_{18}\text{H}_{34}\text{O}_2$          | TR                 |                 |                    | 60                 | +                        | +                    | -         | o  | +    | +    | +   | o   | -   | -    | +        | +    |
| Oxalsäure           | (CO <sub>2</sub> H) <sub>2</sub>                | 10                 |                 |                    | 20                 | +                        | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Oxalsäure           | (CO <sub>2</sub> H) <sub>2</sub>                | 10                 |                 |                    | 40                 | +                        | +                    | -         | o  | +    | +    | +   | +   | +   | +    | +        | +    |
| Oxalsäure           | (CO <sub>2</sub> H) <sub>2</sub>                | 10                 |                 |                    | 60                 | +                        | +                    | -         | o  | +    | +    | +   | +   | +   | +    | +        | +    |
| Oxalsäure           | (CO <sub>2</sub> H) <sub>2</sub>                | GL                 | 1,65            |                    | 20                 | +                        | +                    | -         | +  | +    | +    | o   | +   | o   | +    | +        | +    |
| Oxalsäure           | (CO <sub>2</sub> H) <sub>2</sub>                | GL                 |                 |                    | 40                 | +                        | +                    | -         | o  | +    | +    | o   | +   | o   | o    | +        | +    |
| Oxalsäure           | (CO <sub>2</sub> H) <sub>2</sub>                | GL                 |                 |                    | 60                 | +                        | +                    | -         | o  | o    | +    | o   | +   | o   | o    | +        | +    |
| Oxidiessigsäure 2,2 |                                                 |                    |                 |                    |                    | siehe Diglykolsäure      |                      |           |    |      |      |     |     |     |      |          |      |
| Palatinol C         |                                                 |                    |                 |                    |                    | siehe Dibutylphthalat    |                      |           |    |      |      |     |     |     |      |          |      |
| Paraffinöl          | C <sub>n</sub> H <sub>n</sub>                   | TR                 | 0,93            |                    | 20                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Paraffinöl          | C <sub>n</sub> H <sub>n</sub>                   | TR                 |                 |                    | 40                 | +                        | +                    | +         | +  | +    | +    | +   | +   | o   | -    | +        | +    |
| Paraffinöl          | C <sub>n</sub> H <sub>n</sub>                   | TR                 |                 |                    | 60                 | +                        | +                    | +         | +  | +    | +    | +   | +   | o   | -    | +        | +    |
| Pektin              |                                                 | 10                 |                 |                    | 20                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Pentanol-1          |                                                 |                    |                 |                    |                    | siehe Amylalkohol        |                      |           |    |      |      |     |     |     |      |          |      |
| Pentylacetat        |                                                 |                    |                 |                    |                    | siehe Amylacetat         |                      |           |    |      |      |     |     |     |      |          |      |
| Pentylchlorid       |                                                 |                    |                 |                    |                    | siehe Amylchlorid        |                      |           |    |      |      |     |     |     |      |          |      |
| Perchlorethylen     | C <sub>2</sub> Cl <sub>4</sub>                  | TR                 |                 |                    | 20                 | +                        | +                    | -         | -  | +    | +    | +   | +   | -   | -    | +        | +    |
| Perchlorethylen     | C <sub>2</sub> Cl <sub>4</sub>                  | TR                 |                 |                    | 40                 | +                        | +                    | -         | -  | +    | +    | +   | +   | -   | -    | +        | +    |
| Perchlorethylen     | C <sub>2</sub> Cl <sub>4</sub>                  | TR                 |                 |                    | 60                 | o                        | +                    | -         | -  | +    | +    | +   | +   | -   | -    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | 20                 |                 |                    | 20                 | +                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | 20                 |                 |                    | 40                 | +                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | 20                 |                 |                    | 60                 | +                        | +                    | -         | +  | +    | +    | +   | o   | -   | o    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | 50                 | 1,40            |                    | 20                 | +                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | 50                 |                 |                    | 40                 | +                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | 50                 |                 |                    | 60                 | +                        | +                    | -         | o  | +    | +    | +   | o   | -   | o    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | 70                 | 1,55            |                    | 20                 | +                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | 70                 |                 |                    | 40                 | +                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | 70                 |                 |                    | 60                 | +                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | GL                 |                 |                    | 20                 | +                        | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | GL                 |                 |                    | 40                 | +                        | +                    | -         | o  | +    | +    | +   | +   | -   | +    | +        | +    |
| Perchlorsäure       | HClO <sub>4</sub>                               | GL                 |                 |                    | 60                 | o                        | +                    | -         | -  | +    | +    | +   | +   | -   | +    | +        | +    |
| Peressigsäure       |                                                 | TR                 |                 |                    | 20                 | +                        | -                    | -         | -  | +    | +    | -   | -   | -   | -    | +        | -    |
| Peressigsäure       |                                                 | TR                 |                 |                    | 40                 | +                        | -                    | -         | -  | +    | +    | -   | -   | -   | -    | +        | -    |
| Peressigsäure       |                                                 | TR                 |                 |                    | 60                 | +                        | -                    | -         | -  | +    | +    | -   | -   | -   | -    | +        | -    |
| Petrolether         |                                                 | TR                 | 0,69            | AI                 | 20                 | +                        | +                    | +         | -  | +    | +    | +   | +   | +   | o    | +        | +    |
| Petrolether         |                                                 | TR                 |                 |                    | 40                 | +                        | +                    | +         | -  | +    | +    | +   | +   | o   | -    | +        | +    |
| Petrolether         |                                                 | TR                 |                 |                    | 60                 | +                        | +                    | +         | -  | +    | +    | +   | o   | -   | -    | +        | +    |
| Petroleum           |                                                 | TR                 | 0,81            | AII                | 20                 | +                        | +                    | +         | +  | +    | +    | o   | +   | +   | o    | +        | +    |
| Petroleum           |                                                 | TR                 |                 |                    | 40                 | +                        | +                    | +         | +  | +    | +    | o   | +   | +   | -    | +        | +    |
| Petroleum           |                                                 | TR                 |                 |                    | 60                 | +                        | +                    | +         | +  | +    | +    | o   | +   | +   | -    | +        | +    |
| Phenol              | C <sub>6</sub> H <sub>6</sub> O                 | 100                |                 |                    | 20                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Phenol              | C <sub>6</sub> H <sub>6</sub> O                 | 100                |                 |                    | 40                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | o    | +        | +    |
| Phenol              | C <sub>6</sub> H <sub>6</sub> O                 | 100                |                 |                    | 60                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | o    | +        | +    |
| Phenol              | C <sub>6</sub> H <sub>6</sub> O                 | 50                 |                 |                    | 20                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Phenol              | C <sub>6</sub> H <sub>6</sub> O                 | 50                 |                 |                    | 40                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | o    | +        | +    |
| Phenol              | C <sub>6</sub> H <sub>6</sub> O                 | 50                 |                 |                    | 60                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | o    | +        | +    |
| Phenol              | C <sub>6</sub> H <sub>6</sub> O                 | 90                 |                 |                    | 20                 | +                        | +                    | +         | +  | +    | +    | +   | +   | +   | -    | +        | +    |
| Phenol              | C <sub>6</sub> H <sub>6</sub> O                 | 90                 |                 |                    | 40                 | +                        | +                    | +         | +  | +    | +    | +   | o   | +   | -    | +        | +    |
| Phenol              | C <sub>6</sub> H <sub>6</sub> O                 | 90                 |                 |                    | 60                 | +                        | +                    | +         | +  | +    | +    | +   | o   | o   | -    | +        | +    |
| Phenylchlorid       |                                                 |                    |                 |                    |                    | siehe Chlorbenzol        |                      |           |    |      |      |     |     |     |      |          |      |
| Phosphorchlorid     |                                                 |                    |                 |                    |                    | siehe Phosphortrichlorid |                      |           |    |      |      |     |     |     |      |          |      |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fassungspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung        | Formel                                                              | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelsstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|--------------------|---------------------------------------------------------------------|--------------------|-----------------|--------------------|--------------------|---------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 30                 | 1,18            |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 30                 |                 |                    | 40                 | +                   | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 30                 |                 |                    | 60                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 50                 |                 |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 50                 |                 |                    | 40                 | +                   | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 50                 |                 |                    | 60                 | o                   | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 85                 | 1,69            |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 85                 |                 |                    | 40                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 85                 |                 |                    | 60                 | o                   | +                    | -         | +  | +    | +    | +   | o   | -   | +    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 95                 | 1,70            |                    | 20                 | -                   | +                    | -         | +  | +    | +    | o   | +   | -   | o    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 95                 |                 |                    | 40                 | -                   | +                    | -         | o  | +    | +    | o   | +   | -   | o    | +        | +    |
| Phosphorsäure      | H <sub>3</sub> PO <sub>4</sub>                                      | 95                 |                 |                    | 60                 | -                   | o                    | -         | -  | +    | +    | o   | o   | -   | o    | +        | +    |
| Phosphortrichlorid | POCl <sub>3</sub>                                                   | TR                 | 1,57            |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phosphortrichlorid | POCl <sub>3</sub>                                                   | TR                 |                 |                    | 40                 | o                   | o                    | -         | o  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phosphortrichlorid | POCl <sub>3</sub>                                                   | TR                 |                 |                    | 60                 | -                   | -                    | -         | o  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phthalsäure        | C <sub>6</sub> H <sub>4</sub> (COOH) <sub>2</sub> ·H <sub>2</sub> O | 50                 |                 |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phthalsäure        | C <sub>6</sub> H <sub>4</sub> (COOH) <sub>2</sub> ·H <sub>2</sub> O | 50                 |                 |                    | 40                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phthalsäure        | C <sub>6</sub> H <sub>4</sub> (COOH) <sub>2</sub> ·H <sub>2</sub> O | 50                 |                 |                    | 60                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Phthalsäure        | C <sub>6</sub> H <sub>4</sub> (COOH) <sub>2</sub> ·H <sub>2</sub> O | GL                 | 1,59            |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | o   | -   | +    | +        | +    |
| Phthalsäure        | C <sub>6</sub> H <sub>4</sub> (COOH) <sub>2</sub> ·H <sub>2</sub> O | GL                 |                 |                    | 40                 | +                   | +                    | -         | +  | +    | +    | +   | o   | -   | +    | +        | +    |
| Phthalsäure        | C <sub>6</sub> H <sub>4</sub> (COOH) <sub>2</sub> ·H <sub>2</sub> O | GL                 |                 |                    | 60                 | +                   | +                    | -         | +  | +    | +    | +   | -   | -   | o    | +        | +    |
| Polyol             |                                                                     |                    | 1,78            |                    | 20                 | +                   | +                    | +         | -  | +    | +    | +   | +   | +   | +    | +        | +    |
| Pottasche          | siehe Kaliumcarbonat                                                |                    |                 |                    |                    |                     |                      |           |    |      |      |     |     |     |      |          |      |
| Propandiol         | siehe Propylenglykol                                                |                    |                 |                    |                    |                     |                      |           |    |      |      |     |     |     |      |          |      |
| Propanol           | C <sub>3</sub> H <sub>8</sub> O                                     | TR                 |                 | B                  | 20                 | +                   | +                    | +         | +  | +    | +,1) | +   | +   | +   | o    | +        | +    |
| Propanol           | C <sub>3</sub> H <sub>8</sub> O                                     | TR                 |                 |                    | 40                 | +                   | +                    | +         | +  | +    | +,1) | +   | +   | +   | o    | +        | +    |
| Propanol           | C <sub>3</sub> H <sub>8</sub> O                                     | TR                 |                 |                    | 60                 | +                   | +                    | +         | +  | +    | +,1) | +   | +   | +   | o    | +        | +    |
| Propanon           | siehe Aceton                                                        |                    |                 |                    |                    |                     |                      |           |    |      |      |     |     |     |      |          |      |
| Propenoxid         | siehe Propylenoxyd                                                  |                    |                 |                    |                    |                     |                      |           |    |      |      |     |     |     |      |          |      |
| Propionsäure       | C <sub>3</sub> H <sub>7</sub> O <sub>2</sub>                        | 50                 |                 |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | o    | +        | +    |
| Propionsäure       | C <sub>3</sub> H <sub>7</sub> O <sub>2</sub>                        | 50                 |                 |                    | 40                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | o    | +        | +    |
| Propionsäure       | C <sub>3</sub> H <sub>7</sub> O <sub>2</sub>                        | 50                 |                 |                    | 60                 | +                   | +                    | -         | +  | +    | +    | +   | o   | -   | o    | +        | +    |
| Propionsäure       | C <sub>3</sub> H <sub>7</sub> O <sub>2</sub>                        | TR                 | 0,99            |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Propionsäure       | C <sub>3</sub> H <sub>7</sub> O <sub>2</sub>                        | TR                 |                 |                    | 40                 | +                   | +                    | -         | o  | +    | +    | +   | +   | -   | +    | +        | +    |
| Propionsäure       | C <sub>3</sub> H <sub>7</sub> O <sub>2</sub>                        | TR                 |                 |                    | 60                 | +                   | +                    | -         | o  | +    | +    | +   | +   | -   | o    | +        | +    |
| Propylacetat       | siehe Isopropylacetat                                               |                    |                 |                    |                    |                     |                      |           |    |      |      |     |     |     |      |          |      |
| Propylenaldehyd    | C <sub>3</sub> H <sub>4</sub> O                                     | TR                 |                 | AI                 | 20                 | +                   | +                    | +         | -  | +    | +    | +   | +   | +   | +    | +        | +    |
| Propylenglykol     | C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>                        | TR                 | 1,04            |                    | 20                 | +                   | +                    | +         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Propylenglykol     | C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>                        | TR                 |                 |                    | 40                 | +                   | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Propylenglykol     | C <sub>3</sub> H <sub>8</sub> O <sub>2</sub>                        | TR                 |                 |                    | 60                 | +                   | +                    | +         | +  | +    | +    | +   | o   | -   | +    | +        | +    |
| Propylenoxid       | C <sub>3</sub> H <sub>6</sub> O                                     | TR                 | 0,83            | AI                 | 20                 | +                   | +                    | +         | +  | +    | +    | +   | -   | -   | -    | +        | +    |
| Propylenoxid       | C <sub>3</sub> H <sub>6</sub> O                                     | TR                 |                 |                    | 40                 | +                   | +                    | +         | +  | +    | +    | +   | -   | -   | -    | +        | +    |
| Pyranon            | siehe Diacetonalkohol                                               |                    |                 |                    |                    |                     |                      |           |    |      |      |     |     |     |      |          |      |
| Pyridin            | C <sub>5</sub> H <sub>5</sub> N                                     | TR                 | 0,99            | B                  | 20                 | +                   | +                    | +         | o  | +    | +    | +   | o   | -   | +    | +        | +    |
| Pyridin            | C <sub>5</sub> H <sub>5</sub> N                                     | TR                 |                 |                    | 40                 | +                   | +                    | +         | o  | +    | +    | +   | -   | -   | o    | +        | +    |
| Pyridin            | C <sub>5</sub> H <sub>5</sub> N                                     | TR                 |                 |                    | 60                 | +                   | +                    | +         | o  | o    | +    | +   | -   | -   | o    | +        | +    |
| Pyrogallol         | C <sub>6</sub> H <sub>3</sub> (OH) <sub>3</sub> -1,2,3              | 10                 |                 |                    | 20                 | +                   | +                    | +         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Pyrogallol         | C <sub>6</sub> H <sub>3</sub> (OH) <sub>3</sub> -1,2,3              | 10                 |                 |                    | 40                 | +                   | +                    | +         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Pyrogallol         | C <sub>6</sub> H <sub>3</sub> (OH) <sub>3</sub> -1,2,3              | 10                 |                 |                    | 60                 | +                   | +                    | +         | +  | +    | +    | +   | +   | -   | +    | +        | +    |
| Pyrogallussäure    | siehe Pyrogallol                                                    |                    |                 |                    |                    |                     |                      |           |    |      |      |     |     |     |      |          |      |
| Quecksilbercyanid  | Hg(CN) <sub>2</sub>                                                 | TR                 |                 |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Quecksilbercyanid  | Hg(CN) <sub>2</sub>                                                 | TR                 |                 |                    | 40                 | +                   | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Quecksilbercyanid  | Hg(CN) <sub>2</sub>                                                 | TR                 |                 |                    | 60                 | +                   | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Quecksilbernitrat  | Hg(NO <sub>3</sub> ) <sub>2</sub>                                   | GL                 |                 |                    | 20                 | +                   | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Quecksilbernitrat  | Hg(NO <sub>3</sub> ) <sub>2</sub>                                   | GL                 |                 |                    | 40                 | +                   | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung         | Formel                            | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelstahl (1.4571)        | Hastelloy C (2.4610) | Aluminium | PP                        | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|---------------------|-----------------------------------|--------------------|-----------------|--------------------|--------------------|---------------------------|----------------------|-----------|---------------------------|------|------|-----|-----|-----|------|----------|------|
| Quecksilbernitrat   | Hg(NO <sub>3</sub> ) <sub>2</sub> | GL                 |                 |                    | 60                 | +                         | +                    | -         | +                         | +    | +    | +   | +   | -   | +    | +        | +    |
| Rizinusöl           |                                   | H                  | 0,96            |                    | 20                 | +                         | +                    | +         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Rizinusöl           |                                   | H                  |                 |                    | 40                 | +                         | +                    | +         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Rizinusöl           |                                   | H                  |                 |                    | 60                 | +                         | +                    | +         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Salmiak             | siehe Ammoniumchlorid             |                    |                 |                    |                    |                           |                      |           |                           |      |      |     |     |     |      |          |      |
| Salmiakgeist        | siehe Ammoniakwasser              |                    |                 |                    |                    |                           |                      |           |                           |      |      |     |     |     |      |          |      |
| Salpetersäure       | HNO <sub>3</sub>                  | 10                 | 1,05            |                    | 20                 | <sup>+</sup> <sub>+</sub> | +                    | -         | <sup>+</sup> <sub>+</sub> | +    | +    | 0   | +   | -   | +    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 10                 |                 |                    | 40                 | <sup>+</sup> <sub>+</sub> | +                    | -         | 0                         | +    | +    | 0   | +   | -   | +    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 10                 |                 |                    | 60                 | <sup>+</sup> <sub>+</sub> | +                    | -         | 0                         | +    | +    | 0   | +   | -   | 0    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 30                 | 1,18            |                    | 20                 | <sup>+</sup> <sub>+</sub> | +                    | -         | 0                         | +    | +    | -   | +   | -   | +    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 30                 |                 |                    | 40                 | <sup>+</sup> <sub>+</sub> | +                    | -         | 0                         | +    | +    | -   | +   | -   | +    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 30                 |                 |                    | 60                 | 0                         | +                    | -         | -                         | +    | +    | -   | +   | -   | 0    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 50                 | 1,31            |                    | 20                 | <sup>+</sup> <sub>+</sub> | +                    | -         | 0                         | +    | +    | -   | +   | -   | -    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 50                 |                 |                    | 40                 | 0                         | +                    | -         | -                         | +    | +    | -   | 0   | -   | -    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 50                 |                 |                    | 60                 | 0                         | 0                    | -         | -                         | +    | +    | -   | 0   | -   | -    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 65                 | 1,41            |                    | 20                 | <sup>+</sup> <sub>+</sub> | +                    | -         | -                         | +    | +    | -   | 0   | -   | -    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 65                 |                 |                    | 40                 | 0                         | +                    | -         | -                         | +    | +    | -   | 0   | -   | -    | +        | +    |
| Salpetersäure       | HNO <sub>3</sub>                  | 65                 |                 |                    | 60                 | 0                         | 0                    | -         | -                         | +    | +    | -   | 0   | -   | -    | +        | +    |
| Salpetrige Säure    | HNO <sub>2</sub>                  |                    |                 |                    | 20                 | 0                         | +                    | -         | 0                         | +    | +    | +   | +   | -   | 0    | +        | +    |
| Salpetrige Säure    | HNO <sub>2</sub>                  |                    |                 |                    | 40                 | 0                         | +                    | -         | 0                         | +    | +    | +   | +   | -   | 0    | +        | +    |
| Salpetrige Säure    | HNO <sub>2</sub>                  |                    |                 |                    | 60                 | 0                         | +                    | -         | -                         | +    | +    | +   | +   | -   | -    | +        | +    |
| Salzsäure           | HCl                               | 10                 | 1,05            |                    | 20                 | -                         | +                    | -         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Salzsäure           | HCl                               | 10                 |                 |                    | 40                 | -                         | 0                    | -         | +                         | +    | +    | +   | +   | 0   | +    | +        | +    |
| Salzsäure           | HCl                               | 10                 |                 |                    | 60                 | -                         | 0                    | -         | +                         | +    | +    | +   | +   | -   | +    | +        | +    |
| Salzsäure           | HCl                               | 30                 | 1,15            |                    | 20                 | -                         | +                    | -         | +                         | +    | +    | +   | +   | -   | +    | +        | +    |
| Salzsäure           | HCl                               | 30                 |                 |                    | 40                 | -                         | 0                    | -         | +                         | +    | +    | +   | +   | -   | 0    | +        | +    |
| Salzsäure           | HCl                               | 30                 |                 |                    | 60                 | -                         | 0                    | -         | +                         | +    | +    | +   | 0   | -   | 0    | +        | +    |
| Salzsäure           | HCl                               | konz.              | 1,20            |                    | 20                 | -                         | +                    | -         | +                         | +    | +    | +   | +   | -   | +    | +        | +    |
| Salzsäure           | HCl                               | konz.              |                 |                    | 40                 | -                         | 0                    | -         | +                         | +    | +    | +   | +   | -   | 0    | +        | +    |
| Salzsäure           | HCl                               | konz.              |                 |                    | 60                 | -                         | 0                    | -         | 0                         | +    | +    | 0   | 0   | -   | 0    | +        | +    |
| Schwefelchlorid     | S <sub>2</sub> Cl <sub>2</sub>    | 10                 |                 |                    | 20                 | 0                         | +                    | 0         | 0                         | +    | +    | -   | +   | -   | -    | +        | +    |
| Schwefelether       | siehe Ether                       |                    |                 |                    |                    |                           |                      |           |                           |      |      |     |     |     |      |          |      |
| Schwefelkohlenstoff | CS <sub>2</sub>                   | TR                 | 1,27            | AI                 | 20                 | <sup>+</sup> <sub>+</sub> | +                    | +         | <sup>+</sup> <sub>+</sub> | +    | +    | 0   | +   | -   | 0    | +        | +    |
| Schwefelkohlenstoff | CS <sub>2</sub>                   | TR                 |                 |                    | 40                 | <sup>+</sup> <sub>+</sub> | +                    | +         | 0                         | +    | +    | 0   | +   | -   | -    | +        | +    |
| Schwefelkohlenstoff | CS <sub>2</sub>                   | TR                 |                 |                    | 60                 | +                         | +                    | +         | 0                         | +    | +    | -   | +   | -   | -    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 40                 | 1,30            |                    | 20                 | 0                         | +                    | -         | +                         | +    | +    | +   | +   | 0   | +    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 40                 |                 |                    | 40                 | -                         | +                    | -         | +                         | +    | +    | +   | +   | 0   | +    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 40                 |                 |                    | 60                 | -                         | 0                    | -         | 0                         | +    | +    | +   | +   | -   | +    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 80                 | 1,73            |                    | 20                 | 0                         | +                    | -         | +                         | +    | +    | +   | +   | -   | +    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 80                 |                 |                    | 40                 | -                         | 0                    | -         | <sup>+</sup> <sub>+</sub> | +    | +    | 0   | +   | -   | +    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 80                 |                 |                    | 60                 | -                         | 0                    | -         | 0                         | +    | +    | 0   | +   | -   | 0    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 90                 | 1,82            |                    | 20                 | <sup>+</sup> <sub>+</sub> | +                    | -         | 0                         | +    | +    | 0   | +   | -   | +    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 90                 |                 |                    | 40                 | 0                         | +                    | -         | 0                         | +    | +    | 0   | +   | -   | +    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 90                 |                 |                    | 60                 | 0                         | +                    | -         | 0                         | +    | +    | 0   | +   | -   | 0    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 98                 | 1,84            |                    | 20                 | <sup>+</sup> <sub>+</sub> | +                    | -         | 0                         | +    | +    | 0   | +   | -   | 0    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 98                 |                 |                    | 40                 | 0                         | +                    | -         | 0                         | +    | +    | 0   | 0   | -   | 0    | +        | +    |
| Schwefelsäure       | H <sub>2</sub> SO <sub>4</sub>    | 98                 |                 |                    | 60                 | 0                         | +                    | -         | 0                         | +    | +    | -   | -   | -   | 0    | +        | +    |
| Schweflige Säure    | H <sub>2</sub> SO <sub>3</sub>    | 50                 |                 |                    | 20                 | 0                         | +                    | -         | +                         | +    | +    | +   | +   | 0   | +    | +        | +    |
| Schweflige Säure    | H <sub>2</sub> SO <sub>3</sub>    | 50                 |                 |                    | 40                 | 0                         | +                    | -         | +                         | +    | +    | +   | +   | -   | +    | +        | +    |
| Schweflige Säure    | H <sub>2</sub> SO <sub>3</sub>    | 50                 |                 |                    | 60                 | -                         | 0                    | -         | +                         | +    | +    | +   | 0   | -   | +    | +        | +    |
| Silbernitrat        | AgNO <sub>3</sub>                 | 8                  | 1,07            |                    | 20                 | +                         | +                    | -         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Silbernitrat        | AgNO <sub>3</sub>                 | 8                  |                 |                    | 40                 | +                         | +                    | -         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Silbernitrat        | AgNO <sub>3</sub>                 | 8                  |                 |                    | 60                 | +                         | +                    | -         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Siliconöl           |                                   | TR                 | 1,06            |                    | 20                 | +                         | +                    | +         | +                         | +    | +    | +   | +   | +   | 0    | +        | +    |
| Siliconöl           |                                   | TR                 |                 |                    | 40                 | +                         | +                    | +         | +                         | +    | +    | +   | +   | +   | 0    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, 0 = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig





## Beständigkeitsliste

| Bezeichnung           | Formel                                           | Konzentration in %      | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in °C] | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP  | PVDF | ETFE | PFS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-----------------------|--------------------------------------------------|-------------------------|-----------------|--------------------|--------------------|--------------------|----------------------|-----------|-----|------|------|-----|-----|-----|------|----------|------|
| Siliconöl             |                                                  | TR                      |                 |                    | 60                 | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | o    | +        | +    |
| Soda                  |                                                  | siehe Natriumbicarbonat |                 |                    |                    |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Speiseöl              |                                                  | H                       |                 |                    | 20                 | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Speiseöl              |                                                  | H                       |                 |                    | 40                 | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | o    | +        | +    |
| Speiseöl              |                                                  | H                       |                 |                    | 60                 | +                  | +                    | +         | o   | +    | +    | +   | +   | +   | -    | +        | +    |
| Spindelöl             |                                                  | TR                      |                 |                    | 20                 | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | o    | +        | +    |
| Spindelöl             |                                                  | TR                      |                 |                    | 40                 | +                  | +                    | +         | o   | +    | +    | +   | +   | +   | -    | +        | +    |
| Spindelöl             |                                                  | TR                      |                 |                    | 60                 | +                  | +                    | +         | o   | +    | +    | +   | o   | o   | -    | +        | +    |
| Spiritus              |                                                  | siehe Ethanol           |                 |                    |                    |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Stärkegummi           |                                                  | siehe Dextrin           |                 |                    |                    |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Styrol                | C <sub>8</sub> H <sub>8</sub> CHCH <sub>3</sub>  | TR                      | 0,91            | AII                | 20                 | +                  | +                    | +         | o   | o    | +    | +   | o   | -   | -    | +        | +    |
| Sulfitlauge           |                                                  | siehe Calciumbisulfit   |                 |                    |                    |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Sylvin                |                                                  | siehe Kaliumchlorid     |                 |                    |                    |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Terpentinöl           |                                                  | H                       | 0,86            |                    | 20                 | +                  | +                    | +         | -   | +    | +    | +   | +   | +   | -    | +        | +    |
| Terpentinöl           |                                                  | H                       |                 |                    | 40                 | +                  | +                    | +         | -   | o    | +    | +   | +   | +   | -    | +        | +    |
| Terpentinöl           |                                                  | H                       |                 |                    | 60                 | +                  | +                    | +         | -   | o    | +    | +   | +   | +   | -    | +        | +    |
| Testbenzin            |                                                  |                         |                 | AII                |                    | +1)                | +                    | +         | +1) | +    | +    | o   | +   | o   | -    | +        | +    |
| Tetrachlorethan       | Cl <sub>2</sub> CH-CHCl <sub>2</sub>             | TR                      | 1,60            |                    | 20                 | +                  | +                    | -         | o   | +    | +    | +   | o   | -   | -    | +        | +    |
| Tetrachlorethan       | Cl <sub>2</sub> CH-CHCl <sub>2</sub>             | TR                      |                 |                    | 40                 | +                  | +                    | -         | o   | +    | +    | +   | o   | -   | -    | +        | +    |
| Tetrachlorethan       | Cl <sub>2</sub> CH-CHCl <sub>2</sub>             | TR                      |                 |                    | 60                 | +                  | +                    | -         | -   | o    | +    | +   | o   | -   | -    | +        | +    |
| Tetrachlorethylen     |                                                  | siehe Perchlorethylen   |                 |                    |                    |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Tetrachlorkohlenstoff | CCl <sub>4</sub>                                 | TR                      | 1,59            |                    | 20                 | +1)                | +                    | +         | o   | +    | +1)  | o   | +   | -   | o    | +        | +    |
| Tetrachlorkohlenstoff | CCl <sub>4</sub>                                 | TR                      |                 |                    | 40                 | +1)                | +                    | +         | o   | +    | +1)  | o   | +   | -   | -    | +        | +    |
| Tetrachlorkohlenstoff | CCl <sub>4</sub>                                 | TR                      |                 |                    | 60                 | +1)                | +                    | o         | -   | +    | +1)  | o   | +   | -   | -    | +        | +    |
| Tetrahydrofuran       | C <sub>4</sub> H <sub>8</sub> O                  | TR                      | 0,89            | B                  | 20                 | +1)                | +                    | -         | o   | o    | +    | +   | o   | -   | o    | +        | +    |
| Tetrahydrofuran       | C <sub>4</sub> H <sub>8</sub> O                  | TR                      |                 |                    | 40                 | +1)                | +                    | -         | -   | -    | +    | +   | o   | -   | -    | +        | +    |
| Tetrahydrofuran       | C <sub>4</sub> H <sub>8</sub> O                  | TR                      |                 |                    | 60                 | +1)                | +                    | -         | -   | -    | +    | +   | o   | -   | -    | +        | +    |
| Tetrahydronaphtalin   |                                                  | siehe Tetralin          |                 |                    |                    |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Tetralin              | C <sub>10</sub> H <sub>12</sub>                  | 100                     | 0,97            | AIII               | 20                 | +                  | +                    | +         | -   | +    | +    | +   | +   | -   | o    | +        | +    |
| Tetralin              | C <sub>10</sub> H <sub>12</sub>                  | 100                     |                 |                    | 40                 | +                  | +                    | +         | -   | +    | +    | +   | +   | -   | -    | +        | +    |
| Tetralin              | C <sub>10</sub> H <sub>12</sub>                  | 100                     |                 |                    | 60                 | +                  | +                    | +         | -   | +    | +    | +   | +   | -   | -    | +        | +    |
| Thiofuran             |                                                  | siehe Thiophen          |                 |                    |                    |                    |                      |           |     |      |      |     |     |     |      |          |      |
| Thionylchlorid        | SOCl <sub>2</sub>                                | TR                      | 1,66            |                    | 20                 | +                  | +                    | -         | -   | +    | +    | +   | -   | -   | +    | +        | +    |
| Thionylchlorid        | SOCl <sub>2</sub>                                | TR                      |                 |                    | 40                 | +                  | +                    | -         | -   | +    | +    | +   | -   | -   | +    | +        | +    |
| Thionylchlorid        | SOCl <sub>2</sub>                                | TR                      |                 |                    | 60                 | +                  | +                    | -         | -   | +    | +    | +   | -   | -   | +    | +        | +    |
| Thiophen              | C <sub>4</sub> H <sub>4</sub> S                  |                         |                 | AI                 | 20                 | +                  | +                    | -         | o   | +    | +    | +   | +   | -   | +    | +        | +    |
| Tinte                 |                                                  | H                       | 1,00            |                    | 20                 | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Toluol                | C <sub>7</sub> H <sub>8</sub>                    |                         | 0,87            | AI                 | 20                 | +                  | +                    | +         | o   | +    | +    | +   | o   | -   | o    | +        | +    |
| Toluol                | C <sub>7</sub> H <sub>8</sub>                    |                         |                 |                    | 40                 | +                  | +                    | +         | o   | +    | +    | +   | o   | -   | -    | +        | +    |
| Toluol                | C <sub>7</sub> H <sub>8</sub>                    |                         |                 |                    | 60                 | +                  | +                    | +         | o   | +    | +    | +   | o   | -   | -    | +        | +    |
| Transformatoröl       |                                                  | TR                      |                 |                    | 20                 | +                  | +                    | +         | o   | +    | +    | +   | +   | +   | o    | +        | +    |
| Transformatoröl       |                                                  | TR                      |                 |                    | 40                 | +                  | +                    | +         | o   | +    | +    | +   | +   | +   | -    | +        | +    |
| Transformatoröl       |                                                  | TR                      |                 |                    | 60                 | +                  | +                    | +         | o   | +    | +    | +   | +   | +   | -    | +        | +    |
| Traubenzuckerlösung   | C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>    | GL                      | 1,13            |                    | 20                 | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Traubenzuckerlösung   | C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>    | GL                      |                 |                    | 40                 | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Traubenzuckerlösung   | C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>    | GL                      |                 |                    | 60                 | +                  | +                    | +         | +   | +    | +    | +   | +   | +   | +    | +        | +    |
| Tributylphosphat      | C <sub>12</sub> H <sub>27</sub> O <sub>4</sub> P | TR                      | 0,98            |                    | 20                 | +                  | +                    | o         | +   | +    | +    | +   | +   | -   | +    | +        | +    |
| Tributylphosphat      | C <sub>12</sub> H <sub>27</sub> O <sub>4</sub> P | TR                      |                 |                    | 40                 | +                  | +                    | o         | +   | +    | +    | +   | o   | -   | +    | +        | +    |
| Tributylphosphat      | C <sub>12</sub> H <sub>27</sub> O <sub>4</sub> P | TR                      |                 |                    | 60                 | +                  | +                    | o         | +   | +    | +    | +   | -   | -   | +    | +        | +    |
| Trichlorbenzol        | C <sub>6</sub> H <sub>3</sub> Cl <sub>3</sub>    |                         |                 |                    | 20                 | +1)                | +                    | -         | o   | +    | +    | -   | +   | -   | +    | +        | +    |
| Trichlorbenzol        | C <sub>6</sub> H <sub>3</sub> Cl <sub>3</sub>    |                         |                 |                    | 40                 | +1)                | +                    | -         | o   | +    | +    | -   | +   | -   | +    | +        | +    |
| Trichlorbenzol        | C <sub>6</sub> H <sub>3</sub> Cl <sub>3</sub>    |                         |                 |                    | 60                 | +1)                | +                    | -         | o   | +    | +    | -   | +   | -   | o    | +        | +    |
| Trichloressigsäure    | CCl <sub>3</sub> CO <sub>2</sub> H               | 50                      |                 |                    | 20                 | o                  | +                    | -         | +   | +    | +    | +   | -   | -   | +    | +        | +    |
| Trichloressigsäure    | CCl <sub>3</sub> CO <sub>2</sub> H               | 50                      |                 |                    | 40                 | -                  | +                    | -         | +   | +    | +    | +   | -   | -   | o    | +        | +    |
| Trichloressigsäure    | CCl <sub>3</sub> CO <sub>2</sub> H               | 50                      |                 |                    | 60                 | -                  | +                    | -         | +   | o    | +    | +   | -   | -   | -    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig.

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung           | Formel                                                                        | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-----------------------|-------------------------------------------------------------------------------|--------------------|-----------------|--------------------|--------------------|--------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Trichloressigsäure    | CCl <sub>3</sub> CO <sub>2</sub> H                                            | TR                 | 1,62            |                    | 20                 | o                  | +                    | -         | +  | +    | +    | +   | -   | o   | +    | +        | +    |
| Trichloressigsäure    | CCl <sub>3</sub> CO <sub>2</sub> H                                            | TR                 |                 |                    | 40                 | -                  | +                    | -         | o  | +    | +    | +   | -   | -   | o    | +        | +    |
| Trichloressigsäure    | CCl <sub>3</sub> CO <sub>2</sub> H                                            | TR                 |                 |                    | 60                 | -                  | +                    | -         | o  | o    | +    | +   | -   | -   | -    | +        | +    |
| Trichlorethan         | C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub>                                 | TR                 | 1,34            |                    | 20                 | +                  | +                    | -         | o  | +    | +    | o   | o   | -   | -    | +        | +    |
| Trichlorethen         | siehe Trichlorethylen                                                         |                    |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Trichlorethylen       | C <sub>2</sub> HCl <sub>3</sub>                                               | 50                 |                 |                    | 20                 | +                  | +                    | -         | o  | +    | +    | +   | o   | -   | o    | +        | +    |
| Trichlorethylen       | C <sub>2</sub> HCl <sub>3</sub>                                               | 50                 |                 |                    | 40                 | +                  | +                    | -         | o  | +    | +    | +   | o   | -   | -    | +        | +    |
| Trichlorethylen       | C <sub>2</sub> HCl <sub>3</sub>                                               | 50                 |                 |                    | 60                 | +                  | +                    | -         | o  | +    | +    | +   | o   | -   | -    | +        | +    |
| Trichlorethylen       | C <sub>2</sub> HCl <sub>3</sub>                                               | TR                 | 1,47            |                    | 20                 | +                  | +                    | -         | o  | +    | +    | +   | +   | -   | o    | +        | +    |
| Trichlorethylen       | C <sub>2</sub> HCl <sub>3</sub>                                               | TR                 |                 |                    | 40                 | +                  | +                    | -         | o  | +    | +    | +   | o   | -   | -    | +        | +    |
| Trichlorethylen       | C <sub>2</sub> HCl <sub>3</sub>                                               | TR                 |                 |                    | 60                 | +                  | +                    | -         | -  | +    | +    | +   | o   | -   | -    | +        | +    |
| Trichlormethan        | siehe Chloroform                                                              |                    |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Trichlorphenol        | siehe Trichlorbenzol                                                          |                    |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Triethylamin          | C <sub>6</sub> H <sub>15</sub> N                                              | TR                 | 0,73            | B                  | 20                 | +                  | +                    | +         | +  | o    | +    | +   | +   | -   | +    | +        | +    |
| Triethylamin          | C <sub>6</sub> H <sub>15</sub> N                                              | TR                 |                 |                    | 40                 | +                  | +                    | +         | +  | o    | +    | +   | +   | -   | +    | +        | +    |
| Trihydroxybenzoesäure | siehe Gallussäure                                                             |                    |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Trijodmethan          | CHI <sub>3</sub>                                                              |                    |                 |                    | 20                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | o    | +        | +    |
| Trijodmethan          | CHI <sub>3</sub>                                                              |                    |                 |                    | 40                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | o    | +        | +    |
| Trijodmethan          | CHI <sub>3</sub>                                                              |                    |                 |                    | 60                 | +                  | +                    | -         | +  | +    | +    | +   | +   | o   | -    | +        | +    |
| Trikresylphosphat     | PO <sub>3</sub> (C <sub>6</sub> H <sub>4</sub> CH <sub>3</sub> ) <sub>3</sub> | TR                 | 1,13            |                    | 20                 | +                  | +                    | +         | +  | +    | +    | +   | -   | o   | o    | +        | +    |
| Trikresylphosphat     | PO <sub>3</sub> (C <sub>6</sub> H <sub>4</sub> CH <sub>3</sub> ) <sub>3</sub> | TR                 |                 |                    | 40                 | +                  | +                    | +         | o  | +    | +    | +   | -   | -   | -    | +        | +    |
| Trikresylphosphat     | PO <sub>3</sub> (C <sub>6</sub> H <sub>4</sub> CH <sub>3</sub> ) <sub>3</sub> | TR                 |                 |                    | 60                 | +                  | +                    | +         | o  | +    | +    | +   | -   | -   | -    | +        | +    |
| Trinatriumphosphat    | siehe Natriumphosphat                                                         |                    |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Triol                 | siehe Butantriol                                                              |                    |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Überchlorsäure        | siehe Perchlorsäure                                                           |                    |                 |                    |                    |                    |                      |           |    |      |      |     |     |     |      |          |      |
| Urin                  |                                                                               |                    |                 |                    | 20                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Urin                  |                                                                               |                    |                 |                    | 40                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Urin                  |                                                                               |                    |                 |                    | 60                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Vinylacetat           | C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>                                  | TR                 | 0,93            | AI                 | 20                 | +                  | +                    | -         | +  | +    | +    | +   | o   | +   | o    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig

<sup>1)</sup> bei Durchflussmesser FMC nicht beständig, <sup>2)</sup> Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung         | Formel                                                         | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°]       | Edelstahl (1.4571)        | Hastelloy C (2.4610) | Aluminium                 | PP                        | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|---------------------|----------------------------------------------------------------|--------------------|-----------------|--------------------|--------------------------|---------------------------|----------------------|---------------------------|---------------------------|------|------|-----|-----|-----|------|----------|------|
| Vinylacetat         | C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>                   | TR                 |                 |                    | 40                       | +                         | +                    | -                         | o                         | +    | +    | +   | -   | +   | o    | +        | +    |
| Vinylacetat         | C <sub>4</sub> H <sub>8</sub> O <sub>2</sub>                   | TR                 |                 |                    | 60                       | +                         | +                    | -                         | o                         | +    | +    | +   | -   | +   | o    | +        | +    |
| Vinylbenzol         |                                                                |                    |                 |                    | siehe Styrol             |                           |                      |                           |                           |      |      |     |     |     |      |          |      |
| Vinylcarbinol       |                                                                |                    |                 |                    | siehe Allylalkohol       |                           |                      |                           |                           |      |      |     |     |     |      |          |      |
| Vinylcyanid         |                                                                |                    |                 |                    | siehe Acrylnitril        |                           |                      |                           |                           |      |      |     |     |     |      |          |      |
| Vinylidenchlorid    |                                                                |                    |                 |                    | siehe Dichlorethylen 1.1 |                           |                      |                           |                           |      |      |     |     |     |      |          |      |
| Wasser              | H <sub>2</sub> O                                               |                    | 1,00            |                    | 20                       | +                         | +                    | +                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Wasser              | H <sub>2</sub> O                                               |                    |                 |                    | 40                       | +                         | +                    | +                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Wasser              | H <sub>2</sub> O                                               |                    |                 |                    | 60                       | +                         | +                    | +                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Wasser, destilliert | H <sub>2</sub> O                                               |                    | 1,00            |                    | 20                       | +                         | +                    | o                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Wasser, destilliert | H <sub>2</sub> O                                               |                    |                 |                    | 40                       | +                         | +                    | o                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Wasser, destilliert | H <sub>2</sub> O                                               |                    |                 |                    | 60                       | +                         | +                    | o                         | +                         | +    | +    | +   | +   | +   | o    | +        | +    |
| Wasserglas          | Na <sub>2</sub> SiO <sub>3</sub>                               | 20                 | 1,24            |                    | 20                       | +                         | +                    | +                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Wasserglas          | Na <sub>2</sub> SiO <sub>3</sub>                               | 20                 |                 |                    | 40                       | +                         | +                    | +                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Wasserglas          | Na <sub>2</sub> SiO <sub>3</sub>                               | 20                 |                 |                    | 60                       | +                         | +                    | +                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 3                  | 1,01            |                    | 20                       | +                         | +                    | +                         | +                         | +    | +    | +   | +   | o   | +    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 3                  |                 |                    | 40                       | +                         | +                    | +                         | +                         | +    | +    | +   | o   | -   | +    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 3                  |                 |                    | 60                       | +                         | +                    | +                         | +                         | +    | +    | +   | o   | -   | o    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 10                 | 1,04            |                    | 20                       | +                         | +                    | +                         | +                         | +    | +    | +   | +   | o   | +    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 10                 |                 |                    | 40                       | +                         | +                    | +                         | +                         | +    | +    | +   | o   | -   | o    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 10                 |                 |                    | 60                       | +                         | +                    | +                         | +                         | +    | +    | +   | o   | -   | o    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 20                 | 1,07            |                    | 20                       | <sup>+</sup> <sub>1</sub> | +                    | <sup>+</sup> <sub>1</sub> | +                         | +    | +    | +   | +   | o   | +    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 20                 |                 |                    | 40                       | <sup>+</sup> <sub>1</sub> | +                    | <sup>+</sup> <sub>1</sub> | +                         | +    | +    | +   | o   | -   | o    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 20                 |                 |                    | 60                       | <sup>+</sup> <sub>1</sub> | +                    | +                         | o                         | +    | +    | +   | o   | -   | -    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 30                 | 1,11            |                    | 20                       | <sup>+</sup> <sub>1</sub> | +                    | o                         | <sup>+</sup> <sub>1</sub> | +    | +    | +   | +   | -   | +    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 30                 |                 |                    | 40                       | <sup>+</sup> <sub>1</sub> | +                    | o                         | <sup>+</sup> <sub>1</sub> | +    | +    | +   | o   | -   | o    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 30                 |                 |                    | 60                       | <sup>+</sup> <sub>1</sub> | +                    | o                         | o                         | +    | +    | +   | o   | -   | o    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 90                 | 1,42            |                    | 20                       | <sup>+</sup> <sub>1</sub> | +                    | -                         | -                         | +    | +    | -   | +   | -   | +    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 90                 |                 |                    | 40                       | <sup>+</sup> <sub>1</sub> | +                    | -                         | -                         | o    | +    | -   | o   | -   | o    | +        | +    |
| Wasserstoffperoxid  | H <sub>2</sub> O <sub>2</sub>                                  | 90                 |                 |                    | 60                       | <sup>+</sup> <sub>1</sub> | +                    | -                         | o                         | +    | +    | -   | o   | -   | o    | +        | +    |
| Weinessig           |                                                                | H                  |                 |                    | 20                       | +                         | +                    | o                         | +                         | +    | +    | +   | -   | o   | +    | +        | +    |
| Weinessig           |                                                                | H                  |                 |                    | 40                       | +                         | +                    | o                         | +                         | +    | +    | +   | -   | o   | +    | +        | +    |
| Weinessig           |                                                                | H                  |                 |                    | 60                       | +                         | +                    | -                         | +                         | +    | +    | +   | -   | o   | o    | +        | +    |
| Weingeist           |                                                                |                    |                 |                    | siehe Ethylalkohol       |                           |                      |                           |                           |      |      |     |     |     |      |          |      |
| Weinsäure           | C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>                   | GL                 | 1,76            |                    | 20                       | +                         | +                    | -                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Weinsäure           | C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>                   | GL                 |                 |                    | 40                       | +                         | +                    | -                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Weinsäure           | C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>                   | GL                 |                 |                    | 60                       | +                         | +                    | -                         | +                         | +    | +    | +   | +   | o   | +    | +        | +    |
| Weinsteinsäure      |                                                                |                    |                 |                    | siehe Weinsäure          |                           |                      |                           |                           |      |      |     |     |     |      |          |      |
| White spirit        |                                                                |                    |                 |                    | siehe Testbenzin         |                           |                      |                           |                           |      |      |     |     |     |      |          |      |
| Wollfett            |                                                                |                    |                 |                    | siehe Lanolin            |                           |                      |                           |                           |      |      |     |     |     |      |          |      |
| Würfelsalpeter      |                                                                |                    |                 |                    | siehe Natriumnitrat      |                           |                      |                           |                           |      |      |     |     |     |      |          |      |
| Xylol               | C <sub>8</sub> H <sub>10</sub> (CH <sub>3</sub> ) <sub>2</sub> | TR                 | 0,86            | All                | 20                       | +                         | +                    | +                         | -                         | +    | +    | +   | +   | -   | -    | +        | +    |
| Xylol               | C <sub>8</sub> H <sub>10</sub> (CH <sub>3</sub> ) <sub>2</sub> | TR                 |                 |                    | 40                       | +                         | +                    | +                         | -                         | +    | +    | +   | o   | -   | -    | +        | +    |
| Xylol               | C <sub>8</sub> H <sub>10</sub> (CH <sub>3</sub> ) <sub>2</sub> | TR                 |                 |                    | 60                       | +                         | +                    | +                         | -                         | o    | +    | +   | o   | -   | -    | +        | +    |
| Zahnpasta           |                                                                | H                  |                 |                    | 20                       | +                         | +                    | +                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinkchlorid         | ZnCl <sub>2</sub>                                              | 20                 | 1,19            |                    | 20                       | +                         | +                    | -                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinkchlorid         | ZnCl <sub>2</sub>                                              | 20                 |                 |                    | 40                       | +                         | +                    | -                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinkchlorid         | ZnCl <sub>2</sub>                                              | 20                 |                 |                    | 60                       | +                         | +                    | -                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinkchlorid         | ZnCl <sub>2</sub>                                              | 75                 | 2,07            |                    | 20                       | -                         | +                    | -                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinkchlorid         | ZnCl <sub>2</sub>                                              | 75                 |                 |                    | 40                       | -                         | +                    | -                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinkchlorid         | ZnCl <sub>2</sub>                                              | 75                 |                 |                    | 60                       | -                         | +                    | -                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinksulfat          | ZnSO <sub>4</sub>                                              | 10                 | 1,11            |                    | 20                       | +                         | +                    | o                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinksulfat          | ZnSO <sub>4</sub>                                              | 10                 |                 |                    | 40                       | +                         | +                    | o                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinksulfat          | ZnSO <sub>4</sub>                                              | 10                 |                 |                    | 60                       | +                         | +                    | o                         | +                         | +    | +    | +   | +   | o   | +    | +        | +    |
| Zinksulfat          | ZnSO <sub>4</sub>                                              | GL                 | 1,38            |                    | 20                       | +                         | +                    | o                         | +                         | +    | +    | +   | +   | +   | +    | +        | +    |

TR = technisch rein, GL = gesättigte Lösung, H = handelsübliche Zusammensetzung

+ = beständig, o = bedingt beständig, - = nicht beständig,

1) bei Durchflussmesser FMC nicht beständig, 2) Fasspumpe F 424 mit Welle aus Titan beständig



## Beständigkeitsliste

| Bezeichnung     | Formel                                       | Konzentration in % | Dichte [kg/dm³] | Gefahrklasse (VbF) | Temperatur [in C°] | Edelstahl (1.4571) | Hastelloy C (2.4610) | Aluminium | PP | PVDF | ETFE | PPS | FKM | NBR | EPDM | PTFE/FEP | FFKM |
|-----------------|----------------------------------------------|--------------------|-----------------|--------------------|--------------------|--------------------|----------------------|-----------|----|------|------|-----|-----|-----|------|----------|------|
| Zinksulfat      | ZnSO <sub>4</sub>                            | GL                 |                 |                    | 40                 | +                  | +                    | o         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinksulfat      | ZnSO <sub>4</sub>                            | GL                 |                 |                    | 60                 | +                  | +                    | -         | +  | +    | +    | +   | +   | o   | +    | +        | +    |
| Zinkvitriol     |                                              |                    |                 |                    |                    | siehe Zinksulfat   |                      |           |    |      |      |     |     |     |      |          |      |
| Zinn-II-Chlorid | SnCl <sub>2</sub>                            | 20                 | 1,17            |                    | 20                 | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinn-II-Chlorid | SnCl <sub>2</sub>                            | 20                 |                 |                    | 40                 | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Zinn-II-Chlorid | SnCl <sub>2</sub>                            | 20                 |                 |                    | 60                 | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Zitronensäure   | C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> | 50                 | 1,22            |                    | 20                 | +                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Zitronensäure   | C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> | 50                 |                 |                    | 40                 | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |
| Zitronensäure   | C <sub>6</sub> H <sub>8</sub> O <sub>7</sub> | 50                 |                 |                    | 60                 | o                  | +                    | -         | +  | +    | +    | +   | +   | +   | +    | +        | +    |

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+ = beständig, o = bedingt beständig, - = nicht beständig.

<sup>1)</sup> bei Durchflussmesser FMC nicht beständig, <sup>2)</sup> Fasspumpe F 424 mit Welle aus Titan beständig



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