

# Chemical Resistance Chart



## MATERIALS LEGEND

| MATERIAL                 | DESCRIPTION                                   |
|--------------------------|---|
| PVC                      | Polyvinyl Chloride                            |
| CPVC                     | Chlorinated Polyvinyl Chloride                |
| PP                       | Polypropylene                                 |
| PVDF                     | Polyvinylidene Fluoride (KYNAR <sup>1</sup> ) |
| Teflon <sup>2</sup>      | TFE Fluorocarbons                             |
| Tefzel <sup>2</sup>      | Ethylene Tetrafluoroethylene (ETFE)           |
| PES                      | Polyethersulfone                              |
| PEEK                     | Polyetheretherketone                          |
| Kel-F                    | Chlorotrifluoroethylene (CTFE)                |
| Viton <sup>2</sup>       | Vinylidene Fluoride Hexafluoropropylene       |
| EPDM                     | Ethylene Propylene Diene Monomer              |
| Silicone                 | Polydimethylsiloxane                          |
| AFLAS <sup>3</sup>       | Polytetrafluoroethylene Propylene Copolymer   |
| Acetal                   | Acetal Homopolymer (Delrin <sup>2</sup> )     |
| Hastelloy C <sup>4</sup> | Nickel based alloy                            |

<sup>1</sup> Kynar is a trademark Elf Atochem North America, Inc.

<sup>2</sup> Teflon, Tefzel, Viton, and Delrin are registered trademarks of E. I. du Pont de Nemours & Co.

<sup>3</sup> Aflas is a registered trademark of Asahi Glass Co., Ltd.

<sup>4</sup> Hastelloy C is a registered trademark of Cabot Corp.

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| CHEMICAL              | %     | Plastics |      |     |      |        |        |     |      |       |       | Elastomers |          |       |        |              | Metals |        |          |             |
|-----------------------|-------|----------|------|-----|------|--------|--------|-----|------|-------|-------|------------|----------|-------|--------|--------------|--------|--------|----------|-------------|
|                       |       | PVC      | CPVC | PP  | PVDF | Teflon | Tefzel | PES | PEEK | Kel-F | Viton | EPDM       | Silicone | Aflas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| Acetaldehyde          |       | X        | R*   |     | X    | B      | B      | X   | A    | B*    | E*?   | D          | R        | R     | R*     | B            | B      | B      | B        | D           |
| Acetaldehyde          | 40    | X        | X    | C   | X    | B      | B      | X   | A    | B*    | D*?   | B*         | R        | R     | R*     | B            | B      | B      | A*       | D           |
| Acetamide             | 50    | X        | X    | D   | X    | A      | A      | X   |      |       | B     | D          | R*       | R     | R*     | R            | D+     |        | D        |             |
| Acetate solvents      |       | X        | X    | R   | R    | A      | C      |     |      |       | X     | B          | R?       | R     | R*     | C            | C      | R      | R        | B           |
| Acetic Acid           | 10    | E*       | C    | A   | A    | A      | A      | D   | A    | B*    | D     | R          | R*       | R*    | R*     | C            | A*     | B      | A        |             |
| Acetic Acid           | 20    | E*       | B*   | C*  | A    | A      | A      | A   | A    | B*    | C*    | R          | R*       | R*    | R*     | C            | A?     | B      | A        |             |
| Acetic Acid           | 50    | E*       | D*   | D*  | A    | A      | A      | R   | A    | B*    | C*    | R          | R*       | R*    | X      | C*           | X      | B      | A        |             |
| Acetic Acid           | 80    | X        | E*   | E*  | D*   | A      | A      | R   | A    | B*    | R*    | R          | R*       | X     | X      | C*           | X      | B      | A        |             |
| Acetic Acid           | Glac  | X        | X    | D*  | C*   | A      | A      | D*  | A    | B*    | X     | C*         | X        | X     | R      | R            | X      | B      | A        |             |
| Acetic Anhydride      | 100   | X        | X    | E*  | E*   | A      | A      | X   |      | B     | X     | B*         | R*       | R*    | R      | A*           | A*     | A      | A        |             |
| Acetone               |       | X        | X    | C*  | X    | A      | A      | X   | A    | E*    | X     | C          | R*       | R*    | R      | B            | B      | B      | B        |             |
| Acetone               | Trace | X        | D    | C   | A?   | A      | A      | B   | A    | E     | B?    | B          | R+       | R     | B      | B            | B      | B      | B        |             |
| Acetonitrile          |       | X        | X    | R   | D*   | D+     | B      | X   | R    | E     | X     | R?         | R        | R     | R+     | E            | E      |        |          |             |
| Acetophenone          |       | X        |      | D*  | E*   | A      | A      | X   |      | B     | R?    | C          | X        | B     | A*     | A            | A      | B      | E*       |             |
| Acetyl Acetone        |       | X        | X    |     | X    | R      | R      |     |      |       | X     | X          | X        |       |        |              |        |        |          |             |
| Acetyl Bromide        |       | X        | X    | C*? | D*   | B+     | B      |     | E    |       | X?    | X          | R*       | R     | R      | R            | R+     |        | E        |             |
| Acetyl Chloride       |       | X        | X    | E?  | A    | A      | A      |     | B    |       | B     | B          | R*       | R+    | R+     | A            | D+     |        | E        |             |
| Acetylene             |       | X        | X    | X   | D*   | A      | A      |     | A    |       | X     |            |          |       |        |              |        |        |          |             |
| Acrylic Acid          |       | X        | X    | X   | D*   | A      | A      | D   | X    |       | X     | D*?        | X        |       | R      | C            | C      | A*     | B        |             |
| Adipic Acid           | Sat   | D        | C    | C   | A    | A      | A      | C   | D*   |       | B     | B*         |          |       | R      | R            | E      | A      |          |             |
| Allyl Alcohol         |       | X        | X    | D   | A    | A      | A      | B   | E*   |       | C     | R          |          |       | D      | C            | A      | A      | A        |             |
| Allyl Chloride        |       | X        | X    | R   | E*   | A      | B      | A   |      | R     | D*    | X          | R        | X     | E      | E            | E      | R      | R        |             |
| Alum (AlK Sulfate)    | Sat   | D        | C    | C   | B    | B      | A      | A   |      | A     | R     | B          | R        | R     | X      | R*           | D      | B      | C        |             |
| Aluminum Ammonium Sul | Sat   | D        | C    | B?  | A    | A      | A      |     | R    |       | B     | C          | R        | X     | X      | D            | D      | B      |          |             |
| Aluminum Acetate      | Sat   | E        | E    | E   | A    | A      |        |     |      |       | C*    | C          | X        |       | D      | D            | D      |        | B        |             |
| Aluminum Bromide      | Sat   | D        | D    | D   | A    | A      | A      |     |      |       | C     | D          | R        |       |        |              |        |        |          |             |
| Aluminum Chloride     | Sat   | D        | C    | C   | C*   | A      | A      | B   | B    | A     | C     | B*         | R        |       | X      | X            | X      | X      | B?       |             |
| Aluminum Fluoride     | Sat   | D        | C    | C   | A    | B      | A      | B   |      |       | B     | B*         | R*       |       | X      | X            | D      | D      | D        |             |
| Aluminum Hydroxide    | 10    | D*       | C    | C   | A    | B      | A      | E*  |      | R     | B     | B          | R        |       | R*     | R*           | D      | D      | C*       |             |
| Aluminum Nitrate      | Sat   | D        | C    | C   | A*   | E      | A      | E   |      |       | B     | B*         | R        | X     | X      | R            | B      | R      |          |             |
| Aluminum Sulfate      | Sat   | D        | C    | C   | B    | B      | E      | B   |      | A     | D     | D          | R        | R*    | X      | C+           | B      | B      | B        |             |
| Amber Acid            | Sat   | D        | D    | D   | A    | A      | A      |     |      |       | B     | B          |          |       |        |              |        |        |          |             |
| Ammonia Gas           | 100   | D        | D    | C   | A    | A      | A      |     |      | A     | X     | C          | R        |       | E      | R            | R      |        | C        |             |
| Ammonia Liquid        | 100   | X?       | D    | E   | A    | A      | A      | A   | R    | A     | R?    | E          | B*       | R     | R+     | A            | B*     | D*     | A        |             |
| Ammonia water         | 10    | D        | C    | C   | A    | A      | A      | A   | B    | A     | D*    | B          | C*       | R     | R      | B*           | A      | B      | B*       |             |
| Ammonium Acetate      | Sat   | D        | C    | C   | C    | A      |        |     |      |       | X     | B          |          |       |        |              |        |        |          |             |
| Ammonium Bicarbonate  |       | D        |      | C   | C    | A      | A      |     |      |       |       | R          |          |       | E      | B            | A      | B      | R        |             |
| Ammonium Bifluoride   | 10    | D?       | C?   | C   | A    | A      | A      |     |      |       | B     | B          |          | X     | B      | B            | A*     | R      | R        |             |
| Ammonium Carbonate    | Sat   | D        | C    | C   | A    | A      | A      | A   | B    |       | B     | B          | R*       | R     | D      | B*           | B*     | B      | B*       |             |
| Ammonium Chloride     | Sat   | D        | C    | C   | A    | A      | A      | A   | B    | A     | B     | B          | R*       | R*    | X      | D*?          | D*?    | B      | B*       |             |
| Ammonium Fluoride     | 20    | E        | C    | C   | A    | A      | A      | A   |      |       | D     | D          |          |       | X      | R*?          | X      | R*     | A        |             |
| Ammonium Hydroxide    | 56    | D        | D    | C   | A    | A      | A      | A   | B    | R     | D*    | D          | R        | D     | X?     | B*           | B*     | B      | B*       |             |
| Ammonium Metaphosphat |       | D        | C    | C   | A    | A      | A      |     |      |       | C     | C          |          |       | R      | R            | E      | B      | R        |             |
| Ammonium Nitrate      |       | D        | D+   | C   | A    | A      | B      | B   | A    | R     | C?    | C          | R*       | R     | X      | A            | B      | B      | D*       |             |
| Ammonium Oxalate      | 10    | E        |      | C   |      | A      | A      |     |      |       | D     | D          |          | X     | X      | A            | R      | R      | C        |             |
| Ammonium Persulfate   | 10    | E        | C    | C   | A    | A      | A      |     |      | R     | R     | R          | X        |       | X      | X?           | A      | R+     | R+       |             |
| Ammonium Phosphate    |       | D        | C    | C   | A    | A      | A      | A   | B    |       | R     | C          | R        | R     | X      | B*           | C*     | B      | D*       |             |
| Ammonium Sulfate      | Sat   | D        | C    | C   | A    | A      | A      | A   | B    | B     | C?    | C          | R        | R*    | X      | B*?          | A*?    | B      | B*       |             |
| Ammonium Sulfide      | Sat   | D        | C    | C   | A    | A      | A      |     |      | A     | X     | B          |          |       | C      | C            | A      | A      | E        |             |
| Ammonium Sulfite      |       | E        | D    | C   | A    | A      | A      |     |      |       |       | R          |          |       | X      | C            | C      | C      | E        |             |
| Ammonium Thiocyanate  |       | D        | C    | D   | A    | A      | A      |     |      |       | C     | R          |          |       | X      | E            | A*     | A      | C        |             |
| Amyl Acetate          |       | X        | X    | X   | D*   | A      | A      | A   | X    | A     | X     | E*         | X        | R     | R*     | A            | A      | A      | A        | C           |
| Amyl Alcohol          |       | D        | D    | C   | A    | A      | A      | A   | B    | B     | C     | C          | X        | R*    | R      | R            | R      | D+     | B        | B           |

A: to 120°C, B: to 100°C, C: to 80°C, D: to 60°C, E: to 40°C, R: Room temperature, X: Not recommended, \*: Some mechanical damage possible, ?: Questionable data, +: May exceed (less data)

| CHEMICAL                    | %   | Plastics |      |    |      |        |     |      |       |       |      | Elastomers |       |        |              |        | Metals |          |             |
|-----------------------------|-----|----------|------|----|------|--------|-----|------|-------|-------|------|------------|-------|--------|--------------|--------|--------|----------|-------------|
|                             |     | PVC      | CPVC | PP | PVDF | Teflon | PES | PEEK | Kel-F | Viton | EPDM | Silicone   | Aflas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| Amyl Borate                 |     |          |      |    | A    | A      |     |      |       |       |      |            |       |        |              |        |        |          |             |
| Amyl Chloride               |     | X        | X    | X  | B    | A      |     | R    | R     | X     |      |            |       |        |              |        |        |          |             |
| Aniline                     |     | R?       | R?   | D* | C*   | A      |     | R    | R+    | X     |      |            |       |        |              |        |        |          |             |
| Aniline Hydrochloride       | 10  | D?       | X    | X? | D    | C      |     | R    | D     | B*    |      |            |       |        |              |        |        |          |             |
| Animal Oil (Lard)           |     |          |      |    |      |        |     |      | D     | D     |      |            |       |        |              |        |        |          |             |
| Anthraquinone               |     | D        | C    | X  | A    | A      |     |      | C     |       |      |            |       |        |              |        |        |          |             |
| Anthraquinone Sulfonic acid |     | D        | C    | X  | A    | A      |     |      | C     |       |      |            |       |        |              |        |        |          |             |
| Antimony Trichloride        | Sat | D        | C    | C  | C*   | A      |     |      | C     |       |      |            |       |        |              |        |        |          |             |
| Aqua Regia                  |     | R?       | E?   | E? | R*   | A      |     |      | D*    | X     |      |            |       |        |              |        |        |          |             |
| Aroclor                     |     |          |      | X  | A    | C      |     |      | A     | D*    |      |            |       |        |              |        |        |          |             |
| Arsenic Acid                | Sat | D*       | C*   | C* | A*   | A      |     |      | B     | C     |      |            |       |        |              |        |        |          |             |
| Asphalt                     |     | X        | X    | D  | A    | A      |     |      | C     | X     |      |            |       |        |              |        |        |          |             |
| Barium Carbonate            | 10  | D        | C    | C  | A    | A      |     |      | A     | C     |      |            |       |        |              |        |        |          |             |
| Barium Chloride             | Sat | D        | C    | C  | A    | A      |     |      | R     | A     |      |            |       |        |              |        |        |          |             |
| Barium Hydroxide            | Sat | D        | C    | C  | A    | A      |     |      | R     | A     |      |            |       |        |              |        |        |          |             |
| Barium Nitrate              | Sat | D        | C    | C  | A    | B      |     |      | R     | A     |      |            |       |        |              |        |        |          |             |
| Barium Sulfate              | Sat | D        | C    | C  | A    | A      |     |      | A     | A     |      |            |       |        |              |        |        |          |             |
| Barium Sulfide              | Sat | D        | C    | C  | A    | A      |     |      | A     | D     |      |            |       |        |              |        |        |          |             |
| Beer                        |     | D        | C    | C  | A    | A      |     |      | C     | C     |      |            |       |        |              |        |        |          |             |
| Beet Sugar Liquors          |     | D        | C    | C  | A    | A      |     |      | C     | C     |      |            |       |        |              |        |        |          |             |
| Benzaldehyde                |     | X        | X    | D  | D    | B      |     |      | C     | D     |      |            |       |        |              |        |        |          |             |
| Benzene                     |     | X        | X    | E* | D*   | A      |     |      | X     | A     |      |            |       |        |              |        |        |          |             |
| Benzene Sulfonic Acid       | 10  | X?       | X?   | X? | D*   | A      |     |      | D     | X     |      |            |       |        |              |        |        |          |             |
| Benzine                     |     | X        | X    | D* | D    | B      |     |      | C     | X     |      |            |       |        |              |        |        |          |             |
| Benzoic Acid                |     | D        | B*   | D* | A    | B      |     |      | B     | C     |      |            |       |        |              |        |        |          |             |
| Benzyl Alcohol              |     | X        | X    | D  | B    | A      |     |      | B     | D*    |      |            |       |        |              |        |        |          |             |
| Benzyl Benzoate             | Sat | R?       | X    | R  | A    | A      |     |      | A     | X     |      |            |       |        |              |        |        |          |             |
| Benzyl Chloride             |     | D        | C    | C  | A    | A      |     |      | C     | R     |      |            |       |        |              |        |        |          |             |
| Bismuth Carbonate           |     | D        | C    | C  | B    | B      |     |      | B     | C     |      |            |       |        |              |        |        |          |             |
| Black Liquor                | Sat | D        | C    | C  | A    | A      |     |      | E     | R     |      |            |       |        |              |        |        |          |             |
| Bleaching Agent             | 5   | D        | D    | D* | A    | C+     |     |      | R+    | E     |      |            |       |        |              |        |        |          |             |
| Bleaching Agent             | 12  | D        | E    | D* | A    | A      |     |      | E     | R     |      |            |       |        |              |        |        |          |             |
| Borax                       | Sat | D        | C    | C  | A    | A      |     |      | C     | D     |      |            |       |        |              |        |        |          |             |
| Boric Acid                  | 10  | D        | C    | C  | A    | A      |     |      | B     | C     |      |            |       |        |              |        |        |          |             |
| Borofluoric Acid            |     | D        | C    | C  | A    | A      |     |      | C     | C     |      |            |       |        |              |        |        |          |             |
| Brine                       |     | D        | C    | C  | A    | A      |     |      | B     | C     |      |            |       |        |              |        |        |          |             |
| Bromic Acid                 |     | D        | C    | X? | A    | C+     |     |      | R     | E*    |      |            |       |        |              |        |        |          |             |
| Bromine vapor               |     | E*       | E*   | R? | X    | A      |     |      | E     | D     |      |            |       |        |              |        |        |          |             |
| Bromine water               |     |          |      |    |      |        |     |      |       |       |      |            |       |        |              |        |        |          |             |
| Butane (or Butyl) diol      |     | E*       | R?   | X  | A    | A      |     |      | E     | X     |      |            |       |        |              |        |        |          |             |
| Butadiene (butylene) gas    |     | D?       | E    | X  | A    | A      |     |      | D     | D     |      |            |       |        |              |        |        |          |             |
| Butane gas                  |     | D        | C    | C  | A    | A      |     |      | D     | X     |      |            |       |        |              |        |        |          |             |
| Butyl Acetate               |     | X        | X    | R? | E    | C+     |     |      | C     | E*    |      |            |       |        |              |        |        |          |             |
| Butyl Acrylate              |     | X        | X    | X  | D*   | D      |     |      | E     | E     |      |            |       |        |              |        |        |          |             |
| Butyl Alcohol (butanol)     |     | D?       | D    | C  | A    | A      |     |      | D+    | C     |      |            |       |        |              |        |        |          |             |
| Butyl Amine                 |     | X        | X    | R? | A    | C*     |     |      | R?    | X     |      |            |       |        |              |        |        |          |             |
| Butyl Bromide               |     | X        | X    | X  | A    | A      |     |      | R*    | R*    |      |            |       |        |              |        |        |          |             |
| Butyl Carbitol              |     | X        |      |    |      |        |     |      | R*    | R     |      |            |       |        |              |        |        |          |             |
| Butyl Cellosolve            |     | X        |      |    | C*   | C      |     |      | X     | C     |      |            |       |        |              |        |        |          |             |
| Butyl Chloride              |     | X        | X    | X  | A    | A      |     |      | R     | C     |      |            |       |        |              |        |        |          |             |
| Butyl Ether                 |     | X        | X    | D* | A    | B      |     |      | X     | X     |      |            |       |        |              |        |        |          |             |
| Butyl Mercaptan             |     | X        | X    | D+ | A    | D+     |     |      | R     |       |      |            |       |        |              |        |        |          |             |
| Butyl Phenol                |     | X        | X    | X  | B    | A      |     |      | X     |       |      |            |       |        |              |        |        |          |             |
| Butyl Phthalate             |     | X        | X    | D  | X?   | E+     |     |      | R*    | R     |      |            |       |        |              |        |        |          |             |
| Butyl Stearate              |     |          |      | A  | A    | A      |     |      | D     | R*    |      |            |       |        |              |        |        |          |             |

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|----------------------|----------|-----|------|----|------|--------|--------|-----|------|-------|------------|------|----------|-------|--------|--------------|--------|--------|----------|-------------|
|                      | %        | PVC | CPVC | PP | PVDF | Teflon | Tefzel | PES | PEEK | Kel-F | Viton      | EPDM | Silicone | Aflas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| Butyric Acid         | 5        | X   | X    | C  | A    | A      | A      | D*  | B    | B     | E*         | R    | X        | X     | X      | R*           | D      | D*     | C        | B           |
| Caffeine Citrate     | Sat      | D   | C    | D  | A    | A      | D      | R   | A    | B     | B          | R    | R        | R     | X      | X            | D*     | B      | B        | B           |
| Calcium Acetate      | R?       | D   | C    | C  | A    | A      | A      |     |      | C?    | C          | X    | X        | R     | X      |              |        |        |          |             |
| Calcium Bisulfate    | Sat      | D   | E    | B? | B    | B      |        | A   | A    | C     | R          | R*   | R*       |       | X      | X            | C      |        |          |             |
| Calcium Bisulfite    | 10       | E   | D    | B? | B    | B      | B      | B   | B    | C     | E          | R    | R        |       | X      | X?           | A      | A      | D+       | B*          |
| Calcium Carbonate    | Sat      | D   | B    | B? | A    | A      | B      | R   | R    | A     | D          | R*   | R*       | D     | R*     | R+           | A*     | A*     | A*       | A*          |
| Calcium Chlorate     | Sat      | D   | C    | B? | A    | A      |        |     | R    | D     | D          | D    |          |       | E      | C            | C      | D      | C        | C           |
| Calcium Chloride     | Sat      | D   | B    | B? | A    | A      | A      | B   | A    | B     | C          | R    | R        | R     | X?     | D*           | B      | B      | B        | B           |
| Calcium Hydroxide    | 20       | D   | D    | C? | B    | B      | A      | B   | A    | B     | C          | R    | R        | R     | D      | B*           | B      | B      | A        | A           |
| Calcium Hypochlorite | 2        | D   | D    | C  | B    | B      | A      | B   | A    | R+    | B          | R    | R        | R     | X      | R*           | D      | B      | B        | C           |
| Calcium Nitrate      | Sat      | D   | C    | C  | B    | B      | A      | B   | R    | B     | C          | R    | R        | X     | E      | R            | R      | B      | B        | B           |
| Calcium Oxide (Lime) | Sat      | D   | C    | C  | A    | A      | A      | A   | A    |       | D          | R*   |          | X     | R?     | B*           | B      | B      | R        | R           |
| Calcium Sulfate      | Sat      | D   | C    | C  | B    | B      | A      | B   | A    | B     | C          | R    | R        |       | R*     | R            | R      | B      | B        | B*          |
| Calcium Sulfide      | Sat      | D   | C    | C  | C    | B      | A      |     |      | B     | C          | R    | R        | R     | D      | R            | R      | A      | A        | A           |
| Cane Sugar Liquors   |          | D   | C    | D  | A    | A      |        |     |      | B     | C          | R    | R        | R     | D      | R            | R      | A      | A        | A           |
| Caprylic Acid        |          | E   | D    | C  | A    | A      | A      | E*  | A    | E     | B?         | C    | D        | R     | D      | B            | C      | A      | C        | A           |
| Carbinol (Methanol)  |          | E   | D    | C  | A    | A      | A      |     |      | E     | D*         | R    | R        | R     | D      | B            | B+     | C      | C        | B           |
| Carbitol             |          | E   | D    | C  | A    | B      |        |     |      | D*    | R          | R*   |          |       |        |              |        |        |          |             |
| Carbon Dioxide gas   |          | D   | C    | C  | A    | A      | A      |     | A    | A     | B?         | B    | R*       | R*    | R*     | B            | D      | D      | D        | E           |
| Carbon Disulfide     |          | X   | X    | X  | A    | A      | A      | X   | A    | B     | C          | X    | X        | R     | R*     | B            | B+     | B      | B        | B           |
| Carbon Monoxide gas  |          | D   | C    | C  | A    | A      | A      |     | A    | R     | B          | C    | D        | D*    | A      | A            | A      | A      | A        | A           |
| Carbon Tetrachloride |          | X   | X    | C  | A    | A      | A      | X   | A    | R     | A          | X    | X        | X     | R      | B            | B      | A      | B        | A           |
| Carbonic Acid        | Sat      | D   | B    | B? | A    | A      | A      | B   | A    | R     | B          | C    | R        | D     | X?     | B*           | B+     | B      | B        | B           |
| Casein               | D*       |     |      |    | A    | A      | A      |     |      | C     | C          | R    | R        |       |        |              |        |        |          |             |
| Castor Oil           |          | D   | C    | C  | A    | A      |        |     |      | C     | C          | C    | B        | R     | E      | R            | D      |        |          |             |
| Caulic Potash        | 25       | D   | C    | C  | C*   | A      | A      | B   | A    | B*    | D          | B*   | R*       | R*    | X      | B*           | B*     | C      | C        | A*          |
| Cellosolve           |          | X   | C    | E  | C*   | A      | A      | X   |      | B     | X          | B    | X        | R     | R      | B            | A      | B      | B        | B           |
| Cellulose Acetate    |          | X   | X    | X  | X    | A      |        |     | R    | R     | X          |      |          |       |        | R            | A      | A      | R        | R           |
| Chloral Hydrate      |          | D   | C    | X  | C    | A      |        |     |      | X     | X          |      |          |       |        |              |        |        |          |             |
| Chloric Acid         | 20       | E   | R*   | X? | C    | D+     | B      |     | R    | X     | X          | X    |          | X     | X      | X            | X      |        |          | E           |
| Chlorinated Solvents |          |     |      |    |      | B      |        |     |      | R+    | X          | X    |          |       |        |              |        |        |          |             |
| Chlorine - liquid    | dry      | X   | X    | X  | D    | A      |        |     | X    | C     | X          | X    |          |       | R      | E*           | E*     |        |          | E           |
| Chlorine Dioxide     | 15       | D   | D    | X  | B    | A      | A      |     |      | X     | X          | R*   |          |       | X      | X            | X      | C      | C        | D           |
| Chlorine gas         | wet      | X   | X    | X  | A    | A      | A      | X   | B*   | C     | C          | X    | X        | X     | X      | X            | X      | A      | A        | C           |
| Chlorine gas         | dry      | D   | C    | X  | A    | A      | A      | X   | D?   | C*    | C          | X    | X        |       | A*     | A*           | A*     | X      | X        | A           |
| Chlorine water       | .04      | D   | D    | R* | A    | A      | E      | R   |      | B     | B          | E*   |          | X     | X      | X            | X      | C      | C        | A           |
| Chloroacetic Acid    | 50       | X   | X    | C  | C    | A      | B      |     | B*   | X     | C          | R?   |          | X     | X      | X?           | X?     | C      | C        | A           |
| Chlorobenzene        |          | X   | X    | X  | B*   | B+     | A      | X   | A    | A     | X          | X    |          |       | C      | C            | A      | B      | B        | A           |
| Chloroform           |          | X   | X    | R  | B*   | B+     | B      | X   | A    | A     | X          | X    | X        | X     | X      | C*           | C*     | C      | C        | C           |
| Chlorosulfonic Acid  | 20       | X   | X    | X  | R*   | C      |        |     | X    | B*    | X          | X    | R        | R     | X      | R*           | E*     | E*     | B        | R           |
| Chromic Acid         | 10       | E   | C    | E  | B    | A      | A      | E*  | B    | A     | A          | X    | X        | R     | X      | B*           | A*     | B      | B        | R           |
| Chromic Acid         | 20       | E   | C    | E  | B    | A      | A*     | X   | R*   | B     | A          | X    | X        | R     | X      | R*           | A*     | B      | B        | B*          |
| Chromic Acid         | 40       | E   | C    | E* | B*   | A      | A*     | X   | R*   | B     | A          | X    | X        | R     | X      | R*           | A*     | B      | B        | B*          |
| Chromic Acid         | 50       | R*  | C    | R* | C*   | A      | A*     | X   | X    | B     | A          | X    | X        | R     | X      | R*           | A*     | B      | B        | B*          |
| Chromium Alum        |          | E   | D    | B  | B    | A      | A      |     | R    | B     | B          | R    | R        | X     | X      | E            | E      |        |          |             |
| Citric Acid          | 10       | D   | C    | D  | B    | B+     | D      | R   | A    | B     | B          | R    | R        | X     | X      | D*           | B      | B      | B        | B           |
| Clorox Bleach        | 5        | D   | C    | C  | B    | A      |        |     | A    | C     | D*         | R    |          |       | X      | E            | R      |        |          |             |
| Coconut Oil          |          | R*  | X    | E  | A    | A      |        |     |      | A     | X          | R    |          |       | E*     | E            | E      |        |          |             |
| Coke Oven Gas        |          |     |      |    |      |        |        |     |      | A     | A          | R*   |          |       | E      | E            | E      |        |          |             |
| Copper Acetate       | Sat      | R   | R    | R  | A    | A      |        |     | A    | D?    | E          | X    |          |       | X      | C            | C      |        |          | E           |
| Copper Borofluoride  |          | R   | R    | C  | A    | A      |        |     |      | R     | B          |      |          |       |        |              |        |        |          |             |
| Copper Carbonate     | Sat      | D   | C    | C  | A    | A      |        |     | A    | C     | B          |      |          |       | C      | R            | R      | R      | R        | R           |
| Copper Chloride      | Sat      | D   | C    | C  | A    | A      | A      | C   | A    | A     | B          | B    |          |       | X      | X            | X      | B      | B        | B           |
| Copper Cyanide       | Sat      | D   | C    | C  | A*   | A      | A      | B   | A    | C     | C          | R    | R        |       | B*     | B*           | B*     | B      | B        | B*          |

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| CHEMICAL                            | Plastics |     |      |    |      |        |        |     |      |       | Elastomers |      |          |       |        | Metals       |        |        |          |             |
|-------------------------------------|----------|-----|------|----|------|--------|--------|-----|------|-------|------------|------|----------|-------|--------|--------------|--------|--------|----------|-------------|
|                                     | %        | PVC | CPVC | PP | PVDF | Teflon | Tefzel | PES | PEEK | Kel-F | Viton      | EPDM | Silicone | Atlas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| Copper Fluoride                     | Sat      | D   | D    | D  | A    | B      | A      | A   | A    | C     | R          |      |          |       | X      | B            | B*     | B      |          |             |
| Copper Nitrate                      |          | D   | D    | C  | B    | B+     | A      | A   | B    | B     | C          |      |          |       | X      | B*           | B*     | B      |          |             |
| Copper Sulfate                      | Sat      | D   | C    | C  | B    | B+     | A      | A   | B    | D     | E          | R    |          |       | D      | B*           | A      | B      |          |             |
| Corn Oil                            |          | R   | X    | E  | A    | A      |        |     |      |       |            |      |          |       |        |              |        |        |          |             |
| Corn Syrup                          |          | D   | D    | C  | A    | A      |        |     |      | B     | C          | R    |          |       | R+     | A            | D+     |        |          |             |
| Coltenseed Oil                      |          | D   | D    | C  | A    | A      |        |     | B    | B     | C*         | R    |          |       | C      | R            | D      |        |          |             |
| Cresolite                           |          | R   | R    | R  | A    | A      |        |     | B    | B     | A          | X    |          |       | D*     | A            | C      | R      |          |             |
| Cresol                              |          | R*  | R*   | X  | B*   | A      | A      |     | E    | D?    | X          | X    |          |       | R      | C            | B      | B      |          |             |
| Cresylic Acid                       |          | X   | X    | X  | C    | A      |        |     |      | C     | X          | X    |          |       | R      | C            | A      | R      |          |             |
| Croton Aldehyde                     |          | X   | X    | X  | B*   | B      |        |     |      | R     | R          | X    |          |       | R      | C            | A      | A      |          |             |
| Crude Oil                           |          | D   | D    | D  | A    | A      | A      |     | E    | R+    | X          | X    |          |       | R      | A            | B      | B      |          |             |
| Cryolite                            | 10       | D   | D    | C  | A    | A      |        |     |      | R     | R          |      |          |       |        |              |        |        |          |             |
| Cupric Fluoride                     | Sat      | D   | D    | C  | A    | A      |        | A   |      | D     | D          |      |          |       |        |              |        |        |          |             |
| Cupric Sulfate                      | Sat      | D   | B    | C  | B    | B      |        | A   |      | B     | B          |      |          |       |        |              |        |        |          |             |
| Cuprous Chloride                    | Sat      | D   | B    | C  | A    | A      |        | A   |      | B     | B          |      |          |       |        |              |        |        |          |             |
| Cyclohexane                         |          | X   | X    | R* | A*   | A      | A      |     | R    | B     | X          | X    |          |       | R      | R            | B      | A      |          |             |
| Cyclohexanol                        |          | X   | X    | D* | B    | B+     | A      |     | R    | E     | R*         | X    |          |       | R      | R            | E      | R      |          |             |
| Cyclohexanone                       |          | X   | X    | E* | D*   | B      | A      |     | R    | E     | X          | X    |          |       | R?     | R            | E      | R      |          |             |
| Decalin                             |          | E*  |      |    |      | B      |        |     |      |       | R          | X    |          |       |        |              |        |        |          |             |
| Decane                              |          |     |      | D  | A    | A      | A      |     |      | R     | X          | R*   |          |       |        |              |        |        |          |             |
| Detergents (non-phenolic)           |          |     |      | D  | A    | A      | A      |     | A    | C     | B          | R    |          |       | R      | C            | A      | D+     |          |             |
| Dextrin                             | Sat      | D   | C    | C  | A    | B+     | A      |     | A    | B?    | C          |      |          |       |        |              |        |        |          |             |
| Dextrose                            |          | D   | C    | C  | A    | A      |        |     |      | C     | C          | R    |          |       | R      | A            | D      |        |          |             |
| Diacetone (Alcohol)                 |          | R   | X    | C  | E*   | B+     | B      |     | R    | X     | B          | D*   |          |       | C      | R            | A      | D      |          |             |
| Diazo salts                         |          | D   | C    | C  | A    | A      |        |     |      | X     |            |      |          |       |        |              |        |        |          |             |
| Dibenzyl Ether                      |          | X   | X    |    | D*   | B      |        |     |      | X     | R          |      |          |       |        |              |        |        |          |             |
| Dibutyl Amine                       |          | X   | X    | X  | E*   | C      |        |     |      | X     | X          | R*   |          |       |        |              |        |        |          |             |
| Dibutyl Ether                       |          | X   | X    | D* | D*   | D+     | B      |     | E    | X     | X          | X    |          |       | R      |              | E      |        |          |             |
| Dibutyl Phthalate                   |          | X   | X    | X  | X    | A      | D      |     | R    | R?    | E          | R*   |          |       | R      | R+           | C**    | B      |          |             |
| Dibutyl Sebacate                    |          | X   | R*   | R* | D*   | A      |        |     |      | R*    | R          | R*   |          |       | E      |              |        |        |          |             |
| Dichloro-isopropylether             |          |     |      |    | D*   | R      |        |     |      | R*    | X          |      |          |       |        |              |        |        |          |             |
| Dichloroacetic Acid                 | 20       | E   | E    | E  | E    | A      |        |     |      | X     | X          |      |          |       |        |              |        |        |          |             |
| Dichlorobenzene                     |          | X   | X    | R* | B*   | A      | D      |     | R    | C     | X          | X    |          |       | R      | R            | R      | A      |          |             |
| Dichloroethylene                    |          | X   | X    | R  | A    | A      | C      |     | E    | C     | X          |      |          |       |        |              |        |        |          |             |
| Diesel Fuels                        |          | D*  | E    | R  | A    | A      | A      |     | R    | E     | C          | X    |          |       | R+     | R            | B      | B      |          |             |
| Diethanolamine                      |          | X   |      |    | A    | A      |        |     |      | X     | D          | X    |          |       | R      | B            | B      | R      |          |             |
| Diethyl Amine                       |          | X   | X?   | E  | E*   | B+     | B      |     | R    | X     | D*         | R*   |          |       | X      | E            | D+     |        |          |             |
| Diethyl Ether                       |          | X   | X    | R* | E    | B+     | B      |     | R    | R?    | X          | X    |          |       | R*     | R*           | R*     |        |          |             |
| Diethylene-triamine (pentetic acid) |          | X   | X    | E  | D*   | A      |        |     |      | R*    | B          | X    |          |       | R*     | R*           | R*     |        |          |             |
| Diglycolic Acid                     | Sat      | E   | C    | R+ | R    | B+     |        |     |      | R     | R          |      |          |       |        | R            | A      | C      |          |             |
| Diisobutyl Ketone (DIBK)            |          |     |      |    | C*   | R      |        |     |      | X     | X?         | X    |          |       |        |              |        |        |          |             |
| Diisobutylene                       |          | R   |      | E  | B*   | A      | A      |     | R    | D     | X          | X    |          |       | R      | R            | E      |        |          |             |
| Diisopropyl Ketone                  |          | X   |      |    | R    | R      |        |     |      | X     | R          | X    |          |       |        |              |        |        |          |             |
| Dimethyl Amine                      |          | X   | X    | E  | E*   | D+     |        |     |      | X     | R          |      |          |       |        |              |        |        |          |             |
| Dimethyl Aniline                    |          | X   | X    | E? | E*   | A      | A      |     | B    | X     | X?         | X    |          |       |        |              |        |        |          |             |
| Dimethyl Formamide                  |          | X   | X    | E  | X    | B+     | A*     |     | E    | X     | R          | R*   |          |       | X      | R            | E+     |        |          |             |
| Dimethyl Phthalate                  |          | X   | X    | D  | E*   | A      | A      |     | R    | B     | R+         |      |          |       | R      | A            | E      |        |          |             |
| Dimethyl Sulfoxide (DMSO)           |          | X   | X    | R  | X    | A      |        |     |      | X     | R          |      |          |       | R      | R            | R      |        |          |             |
| Diethyl Phthalate                   |          | X   | X    | X  | D*   | B+     | A      |     | R*   | R?    | R          | R*   |          |       | R      | R            | E      |        |          |             |
| Dioxane                             |          | X   |      | E* | X    | A      | B      |     | R    | X     | X          | X    |          |       | E      | C            | C      |        |          |             |
| Dioxolane                           |          |     |      |    | X    | R      |        |     |      | X     | X          | X    |          |       |        |              |        |        |          |             |
| Diphenyl (DOWTHERM)                 |          | X   |      | X  |      | A      | A      |     | A    | X     | X          | X    |          |       | A      | C            | C      |        |          |             |
| Diphenyl Oxide                      | 75       | X   |      | D  | B    | B      | A      |     |      | A     | X?         |      |          |       | R*     | R*           | D      |        |          |             |
| Disodium Phosphate                  |          | D   | B    | C  | A    | A      | A      |     |      | B     | C          | X    |          |       | B      | B            | B      |        |          |             |
| Epichlorohydrin                     |          | X   | X    | E  | R*   | A      |        |     | E    | X     | X          | X    |          |       | E      | B            | A      |        |          |             |

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| CHEMICAL                | Plastics |     |      |    |      |        |        |     |      |       | Elastomers |      |          |       |        | Metals       |        |        |          |             |
|-------------------------|----------|-----|------|----|------|--------|--------|-----|------|-------|------------|------|----------|-------|--------|--------------|--------|--------|----------|-------------|
|                         | % Sat    | PVC | CPVC | PP | PVDF | Teflon | Tefzel | PES | PEEK | Kel-F | Viton      | EPDM | Silicone | Aflas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| Epsom Salt              |          | D   | C    | C  | C    | A      | A      | B   | A    | B     | B          | R    | R        | R     | B*     | B            | A      | B      | B        | B*          |
| Esters (general)        |          | X   | X    | C  | D*   | A      | A      | B   |      | X     | X          | C    | R*       | R     | X      | B*           | A      | A      | A        | B*          |
| Ethanolamine            |          | X   | X    | C  | X    | A      | B      | B   | X    | X     | X          | D*   | X        | R     | C      | B            | A      | B      | B        | B           |
| Ethers (general)        |          | X   | X    | C  | E    | A      | B      | X   | A    | R     | X?         | D*   | X        | R     | C      | B            | A      | B      | B        | B*          |
| Ethyl Acetate           |          | X   | X    | D* | D*   | A      | C*     | X   | R    | B*    | X          | D*   | R*       | X     | C      | A            | A      | A      | B        | B           |
| Ethyl Acetoacetate      |          | X   | X    | X  | D*   | B      |        |     |      | X     | X          | E    | R*       |       | R      |              | D      |        |          | B           |
| Ethyl Acrylate          |          | X   | X    | E  | D*   | A      |        |     |      | X     | X          | R*   | R*       |       | C*     | R            | C      | C      |          | C           |
| Ethyl Alcohol (ethanol) |          | D   | C*   | C  | A    | A      | A      | E*  | A    | A     | A          | C    | R*       | R     | B*     | C*           | A*     | B      | B        | B           |
| Ethyl Benzene           |          | X   | X    | X  | D    | A      | D      | X   |      | R     | X          | X    | X        | R*    | X      | R*           | D      |        | A        | A           |
| Ethyl Chloride          |          | X   | X    | R* | A    | A      | A      | X   | B    | B     | A          | D    | X        | R     | C      | A            | A      | B      | B        | B           |
| Ethyl Ether             |          | X   | X    | R* | D    | A      | B      |     | R    | X     | X          | X    | X        | D     | C      | B            | B      | B      | B        | B*          |
| Ethyl Formate           |          |     |      | R  |      | A      |        |     |      | X?    | R          | R    |          |       |        |              | D      |        |          |             |
| Ethyl Hexanol           |          |     |      | A  |      | A      |        |     |      | D     | E          | R*   |          |       |        |              | D      |        |          |             |
| Ethyl Mercaptan         |          |     |      |    |      | A      |        |     |      | X?    | R*         | X    |          |       |        |              |        |        |          |             |
| Ethyl Oxalate           |          |     |      | A  |      | A      |        |     |      |       | X          | X    | X        |       |        |              |        |        |          |             |
| Ethylene Bromide        |          | X   | X    | X  | A    | A      | A      |     |      |       | X          | X    | X        |       | C      | B            | B      | B      | B        | B           |
| Ethylene Chloride       |          | X   | X    | R? | A    | A      | A      | X   | R    | E     | R?         | R?   | X        | R     | C      | R?           | D?     | D      | D        | D*          |
| Ethylene Chlorohydrin   |          | X   | X    | C  | D*   | A      | A      | X   | B    | A     | R          | R    | R*       | R*    | D      | D            | D      | C      | C        | C           |
| Ethylene Diamine        |          | R*  |      | D  | R    | A      | D      | X   | X    | X     | A          | R    | R        | R     | R      | R            | R      | R      | X        | X           |
| Ethylene Dichloride     |          | X   | X    | R  | B    | A      | B      | X   | R    | E     | A          | X    | X        | R     | D      | B*           | A*     | B*     | B*       | B*          |
| Ethylene Glycol         |          | D   | C    | C  | B*   | A      | A      | B   | A    | B     | A          | B    | R        | A     | R      | B            | A      | B      | B        | B+          |
| Ethylene Oxide          |          | X   | X    | X  | B    | A      | B      | E   | R    | E     | X          | R*   | X        |       | B*     | B*           | A*     | R      | R        | R           |
| Fatty Acids             | 12       | D   | D    | C  | A    | A      | A      | B   | A    | R     | R          | X    | R*       | X     | X      | X            | A      | A      | A        | A           |
| Ferric Chloride         |          | D   | D    | C  | A    | A      | A      | B   | B?   | B     | B          | B    | R        | R     | X      | X            | X      | X      | B        | R?          |
| Ferric Hydroxide        | Sat      | D   | C    | C  | A    | A      | A      |     |      | C     | C          | C    |          |       |        |              | R      | R      |          |             |
| Ferric Nitrate          | Sat      | D   | C    | C  | A    | A      | A      | B   | R    | R     | R          | R*   | R*       | R     | X      | R+           | B+     | B      | B        | R           |
| Ferric Sulfate          | 10       | D   | C    | C  | A    | A      | A      | B   | R    | R     | C          | B    | R        | R     | X      | R*           | C      | C      | C        | D           |
| Ferric Sulfide          |          | D   | D    | D  | A    | A      | A      |     |      | C     | C          | C    |          |       |        |              |        |        |          |             |
| Ferrous Chloride        | Sat      | D   | B    | B  | A    | A      | A      | B   | R*   | R     | B          | B    | R*       | R*    | X      | X            | X      | B      | B        | B*          |
| Ferrous Hydroxide       |          | D   | C    | C  | A    | A      | A      |     |      | B     | C          | C    |          |       |        |              |        |        |          |             |
| Ferrous Nitrate         |          | D   | C    | C  | A    | A      | A      |     | R    | B     | B          | C    |          |       |        |              |        |        |          |             |
| Ferrous Sulfate         |          | D   | C    | C  | A    | A      | A      | B   | A    | R     | B          | B    | R*       | R*    | R?     | B*           | B*     | R      | R        | B*          |
| Fish Solubles           |          | D   | C    | D  | D    | A      | A      |     |      | X     | X          | X    |          |       |        |              |        |        |          |             |
| Fluorine gas            | 40       | D   | C    | C  | A    | A      | A      | B   | X    | R     | C          | C    | R        | R     | R      | R            | R      | A*     | A*       | C           |
| Fluoboric Acid          | wet      | X   | R?   | X  | R    | A      | A      |     |      | D?    | D          | D    | X        | X     | X?     | X?           | X?     | X?     | X?       | A?          |
| Fluosilicic Acid        | 10       | D   | C    | C  | A    | A      | A      |     | R    | B?    | B          | B    |          |       |        | C*           | R      | R      | X        | A*          |
| Formaldehyde (Formalin) | 37       | D*  | C    | C  | D    | A      | B      | B   | A    | B     | A          | A    | R*       | R     | X      | A            | A      | A      | B        | B           |
| Formaldehyde (Formalin) | 50       | D*  | D    | C  | D    | A      | B      | B   | R    | B     | X          | A    | R*       | R     | X      | A            | A      | A      | B        | B           |
| Formic Acid             | 90       | E*  | E    | E  | A    | A      | A      | X   | R    | E     | C          | R*   | R*       | R*    | X      | B+           | B+     | B+     | B        | B           |
| Freon F-11              |          | D   | D    |    | A    | A      | A      | X   | R    | E     | R          | X    | X        | X     | X      | R*           | R*     | D      |          | R           |
| Freon F-113             |          | E   | R*   |    | A    | A      | A      |     | R    | E     | E          | R*   | X        | X     | X      | R*           | R*     | D      |          | R           |
| Freon F-114             |          | X   | R*   | X  | A    | A      | B      | X   | R    | R     | R          | X    | X        | X     | X      | R*           | R*     | A      | B        | B           |
| Freon F-12              |          | X   | X    | A  | A    | A      | B      | X   | R    | E     | X          | X    | X        | X     | X      | R*           | R*     | A      | B        | B           |
| Freon F-21              |          | X   | X    | A  | A    | A      | B      | X   | R    | E     | X          | X    | X        | X     | X      | R*           | R*     | A      | B        | B           |
| Freon F-22              |          | X   | X    | R  | A    | A      | B      | X   | A    | E     | X?         | X    | X        | X     | X      | R            | R      | D+     | B        | B+          |
| Fructose                |          | D   | D    | C  | A    | A      | A      |     | A    | E     | B          | C    |          |       |        |              |        |        |          |             |
| Fruit Juice             |          | D   | C    | C  | A    | A      | A      |     | A    | C     | D          | X    | R        | R*    | X      | E            | A      | A      | R        | E           |
| Fuel Oil                |          | D   | C    | D* | A    | A      | A      | D   |      | R     | X          | X    | X        |       | C      | A            | A      | D      | R        | C           |
| Furan(e)                |          | R   | R    | X  | X    | B      | B      | X   | R    | R?    | D?         | C    | X        |       |        |              |        |        |          |             |
| Furfural                |          | X   | X    | D  | E*   | A      | B      | X   | R    | R*    | X          | X    | X        | R*    | E*     | A            | A      | A      | B        | B*          |
| Furfuryl Alcohol        |          |     |      | D* |      | D      |        |     |      | X     | R*         | X    | X        |       |        |              |        |        |          |             |
| Gallic Acid             |          | D   | C    | B  | D*   | A      | B      |     |      | A     | R          | R    |          |       | X      | B            | A      | A      | C        | B*          |
| Gas, Natural            |          | D   | C    | R  | A    | A      | A      |     | R    | C     | X          | X    |          |       | A      | A            | A      | A      | C        | B           |
| Gasoline, sour          |          | X?  | D    | X  | A    | A      | A      |     |      | C     | X          | X    |          |       | A      | R            | R      | R      | A        | A           |
| Gasoline, Unl. or Lead. |          | D*? | R?   | X  | A    | A      | A      | B   | R    | R     | D          | X    | X        | R*    | A      | R            | B      | B      | B        | B           |

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| CHEMICAL                | Plastics |     |      |    |      |        |         |     |      |       | Elastomers |      |          |       |        | Metals       |        |        |          |
|-------------------------|----------|-----|------|----|------|--------|---------|-----|------|-------|------------|------|----------|-------|--------|--------------|--------|--------|----------|
|                         | %        | PVC | CPVC | PP | PVDF | Teflon | Teifzel | PES | PEEK | Kel-F | Viton      | EPDM | Silicone | Aflas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium |
| Gelatin                 |          | D   | C    | C  | A    | A      |         | A   |      | B     | C          | R    |          | R*    | X      | D            |        |        |          |
| Gin                     |          | D   | C    | C  | A    | A      |         |     |      | B     | C          | R    |          | R*    | R+     | C            |        |        |          |
| Glucose                 |          | D   | C    | C  | A    | A      |         |     |      | B     | C          | R    |          | R     | R+     | C            |        |        |          |
| Glue                    |          | D*  | C    | R  | A    | A      |         |     |      | B     | C          | R    |          | R*    | R+     | A            | D+     |        | A        |
| Glycerine (Glycerol)    |          | D   | C    | C  | A    | A      |         | R   |      | B     | C          | R    |          | R*    | R+     | D*           | D      |        | B        |
| Glycolic Acid           |          | R*  | C    | D  | E*   | A      | A       | B   | E    | R     | D          |      |          | R     | D      | A            | A      |        | B        |
| Glycols                 |          | D   | C    | B  | A    | A      | A       | B   | B    | A     | A          | R    |          | C     | R      | B            | B      |        | B        |
| Grape Sugar             |          | D   | C    | D  | A    | A      |         |     |      | B     | C          | R    |          |       | A      |              |        |        |          |
| Green Liquor            |          | D   | C    | D  | A    | A      |         |     |      | A     |            | R    |          |       | A      |              |        |        |          |
| Heptane                 |          | E   | E    | E* | A    | A      | A       | A   | B    | B     | X          | X    |          | D*    | R+     | B            | D+     |        | B        |
| Hexane                  |          | E*  | R+   | E* | A    | A      | A       | B   | B    | R+    | X          | X    |          | D*    | R+     | B            | D+     |        | A        |
| Hexyl Alcohol (hexanol) |          | E   | C    | E  | C    | A      | A       |     |      | A     | D*         | R*   |          | R     | E      | A            |        |        | E        |
| Hydrazine               | 48       | X   |      | R* | A    | B      | E       |     |      | X     | B          |      |          | R*    | X      | R            |        |        |          |
| Hydrobromic Acid        | 20       | D   | C    | C  | A    | A      | A       | C   | X    | C     | X          | X    |          |       | X      | X            | X      |        | R        |
| Hydrochloric Acid       | 50       | D   | C    | C  | A    | A      | A       | A   | X    | E     | C          | X    |          |       | X      | X            | X      |        | R        |
| Hydrochloric Acid       | 25       | D   | C    | C  | A    | A      | A       | B   | A    | A     | C*         | R    |          | D     | X      | X            | X      |        | D*       |
| Hydrochloric Acid       | 35       | D   | C    | C  | A    | A      | A       | B   | B    | A     | E          | R    |          | D*    | X      | X            | X      |        | D*       |
| Hydrochloric Acid       | 38       | D   | C    | C  | A    | A      | A       | B   | B    | A     | E*         | X    |          | D*    | X      | X            | X      |        | E*       |
| Hydrochloric Acid       | 50       | D   | C    | E  | A    | A      | A       | A   | B    | A     | R*         | X    |          | X     | X      | X            | X      |        | R+       |
| Hydrocyanic Acid        | D        | D   | D    | D  | A    | A      | A       | A   | A    | A     | A          | R*   |          | X     | R*     | C            | A      |        | D        |
| Hydrofluoric Acid       | Trace    | D*  | R    | C  | A    | A      | A       | A   | B    | B     | B          | X    |          | X     | X      | X            | X      |        | B        |
| Hydrofluoric Acid       | 30       | D*  | X    | C  | A    | A      | A       | R   | X    | B     | C*         | X    |          | R     | X      | X            | X      |        | B        |
| Hydrofluoric Acid       | 40       | E*  | X    | C  | A    | A      | A       | R   | X    | B     | D*         | X    |          | R     | X      | X            | X      |        | R+       |
| Hydrofluoric Acid       | 50       | E*  | X    | C  | A    | A      | A       | R   | X    | B     | D*         | X    |          | R     | X      | X            | X      |        | R+       |
| Hydrofluoric Acid       | 70       | R   | X    | X  | C    | A      | A       | A   | B    | C     | E          | X    |          | X     | X      | X            | X      |        | C?       |
| Hydrofluoric Acid       | 100      | R   |      | R* | C    | A      | A       | B   | X    | C     | R          | X    |          | X     | E*     | X?           | R      |        | C?       |
| Hydrogen Chloride -gas  | dry      | R   |      | C  | A    | A      | A       | A   |      | R     | R          | X    |          |       | A      | A*           | A*     |        | A*       |
| Hydrogen Fluoride       | 100      | R   |      | R  | A    | A      | A       | A   |      | R     | R          | X    |          |       | X      | R+           | A*     |        | A        |
| Hydrogen gas            |          | D   | D?   | D  | B    | A      | A       | A   | B    | A     | D          | B    |          | D*    | A      | A            | A      |        | A        |
| Hydrogen Peroxide       | 5        | D   | X?   | C  | A    | A      | A       | C   | R    | B     | C*         | D    |          |       | X      | B            | A      |        | A        |
| Hydrogen Peroxide       | 50       | E*  | X?   | R* | A?   | A      | A       | E   | A    | B     | A          | D*   |          | X     | X      | A            | A      |        | E*       |
| Hydrogen Peroxide       | 90       | E*  |      | E  | R?   | A      | D       | E   | A    | B     | R          | X?   |          | X     | X      | C*           | A*     |        | C*       |
| Hydrogen Sulfide (aq.)  | D        | C   | C    | C  | A    | A      | A       | E   |      | C     | D          |      |          |       | X      | X            | C      |        | A        |
| Hydrogen Sulfide gas    | dry      | B   | B    | B  | A    | A      | A       | A   | B    | E     | D          | B    |          |       | R      | A            | D      |        | A        |
| Hydrogen Sulfide gas    | wet      | D   | B    | B  | A    | A      | A       | B   | B    | E     | D          | A    |          |       | A      | R?           | D      |        | A*       |
| Hydroquinone            | Sat      | D   | C    | D  | A    | A      | A       |     |      | A     | R          | X    |          |       | R      | C            | A      |        | C        |
| Hypochlorous Acid       | 10       | E   | C    | D  | A    | A      | A       |     |      | A     | A          | A    |          |       | X      | X            | X      |        | A        |
| Iodine                  | X        | X   | X    | X  | A    | A      | A       |     | R*   | E     | C          | C    |          |       | X      | X            | X      |        | B*       |
| Iodine water            | 10       | X   |      | X  | A    | A      | A       |     |      | C     | D          | R*   |          |       | X      | X            | X      |        | B*       |
| Iso-octane              | R        |     | B*   |    | A    | A      | D       | B   | R    | R     | R          | X    |          |       | D      | A            | D      |        | D        |
| Isobutyl Alcohol        | E*       |     |      |    | A    | A      | A       |     |      | R     | X?         | X    |          | R*    | R      | A            | D      |        | D        |
| Isophorone              |          |     |      |    | R    |        |         |     |      | X     | X?         | X    |          |       | R      | A            | D      |        | D        |
| Isopropyl Acetate       | X        |     | E*   |    | A    | A      | D       | X   |      | X     | D          | X    |          | R     | R      | A            | B      |        | R*       |
| Isopropyl Alcohol       | D        | D   | D    | D  | A    | A      | D       | R   |      | B     | C*         | R    |          | R     | R      | D            | D      |        | E        |
| Isopropyl Chloride      |          |     |      |    | D*   | B      |         |     |      | R     | X          | X    |          |       | R      | D            | D      |        | E        |
| Isopropyl Ether         | R*       | R*  | X    | X  | D*   | A      |         |     | R    | R?    | X          | X    |          | X     | D      | R            | D      |        | D        |
| Jet Fuel JP-4, JP-5     | D        | E   | R    | A  | A    | A      | B       | D   |      | R     | A          | X    |          | R     | C      | R            | A      |        | R        |
| Kerosene                | D        | D   | D    | D? | A    | A      | A       | E*  | R    | B     | A          | X    |          | D     | A      | A            | A      |        | B        |
| Ketones (general)       | X        | X   | E*   | E* | A    | A      | B       | X   | R    | R     | X          | B?   |          | X     | C      | C+           | A      |        | C        |
| Kraft Liquor            | D        | C   | D    | D  | A    | A      |         |     |      | R     | R          |      |          |       |        |              |        |        |          |
| Lacquer                 | X        |     |      |    |      | R      |         |     |      | X     | X          | X    |          | X     | R      | A            | D      |        | R        |
| Lactic Acid             | 25       | D   | C    | C  | E*   | A      | A       | B   | A    | B     | B          | D*   |          | R*    | X      | D*           | B      |        | B        |
| Lactic Acid             | 80       | D   | D    | C  | E*   | A      | A       | B   | A    | B     | B          | D*   |          | R*    | X      | R*           | B      |        | B        |
| Lard (or Lard oil)      | D        | C   | C    | R  | A    | A      | A       |     |      | C     | D          | R    |          | R*    | R*     | R            | B      |        | R        |
| Lauric acid             | D        | C   | C    | C  | A    | A      |         |     |      | R     | R*         |      |          |       | C      | C            | A      |        | A        |

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|---------------------------|----------|------|----|------|--------|--------|-----|------|-------|-------|------------|----------|-------|--------|--------------|--------|--------|----------|-------------|
|                           | PVC      | CPVC | PP | PVDF | Teflon | Tefzel | PES | PEEK | Kel-F | Viton | EPDM       | Silicone | Atlas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| %                         |          |      |    |      |        |        |     |      |       |       |            |          |       |        |              |        |        |          |             |
| Lauryl Chloride           | D        | X    | C  | A    | A      | A      | A   | A    | B     | A     | C          | D        | R*    |        | X            | A      | D      |          |             |
| Lead Acetate              | D        | C    | C  | A    | A      | A      | A   | B    | A     | B     | C          | C        | X     | R      | X            | B*     | B*     | B        | B*          |
| Lead Chloride             | D        | D    | D  | A    | A      | A      |     |      |       |       | B          | C        | R*    |        |              | C      | C      |          | C           |
| Lead Nitrate              | D        | C    | C  | B    | B      | D      |     |      |       |       | B          | C        | R*    |        | X            | C      | C      |          | C           |
| Lead Sulfate              | D        | C    | C  | A    | A      |        |     |      |       |       | B          | C        | R*    |        |              |        |        |          |             |
| Lemon Oil                 | D*       | X    | X  | A    | A      |        |     |      |       |       | R          | R*       |       |        |              |        |        |          |             |
| Lime Sulfur               | D        | E    | C  | C    | A      | A      |     |      |       |       | B          | C        | R     | R      | R*           | R      | R      |          |             |
| Linoleic Acid (or oil)    | D        | D    | R* | A    | A      | A      |     |      |       |       | B          | X        | R*    |        | X            | A      | R+     | C        | A           |
| Linseed Oil               | D        | C    | C  | A    | A      | A      | R   | R    |       |       | D          | R?       | R     | D      | R            | B      | B      | R        | R           |
| Liqueurs                  | D        | C    | D  | C    | A      |        |     |      |       |       | R          | D        |       |        |              |        | A      |          | A           |
| Lithium Bromide           | D        | C    | C  | A    | A      |        |     |      |       |       | B          | R        | A     |        |              |        |        |          |             |
| Lubricating Oil           | D        | C    | R* | A    | A      | A      | B   | R    | B     | B     | X          | X        | R     | D      | C            | C      | B      | B        | B           |
| Machine Oil               | D        | C    | D? | B    | B+     |        |     |      |       |       | D          | X        |       | C      | C            | C      |        |          | C           |
| Magnesium Carbonate       | D        | C    | C  | B    | A      | A      | A   |      |       |       | B          | C        | R     | R      | R*           | B      | B      | R        | D           |
| Magnesium Chloride        | D        | C    | C  | A    | A      | A      | B   | B*   | A     | B     | B          | C        | R     | R      | B*           | B      | B      | A        | A           |
| Magnesium Citrate         | D        | C    | C  | A    | A      |        |     |      |       |       | B          | C        |       | R      |              |        |        |          |             |
| Magnesium Hydroxide       | D        | C    | C  | A    | A      | A      | B   | R    | R+    |       | B          | C        | R     | R      | B            | B      | B      | B        | C           |
| Magnesium Nitrate         | D        | C    | C  | A    | A      | A      | B   |      |       |       | B          | B*       | R     | R      | B*           | B*     | B      | B        | B*          |
| Magnesium Sulfate         | D        | C    | C  | A    | A      | A      |     |      |       |       | B          | B*       | X     | X      | B*           | A      | A      | B        | C           |
| Maleic Acid               | D        | C    | C  | A    | A      | A      |     |      |       |       | A          | D        | X     | X      | X            | X      | A      | B        | B*          |
| Maleic Acid               | D        | C    | E* | A    | A      | A      |     |      |       |       | C          | X        | R*    | X      | X            | E      | B      | C        | C           |
| Malic Acid                | D        | R    | D  |      | A      |        |     |      |       |       | E          | E        | R*    | R      | C*           | C      | C      | B        | C           |
| Manganese Chloride        | E        | C    | C  | A    | A      | A      |     |      |       |       | R          | B        | R*    | R      | A*           | A*     | B      | B        | B           |
| Manganese Sulfate         | E        | C    | C  | A    | A      | A      |     |      |       |       | B          | B        | R*    | X      | X            | X?     | B      | B        | R*          |
| Mercuric Chloride         | D        | D    | C  | A    | A      | A      | A   | A    | B     | A     | D          | D        | R     | R*     | X            | X?     | B      | D        | E           |
| Mercuric Cyanide          | D        | C    | C  | A    | A      | A      |     |      |       |       | R          | B        |       | X      | R            | D      | D      |          |             |
| Mercuric Nitrate          | D        | C    | C  | A    | A      | A      |     |      |       |       | R          | A        |       |        |              |        |        |          |             |
| Mercuric Sulfate          | D        | C    | C  | A    | A      | A      |     |      |       |       | R          | R        | R     |        |              |        |        |          |             |
| Mercurous Nitrate         | D*       | C    | B  | A    | A      | A      |     |      |       |       | X          | E        |       |        |              |        |        |          |             |
| Mercury                   | D        | C    | C  | A    | A      | A      |     |      |       |       | R          | D        | R     | R*     | R*           | E+     | A      | A        | E           |
| Methane Sulfonic Acid     | D        | D    | R  | A    | A      | A      |     |      |       |       | R          | C        | R     | R      | A            | A      | A      | D**      | A           |
| Methyl Acrylate           | D        | D    | R  | A    | A      | A      |     |      |       |       | R          | C        | X     | R      | A            | A      | A      | C        | B           |
| Methyl Alcohol (Methanol) | X        | X    | R  | D*   | B      |        |     |      |       |       | X          | D*       | X     | R*     | R*           | B      | B      |          | B           |
| Methyl Acrylate           | E        | D    | C  | A    | A      | A      | A   | E*   | A     | E     | D          | C        | D     | R      | D            | B      | B*     | C        | B           |
| Methyl Amine              | X        | X    | X  | R*   | B      |        |     |      |       |       | R*         | R        |       | R      | R            | R      | D      |          | B           |
| Methyl Bromide            | X        | X    | X  | A    | A      | A      |     |      |       |       | C          | R        |       | R      | R            | R      | R      |          |             |
| Methyl Cellosolve         | R        | X    | R  | A    | A      | A      |     |      |       |       | X          | C*       | X     | R      | R            | R      | R      |          |             |
| Methyl Chloride -wet      | X        | X    | X  | D    | A      | A      | X   |      |       |       | R?         | R?       | X     | R*     | R?           | X?     |        | B        | B           |
| Methyl Chloroform         | X        | X    | R* | E    | A      |        |     |      |       |       | R          | X        | X     | R      | R*           | R      |        |          |             |
| Methyl Ether              |          |      |    |      | A      |        |     |      |       |       | X?         | X?       | R     |        |              |        |        |          |             |
| Methyl Ethyl Ketone (MEK) | X        | X    | E* | X    | A      | A      | A   | X    | B?    | E*    | X          | X?       | R     |        | C            | C      | C      | C        | C           |
| Methyl Formate            | X        | X    | E  | X    | A      | A      |     |      |       |       | X          | C        | X     | X      | D            | C      | B+     | B        | B           |
| Methyl Isobutyl Carbinol  | X        | X    | E  | X    | A      | A      |     |      |       |       | X          | E        | R*    | X      | X            | C      | D      | D        | D           |
| Methyl Isobutyl Ketone    | X        | X    | R  | X    | A      | A      | X   |      |       |       | R          | R        |       | E      | R            | A      | A      | R        | R           |
| Methyl Isopropyl Ketone   | X        | X    | X  | D*   | B      |        |     |      |       |       | X          | E        |       | D      | D            | R+     | D+     | D        | R+          |
| Methyl Methacrylate       | R        | R    | C  | D*   | A      |        |     |      |       |       | X          | D*       |       |        |              | A      | A      |          |             |
| Methyl Sulfate            | R*       | E*   | X  | A    | A      |        |     |      |       |       | X          | X        |       | X      | R            | R      | R      |          |             |
| Methyl Sulfuric Acid      | D        | D*   | C  | D    | A      |        |     |      |       |       |            |          |       |        |              |        |        |          |             |
| Methylene Bromide         |          |      |    |      | A      |        |     |      |       |       |            |          |       |        |              |        |        |          |             |
| Methylene Chloride        | X        | X    | X  | E    | A      | B      | X   | R    | R     | R     | R          | X        | X     | R*     | E            | B*     | X      | X        | B*          |
| Milk                      | D        | C    | B  | A    | A      |        |     |      |       |       | R*         | X        |       | D      | C            | B+     | B      | B        | E           |
| Mineral Oil               | E        | C    | E* | A    | A      | A      | B   | R    | B     | B     | X          | R*       |       | E      | R            | D+     | B      | B        | B           |
| Molasses                  | D        | C    | C  | D    | A      |        |     |      |       |       | R          | R        | R*    | E      | A            | A      | E      | E        | E           |
| Monobromobenzene          | X        | X    | E* | D*   | A      | B      | X   | A    | B     | C     | X          | X        | R*    | R+     | B*           | B*     | B      | B        | B*          |

A: to 120°C, B: to 100°C, C: to 80°C, D: to 60°C, E: to 40°C, R: Room temperature, X: Not recommended, \*: Some mechanical damage possible, ?: Questionable data, +: May exceed (less data)

| CHEMICAL                     | Plastics |     |      |    |      |        |        |     |      |       | Elastomers |      |          |       | Metals |              |        |        |          |             |
|------------------------------|----------|-----|------|----|------|--------|--------|-----|------|-------|------------|------|----------|-------|--------|--------------|--------|--------|----------|-------------|
|                              | %        | PVC | CPVC | PP | PVDF | Teflon | Tefzel | PES | PEEK | Kel-F | Viton      | EPDM | Silicone | Atlas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| Monochloroacetic Acid        | 50       | X?  | D    | E  | B*   | B      | B      | X   |      | B*    | R          | C*   |          |       | X      | X            | X      | X      |          |             |
| Monochlorobenzene            |          | X   |      | E* | B*   | B+     | A      | X   |      | B*    | R          | X    |          |       | R      | R            | D      | D      |          |             |
| Monochloroaniline            |          | X   |      | C* | X    | A      | D      | B   |      | X     | X?         | A    | R*       | X     | B      | A            | A      | A      |          |             |
| Monomethylamine              |          |     |      |    |      | R      |        |     |      |       | R          | X    |          |       |        |              |        |        |          |             |
| Morpholine                   |          |     |      | D  | E    | A      |        |     |      |       | R          | X    |          |       | E      |              |        |        |          |             |
| Motor Oil                    |          |     |      | D  | E    | A      |        |     |      |       | R          | X    |          |       | E      |              |        |        |          |             |
| Naphtha                      |          |     |      | E* | B+   | B+     | A      | A   | B    | A     | C          | X    |          |       | A      | A            | A      | A      | B        | E           |
| Naphthalene                  |          |     |      | X  | R    | B      | A      | A   | B    | A     | D          | X    | X        | R*    | C      | A            | A      | A      | B        | B           |
| Nickel Acetate               |          |     |      | R  | R    | A      | A      | A   | A    | A     | X          | R    |          |       | R      | R            | R      | R      | R        | C*          |
| Nickel Chloride              | Sat      | D   | C    | C  | A    | A      | A      | B   | A    | R     | B          | B    | R        | R*    | X      | X            | X      | X      | B        | B           |
| Nickel Nitrate               | Sat      | D   | C    | C  | A    | A      | A      | A   | A    | C     | B          | B    | R        | R*    | R*     | A            | A      | A      | R        | A           |
| Nickel Sulfate               | Sat      | D   | C    | C  | A    | A      | A      | B   | A    | B     | B          | B    | R        | R*    | X      | B*           | B*     | R*     | B*       | B*          |
| Nicotine                     |          |     |      | D  | E    | A      |        |     |      |       | R          |      |          |       | C      | C            | C      | C      |          |             |
| Nicotinic Acid               |          |     |      | D  | C    | D      | A      |     |      |       | D          |      |          |       |        |              |        |        |          |             |
| Nitric Acid                  | 10       | D   | B?   | D  | A    | A      | A      | B*  | A    | A     | A          | D    | R*       | X     | X      | B            | B      | A      | A        | D           |
| Nitric Acid                  | 30       | E   | B?   | D  | A    | A      | A      | B*  | A    | A     | A          | E    | R*       | X     | X      | B            | B      | A      | A        | D           |
| Nitric Acid                  | 50       | R*  | C*   | X  | A*   | A      | A      | B*  | A    | A     | A          | X    |          |       | X      | E*           | B*     | A      | A        | D*          |
| Nitric Acid                  | 70       | R*  | D*   | X  | D*   | A      | D      | X   | A    | R*    | X          | X    | X        | D?    | X      | E            | B*     | A      | A        | D*          |
| Nitric Acid                  | 98       | R*  | X    | X  | R*   | R      | A      | X   | R    | X     | X          | X    | X        | R?    | X      | E?           | B?     | E      | B?       | D*          |
| Nitric Acid - Anhydrous      | 100      | X   | X    | X  | X    | A      | A      | X   | R    | X     | X          | X    | R?       | X     | X      | R*           | C?     | E*     | C?       | R           |
| Nitric Acid - Fuming         | 90+      | X   | X    | X  | E*   | A      |        | X   | R*   | X     | X          | X    | X        | X     | X      | E*           | E*     | E*     | R?       | R           |
| Nitrobenzene                 |          | X   | X    | E* | E*   | A      | A      | X   | R    | B*    | R?         | X    |          |       | C      | B*           | A      | A      | B        | B*          |
| Nitroethane                  |          | X   |      | R  | C    | C      |        |     |      | X     | R          |      |          |       |        |              |        |        |          |             |
| Nitrogen Dioxide             |          | X   |      | C  | D    | A      |        |     |      | X     |            |      |          |       |        |              |        |        |          |             |
| Nitromethane                 |          | E?  |      | D  | E    | A      | B      | X   |      | B     | X          | E    |          |       | R      | R            | R      | R      |          | E           |
| Nitrous Acid                 | 10       | D   | D    | R  | B    | A      | B      |     |      | R     | R          | R    |          |       | X      | R            | D      | D      |          |             |
| Nitrous Oxide                |          | D   | D    | R  | X    | A      | B      |     |      | R     | D          | C    |          |       | R*     | R*           | R*     | R*     |          | R*          |
| Ocenol                       |          | D   | C    | E  | E    | A      |        |     |      |       |            |      |          |       |        |              |        |        |          |             |
| Octane (or Octene)           |          | R?  |      | D  | A    | A      |        |     |      |       | A          | X    |          |       | D      | D            | D      | D      |          | D           |
| Oleic Acid                   | 20       | D   | D    | R  | A    | A      | A      | A   | R    | R     | R          | X    |          |       | R      | A            | A      | A      | R        | C           |
| Oleum (fuming Sulfuric Acid) |          |     |      | X  | X    | A      | A      | X   | X    | X?    | X          | X    | R        |       | X?     | R*           | A*     | A*     | X        | D*          |
| Olive Oil                    |          | D   | X    | C  | C    | A      |        |     |      | C     | R          |      |          |       | D      | D            | D      | D      | R        | R           |
| Oxalic Acid                  | 20       | D   | C    | C  | B    | A      | A      |     |      | A     | A          | R*   |          |       | X      | X            | A      | A      | X        | R           |
| Oxalic Acid                  | 50       | D   | C    | C  | B*   | A      | A      |     |      | A     | A          | R*   |          |       | X      | X            | A      | A      | X        | B*          |
| Oxygen gas                   |          | D   | C    | R+ | A    | A      | A      | B   | R    | R     | A          | C    | R        |       | D      | R            | A      | A      | X        | B*          |
| Ozone                        | 1        | E*  | E    | R* | A    | A      | B      | E   | A    | R     | R          | C    | R        |       | R*     | R            | A      | A      | X        | A           |
| Paint Solvents               |          | X   |      |    |      | R      |        |     |      | X     | X          | X    |          |       |        |              |        |        |          |             |
| Palmitic Acid                | 10       | C*  | R    | C  | A    | A      | A      |     |      | A     | A          | R    |          |       | R      | R            | A      | A      |          |             |
| Palmitic Acid                | 70       | X?  | X    | C  | A    | A      | A      |     |      | A     | A          | X    |          |       | R      | R            | A      | A      |          |             |
| Paraffins                    |          | D   | C    | D  | A    | A      |        |     |      | A     | A          | X    |          |       | E      | A            | A      | A      |          | E           |
| Peanut Oil                   |          | R   | R    | R  | A    | A      |        |     |      | A     | A          | R*   |          |       |        |              |        |        |          |             |
| Peracetic Acid               | 40       | E*  | X    | X  | X    | A      |        |     |      |       | A          |      |          |       |        |              |        |        |          |             |
| Perchloric Acid              | 10       | D   | C    | E  | A    | A      | A      | A   | B    | A     | A          | D    | X        | R*    | X      | X            | X      | X      | X        |             |
| Perchloric Acid              | 70       | R   | C    | X  | E    | A      | D      | X   | B    | A     | C*         | X    | X        | X     | X      | X            | X      | X      | X        | B*          |
| Perchloroethylene            |          | X   | X    | X? | A*   | A      | A      | X   | E    | A     | A          | R?   |          |       | R      | A*           | A*     | A*     | B        | B           |
| Perphosphate                 |          | D   | C    | C  | A    | A      |        |     |      | R     | R          | R    |          |       | R      |              |        |        |          |             |
| Petrolatum                   |          | D   | C    | C  | A    | A      |        |     |      | R     | X          | X    |          |       | R*     | E            | A      | A      |          |             |
| Petroleum Oils               |          | R   | D    | R  | A    | A      | A      | A   | R    | A     | C          | X    | X        | B     | D      | R            | R      | R      | R        | A           |
| Phenol                       |          | R   | E    | C* | C    | A      | B      | X   | E    | R+    | X          | X    | R        | X     | C      | C            | C      | C      | R        | A           |
| Phenyl Bisulfide             |          |     |      |    |      | A      |        |     |      | R     | X          |      |          |       |        |              |        |        |          |             |
| Phenylhydrazine              |          | X   | X    | X? | E    | E+     |        |     |      | E     | X          |      |          |       |        |              |        |        |          |             |
| Phosgene gas                 |          | D*  | D*   | R* | E    | A      |        |     |      | E     | D          |      |          |       |        |              |        |        |          | A           |
| Phosgene Liquid              |          | X   | X    | X  | R    | A      |        |     |      | R     | R          |      |          |       |        |              |        |        |          |             |
| Phosphoric Acid              | 10       | D   | C    | C  | A    | A      | A      | B   | A    | A     | A          | R*   |          |       | X      | C*           | A*     | R      | R        | C           |
| Phosphoric Acid              | 50       | D   | C    | C  | D    | A      | A      | B   | A    | A     | C          | X    |          |       | X      | D*           | C*     | E*     | C        | C           |

A: to 120°C, B: to 100°C, C: to 80°C, D: to 60°C, E: to 40°C, R: Room temperature, X: Not recommended, \*: Some mechanical damage possible, ?: Questionable data, +: May exceed (less data)

| CHEMICAL                  | Plastics |     |      |    |      |        |        |     |      |       | Elastomers |      |          |       |        | Metals       |        |        |          |             |   |
|---------------------------|----------|-----|------|----|------|--------|--------|-----|------|-------|------------|------|----------|-------|--------|--------------|--------|--------|----------|-------------|---|
|                           | %        | PVC | CPVC | PP | PVDF | Teflon | Tefzel | PES | PEEK | Kel-F | Viton      | EPDM | Silicone | Atlas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |   |
| Phosphoric Acid           | 80       | D   | C    | C  | A    | A      | A      | R   | A    | B     | C          | C    | X        |       | X      | X            | E*     | A*     | R        |             |   |
| Phosphorus Oxochloride    |          | R   | E    | X  | C    | A      | A      |     |      |       | X          | X    |          |       | X      | X            | X      | X      | R        |             |   |
| Phosphorus Pentoxide      | 61       | R   | D    | C  | A    | A      | A      |     | A    |       | C          | C    |          |       |        | R            | R      | R      | R        |             |   |
| Phosphorus Trichloride    |          | X   | X    | X  | A    | A      | A      |     | A    | B     | C          | R    |          |       | R      |              |        |        |          |             |   |
| Phosphorus, red or yellow |          | R   | R    | R? | A    | A      | A      |     |      |       |            |      |          |       | D      | D            | D      | D      |          |             |   |
| Photographic Solutions    |          | D   | D    | C  | A    | A      | A      | B   | A    | D     | C          | E    | R        |       | X      | R*           | A      | A      | R        |             |   |
| Phthalic Acid             | 10       | R?  | X    | D  | B    | A      | B      |     | A    |       | X          | E    | R        |       | R*     | A*           | A*     | R      |          |             |   |
| Phthalic Anhydride        |          | R*  | R    |    |      | A      | B      |     |      |       | C          | B    |          |       | C      | A            | A      | A      |          |             |   |
| Pickling Solutions(Steel) |          | D   | C    | C  | A    | A      | A      |     |      |       | R          | R*   | X        |       |        |              |        |        |          |             |   |
| Picric Acid               | 10       | R   | R*   | R* | B    | A      | D      |     | A    | R     | C          | R*   | X        | R     | X      | A*           | A*     | R      | R        | A*          |   |
| Plating Solution(Brass)   |          | D   | C    | C  | A    | A      | A      |     |      |       | C          | A    | X        |       | R      |              |        | E      |          | E           |   |
| Plating Solution(Cadmium) |          | D   | C    | C  | A    | A      | A      |     |      |       | C          | A    | X        |       |        |              |        | A*     | R        | R           |   |
| Plating Solution(Chrome)  | 40       | D   | C    | C  | A    | A      | A      |     |      |       | A          | R    | X        |       | X      | R            | R+     | R?     | R?       | R           |   |
| Plating Solution(Copper)  |          | D   | C    | C  | B    | A      | A      |     |      |       | C          | A    | X        |       |        |              |        | E      | R?       | E?          |   |
| Plating Solution(Gold)    |          | D   | D    | C  | A    | A      | A      |     |      |       | R+         | R    |          |       |        |              |        | E      | R        | R           |   |
| Plating Solution(Iron)    |          | D   | C    | C  | C    | A      | A      |     |      |       | C          | A    |          |       |        |              |        |        |          |             |   |
| Plating Solution(Lead)    |          | D   | C    | C  | C    | A      | A      |     |      |       | C          | A    |          |       |        |              |        |        |          |             |   |
| Plating Solution(Nickel)  |          | D   | D    | D  | A    | A      | A      |     |      |       | C          | A    |          |       |        |              |        | R      | X        | R           |   |
| Plating Solution(Nickel)  |          | D   | D    | D  | A    | A      | A      |     |      |       | C          | A    |          |       |        |              |        | D*     | E        | E           |   |
| Plating Solution(Rhodium) |          | D   | D    | D  | A    | A      | A      |     |      |       | C          | R    |          |       |        |              |        |        |          |             |   |
| Plating Solution(Rhodium) |          | D   | D    | D  | A    | A      | A      |     |      |       | C          | R    |          |       |        |              |        |        |          |             |   |
| Plating Solution(Silver)  |          | D   | C    | C  | D    | A      | A      |     |      |       | C          | A    |          |       |        |              |        |        | R        | E           | E |
| Plating Solution(Tin)     |          | D   | D    | D  | A    | A      | A      |     |      |       | C          | D    |          |       |        |              |        | D*     | X        | E           |   |
| Plating Solution(Zinc)    |          | D   | C    | C  | B    | A      | A      |     |      |       | C          | A    |          |       |        |              |        | D*     | E        | E           |   |
| Polyethylene Glycol       |          | D   | C    | C  | A    | A      | A      |     |      |       | B          | C    |          |       |        |              |        |        | E        | D           |   |
| Polyvinyl Acetate         |          | X   | C    | C  | A    | A      | A      |     |      |       | R          | A    | X        |       |        |              |        |        | C        |             |   |
| Polyvinyl Alcohol         |          | D   | D    | C  | A    | A      | A      |     |      |       | D          | E    |          |       |        |              |        |        |          |             |   |
| Potash                    |          | D   | C    | C  | C    | A      | A      |     | A    |       | B          | C    | R*       |       |        |              |        |        |          |             |   |
| Potassium Acetate         | Sat      | E   | C    | D  | A    | A      | A      |     |      |       | C          | D    | X        | R     |        |              |        | B*     | B        | B           |   |
| Potassium Aluminum Sulf   | Sat      | E   | C    | C  | B    | A      | A      |     | A    | R     | B          | D    | X        | R     |        |              |        | E      | B        | B           |   |
| Potassium Bicarbonate     | 30       | C*  | C    | C  | A    | A      | A      |     | R    | E     | B          | C    | E        |       |        |              |        | D      | B        | C           |   |
| Potassium Bichromate      | 60       | D   | C    | C  | A    | A      | A      | B   |      | R+    | D          | C    | R        |       | R*     |              |        | B      | B        | B*          |   |
| Potassium Bisulfate       |          | D   | C    | C  | A    | A      | A      |     |      |       | B          | C    | R        |       | X      | R            | D      | B      | B        | B*          |   |
| Potassium Borate          |          | D   | C    | C  | A    | A      | A      |     |      |       | B          | C    |          |       |        |              |        | D      |          |             |   |
| Potassium Bromate         |          | D   | C    | C  | A    | A      | A      |     |      |       | B          | B    |          |       |        |              |        | D      |          |             |   |
| Potassium Bromide         | 30       | D   | C    | C  | A    | A      | A      | B   | A    | R     | B          | C    | R        |       | X      |              |        | D      |          |             |   |
| Potassium Carbonate       | 40       | D   | C    | C  | A    | A      | A      | B   | A    | R     | B          | C    | R*       |       | B*     | B*           | B*     | C      | B        | B           |   |
| Potassium Chlorate        | 30       | D   | C    | C  | A    | A      | A      | B   | A    | E     | D          | C    | E*       |       | R      | B*           | A      | B      | B        | B           |   |
| Potassium Chloride        | 30       | D   | C    | C  | A    | A      | A      | B   | A    | B     | B          | C    | R        |       | X?     | B*           | B*     | A      | B        | B*          |   |
| Potassium Chromate        | 40       | D   | C    | C  | A    | A      | A      |     | A    | B     | B          | B*   |          |       | R*     | B*           | B*     | C      | B        | B           |   |
| Potassium Copper Cyanide  |          | D   | C    | C  | A    | A      | A      |     |      |       | B          | B    | R        |       |        |              |        | B*     | C        |             |   |
| Potassium Cyanide         | 30       | D   | C    | C  | A    | A      | A      | B   |      | R     | R+         | C    | R        |       | C*     | B*           | B*     | B      | B        | B*          |   |
| Potassium Dichromate      | Sat      | D   | C    | C  | A    | A      | A      | B   | R    | R     | B          | C    | R        |       | D      | B            | B+     | B      | B        | B*          |   |
| Potassium Ferricyanide    | 30       | D   | C    | C* | A    | A      | B      |     | R    | R     | C          | A    |          |       | X      | B*           | A      | R      | R        | B*          |   |
| Potassium Ferrocyanide    | 30       | D   | C    | C* | A    | A      | A      |     | R    | R     | C          | A    |          |       | R*     | A*           | B      | R      | R        | B*          |   |
| Potassium Fluoride        |          | D   | C    | D  | A    | A      | A      |     |      |       | C          | C    |          |       | R*     | A*           | B      | R      | R        | B           |   |
| Potassium Hydroxide       | 25       | D   | C    | C  | C*   | A      | A      | R   | A    | B*    | R          | A    | R*       | R     | C      | B*           | A*     | A*     | C?       | A*          |   |
| Potassium Hydroxide       | 50       | D   | C    | D* | C    | A      | A      |     | R    | D+    | X          | A    | R*       | X     | X      | B*           | A*     | A*     | X        | A*          |   |
| Potassium Hypochlorite    | 10       | D   | E    | D  | B*   | A      | A      |     |      | R     | E          | A    |          |       | X      | X            | R*     | R*     | B        | B*          |   |
| Potassium Iodide          | 70       | D   | C    | C  | A    | A      | A      |     |      |       | B          | C    |          |       | E*     | B            | B      | C      | C        | B           |   |
| Potassium Nitrate         | 20       | D   | D    | B  | A    | A      | A      | B   | A    | R     | B          | C    | R        | R     | D      | B*           | A*     | B      | B        | B*          |   |
| Potassium Perborate       |          | D   | C    | C  | A    | A      | A      |     |      |       | R          |      |          |       |        |              |        |        |          |             |   |
| Potassium Perchlorate     | 20       | D   | C    | C  | A    | A      | A      |     |      |       | C          | D    |          |       |        |              |        |        | R        | R           |   |
| Potassium Permanganate    | 10       | D   | C    | R  | A    | A      | A      | B*  | R    | B     | D          | B    | R*       | D     | R*     | B*           | A      | A      | B        | B*          |   |
| Potassium Permanganate    | 25       | D   | D    | R  | A    | A      | A      | B*  | R    | R     | D          | C    | R*       | R     | R*     | B*           | A      | A      | B        | B*          |   |
| Potassium Persulfate      | 4        | E   | E    | D  | A    | A      | A      |     |      |       | B          | C    |          |       |        |              |        |        | A        | R           |   |
| Potassium Sulfate         | 20       | R   | D    | D  | A    | A      | A      | B   | A    | R     | B          | C    | R        |       | B*     | B            | A      | A      | B        | B           |   |

A: to 120°C, B: to 100°C, C: to 80°C, D: to 60°C, E: to 40°C, R: Room temperature, X: Not recommended, \*: Some mechanical damage possible, ?: Questionable data, +: May exceed (less data)



| CHEMICAL                     | Plastics |     |      |    |      |        |        |     |      |       | Elastomers |      |          |       |        | Metals       |        |        |          |             |
|------------------------------|----------|-----|------|----|------|--------|--------|-----|------|-------|------------|------|----------|-------|--------|--------------|--------|--------|----------|-------------|
|                              | %        | PVC | CPVC | PP | PVDF | Teflon | Tefzel | PES | PEEK | Kel-F | Viton      | EPDM | Silicone | Aflas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| Potassium Sulfide            |          | D   | R    | R  | A    | A      | A      | R   | R    | X     | R          | R    | X        |       | X?     | C            | C      | R      | R        | E           |
| Propane                      |          | R   | R    | R  | A    | A      | A      | R   | R    | R     | X?         | X    | X        |       | D      | A            | A      | R      | R        | R           |
| Propyl Acetate               |          | X   |      |    | X    | R      |        |     |      | X     | R          | X    |          |       | D      | D            | D      |        |          |             |
| Propyl Acetone               |          | D   | C    | C  | B*   | A      | B      | R   |      | B     | C          | R    | R        |       |        |              |        |        |          |             |
| Propylene Dichloride         |          | X   | X    | X  | C    | A      |        |     |      | R?    | X          | X    |          |       |        |              |        |        |          |             |
| Propylene Glycol             |          | D   | R    | D  | A    | A      | E      | E*  | R    | E     | D          | R    | R        |       | R      | E            | A      | B      | B        | B           |
| Propylene Oxide              | 90       | X   | X    | E* | R    | A      | D      | E*  |      | X     | R*         | X    |          | R     | C      | R            | B      | R      | R        | R           |
| Pyridine                     |          | X   | X    | D  | R    | A      | A      | X   | E    | X     | X          | X    |          | R*    | D      | D            | A      |        |          | D           |
| Pyrogallol Acid (pyrogallol) |          | D   | R    | R  | E    | A      | D      |     | R    | R     | R*         | R    |          | R*    | R      | R            | A      | R      | R        | C           |
| Rhodan Salts                 |          | D   | D    | D  | A    | A      |        |     |      | C     | D          |      |          |       |        |              |        |        |          |             |
| Sallylaldehyde               |          | X   | X    | E* | D*   | A      | B      | E*  |      | R     | R          |      |          |       |        |              |        |        |          |             |
| Sallylic Acid                | 10       | D   | X    | E* | B    | A      | A      | E   | R+   | A     | A          |      |          |       | X      | B            | A      | R      | R        | A           |
| Sewage                       |          | D   | C    | C  | A    | A      | A      | A   | A    | C     | C          |      |          |       | X      | R            | R      | R      | R        | B           |
| Silicic Acid                 |          | D   | C    | C  | A    | A      | A      | A   | A    | B     | C          |      |          |       |        |              |        |        |          |             |
| Silicone Oil                 |          | E   | D    | C  | A    | A      | B      | A   | R    | E     | D          |      |          |       | R      | R            | D      |        |          |             |
| Silver Chloride              |          | E   | D    | D* | B    | A      | A      |     | R    | R     |            |      |          |       | X      | X            | X      | R      | R        | R           |
| Silver Cyanide               |          | D   | C    | C  | A    | A      | A      |     |      | D     | D          |      |          |       | X      | R            | X      | R      | R        | E           |
| Silver Nitrate               | 50       | D   | D    | C  | A    | A      | A      | B   | A    | C     | C          |      |          |       | X      | A            | A      | B      | B        | B           |
| Silver Sulfate               |          | D   | C    | D  | A    | A      |        |     |      | B     | C          |      |          |       |        |              |        |        |          |             |
| Soaps                        |          | D   | C    | C  | A    | A      |        | B   | R    | B     | B          |      |          |       | C      | B            | B      | B      | B        | A           |
| Sodium Acetate               | 50       | D   | C    | C  | A    | A      | A      | B   | R    | E     | C          |      |          |       | X      | A            | A      | B      | B        | A           |
| Sodium Alum(inum) Sulfat     | 60       | D   | C    | C  | A    | B      |        | A   | A    | B     | C          |      |          |       | X      | R*           | B      | B      | B        | B           |
| Sodium Benzoate              |          | D   | D    | C  | A    | A      | A      |     | A    | R     | R          |      |          |       | X      | R*           | B      | B      | B        | B*          |
| Sodium Bicarbonate           | 20       | D   | C    | C  | A    | A      | A      | B   |      | A     | C          |      |          |       | R*     | A            | A      | R      | R        | E           |
| Sodium Bichromate            | Sat      | D   | C    | C  | A    | A      | B      |     |      | B     | C          |      |          |       | R*     | B*           | B*     | R      | R        | E*          |
| Sodium Bisulfate             | 20       | D   | C    | C  | A    | A      | A      | B   | D    | B     | B          |      |          |       | E      | D*           | D      | E      | E        | B*          |
| Sodium Bisulfite             | 10       | D   | C    | C  | A    | A      | A      | B   | R    | R     | B          |      |          |       | X      | B*           | B*     | D      | D        | B*          |
| Sodium Borate                | Sat      | D   | C    | C  | A    | A      | A      | B   | A    | C     | D          |      |          |       | E*     | C            | B*     | B*     | B*       | B*          |
| Sodium Bromide               | Sat      | D   | C    | C  | A    | A      | A      | B   | A    | C     | D          |      |          |       | R*     | E*           | A*     | R      | R        | B*          |
| Sodium Carbonate             | 30       | D   | C    | C  | A    | A      | A      | B   | A    | B     | B*         |      |          |       | E      | B            | B      | B      | B        | B           |
| Sodium Chlorate              | Sat      | D   | C    | C  | A    | A      | A      | B   | A    | C     | C          |      |          |       | R*     | B*           | B*     | B      | B        | B           |
| Sodium Chloride              | 25       | D   | C    | C  | A    | A      | A      | B   | A    | C     | C          |      |          |       | X      | B*           | A*     | B*     | B*       | B           |
| Sodium Chlorite              | 25       | R?  | X?   | R? | E*   | A      |        |     |      | D?    | D?         |      |          |       |        | D*           | D      | D      | R        | R           |
| Sodium Cyanide -wet          | 10       | D   | C    | C  | A    | A      | A      | B   | R    | B     | B          |      |          |       | R*     | B*           | A      | B      | B        | B           |
| Sodium Dichromate            | 20       | D   | C    | D  | C    | A      | B      |     |      | D     | R          |      |          |       | R      | B*           | B*     | R      | R        | R           |
| Sodium Ferricyanide          | Sat      | D   | C    | C  | A    | A      | A      |     |      | D     | D          |      |          |       |        | R*           | A      | A      | A        | C           |
| Sodium Ferrocyanide          | Sat      | D   | C    | C  | A    | A      | A      |     |      | D     | D          |      |          |       |        |              | R      | R      |          |             |
| Sodium Fluoride              | 5        | D   | C    | R  | A    | A      | A      |     | E    | D     | D          |      |          |       | X      | R*           | A      | R      | R        | C           |
| Sodium Hydroxide             | 15       | D   | C    | C  | C*?  | A      | A      | B   | A    | B     | A          |      |          |       | B*     | B*           | A      | B      | B        | B           |
| Sodium Hydroxide             | 30       | D   | C    | C  | C*?  | A      | A      | B   | A    | R?    | A          |      |          |       | D*     | B*           | A      | B      | B        | B           |
| Sodium Hydroxide             | 50       | D   | C    | C  | C*?  | A      | A      | E   | A    | R*    | E          |      |          |       | R*     | B*           | A*     | B      | B        | B           |
| Sodium Hydroxide             | 70       | D   | C    | C  | C*?  | A      | D      | X   | R+   | X?    | A          |      |          |       | D*     | B            | C*     | A      | B        | B           |
| Sodium Hypochlorite          | 13       | D*  | D    | D  | D*   | A      | A      | B   | A    | D?    | D?         |      |          |       | X      | X            | X      | C      | C        | D?          |
| Sodium Metaphosphate         |          | D   | C    | E  | A    | A      | A      |     |      | C     | B          |      |          |       | X      | R            | R      | D      |          |             |
| Sodium Metasilicate          |          | D   | C    | C  | A    | A      | A      |     |      | B     | B          |      |          |       | B*     | B            | B      | B      | B        | B           |
| Sodium Nitrate               | Sat      | D   | C    | C  | A    | A      | A      | B   | R    | B     | C          |      |          |       | R      | D            | A      | B      | B        | D*          |
| Sodium Nitrite               | 40       | D   | C    | C  | A    | A      | A      |     | R+   | B     | C          |      |          |       | R      | B*           | B*     | B      | B        | B           |
| Sodium Perborate             | 10       | D   | C    | C  | A    | A      | A      |     |      | A     | A          |      |          |       | E*     | A*           | B*     | B      | B        | B           |
| Sodium Perchlorate           |          | D   | C    | C  | A    | A      | A      |     |      | A     | A          |      |          |       |        |              |        |        |          |             |
| Sodium Peroxide              | 10       | D   | C    | C  | A    | A      | A      |     | A    | A     | A          |      |          |       | X      | B            | A      |        |          | C           |
| Sodium Phosphate             | 10       | D   | C    | D  | A    | A      | A      |     | R    | B     | C          |      |          |       | B      | B            | B      | B      | B        | B           |
| Sodium Silicate              | 10       | D   | C    | C  | A    | A      | A      | B   | A    | C     | C          |      |          |       | B      | B            | A      | A      | B        | B*          |
| Sodium Sulfate               | Sat      | D   | C    | C  | A    | A      | A      | B   | A    | B     | C          |      |          |       | D      | A            | A      | A      | B        | B*          |
| Sodium Sulfide               | 40       | D   | C    | C  | A    | A      | A      | B   | A    | B     | C          |      |          |       | R      | C*           | C*     | C*     | B        | B*          |

A: to 120°C, B: to 100°C, C: to 80°C, D: to 60°C, E: to 40°C, R: Room temperature, X: Not recommended, \*: Some mechanical damage possible, ?: Questionable data, +: May exceed (less data)



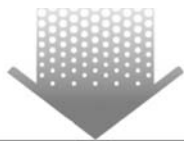
| CHEMICAL                | Plastics |     |      |    |      |        |        |     |      |       | Elastomers |      |          |       |        | Metals       |        |        |          |             |
|-------------------------|----------|-----|------|----|------|--------|--------|-----|------|-------|------------|------|----------|-------|--------|--------------|--------|--------|----------|-------------|
|                         | %        | PVC | CPVC | PP | PVDF | Teflon | Tefzel | PES | PEEK | Kel-F | Viton      | EPDM | Silicone | Aflas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| Sodium Sulfite          | 20       | D   | C    | C  | A    | A      | A      | R   | A    | B     | C          | R    |          |       | R*     | B*           | B*     | B      |          | B*          |
| Sodium Thiocyanate      |          | D   | D    | D  | A    | A      | A      |     |      | A     | C          | D    |          |       | X      | B            | A      | D      |          | B*          |
| Sodium Thiosulfate      |          | D   | C    | C  | A    | A      | A      | B   |      |       | R?         | X    |          | R*    |        |              |        |        |          |             |
| Sour Crude Oil          |          | D   | C    | D  | A    | A      | A      |     |      |       |            |      |          |       |        |              |        |        |          |             |
| Soybean Oil             |          | D   | C    | C  | A    | A      | A      |     |      |       | A          | X    |          |       | E      | B            | C      | R      |          | E           |
| Stannic (Tin) Chloride  | 10       | D   | C    | C  | A    | A      | A      | B   | A    | B     | C          | D    |          |       | X      | X            | R?     | B      | R        | E           |
| Stannous (Tin) Chloride | 10       | D   | C    | C  | A    | A      | A      |     |      | R     | C          | E    |          |       | X      | X            | B*     | R      |          | A*          |
| Starch                  |          | D   | C    | C  | A    | A      | A      |     | A    |       | B          | C    | R        |       | C      | A            | A      |        |          | B*          |
| Steam                   |          | X   | A?   | B  | A    | A      | A      | A   | A    | A     | B          | A    |          |       | A      | A            | A      | B      |          | A           |
| Stearic Acid            | 20       | D   | C    | C* | A    | A      | A      | E*  |      | C     | C*         | D*   |          | R     | E*     | A            | A      | B      | B        | A           |
| Stoddard's Solvent      |          | D?  | X    | E  | A    | A      | A      | B   |      |       | A          | X    |          | R     | C      | A            | A      | C      |          | A           |
| Styrene                 |          | X   |      |    | B    | A      | B      | R   |      |       | A          | X    |          | R*    | E      | R            | D      |        |          | C           |
| Succinic Acid           |          | D   | C    | C  | A    | A      | A      |     |      | C     | R          |      |          |       | X      |              |        |        |          |             |
| Sulfamic Acid           | 20       | D   | C    | C  | C    | A      | A      |     |      | R     | R          | A?   |          |       | X      |              |        |        |          |             |
| Sulfamic Acid           |          | D   | C    | C  | A    | A      | A      |     |      | R     | A          |      |          |       | R*     | B*           | B*     |        |          | C*          |
| Sulfate Liquors (Oil)   | 5        | D   | C    | C  | A    | A      | A      |     |      | R+    | A          | D    |          |       | X      | D            | B      |        |          | A           |
| Sulfite Liquor          |          | X   | X    | E* |      | R+     |        |     |      |       | R          | X    |          |       |        |              |        |        |          |             |
| Sulfolane               |          | D   | C    | E  |      | A      |        |     |      |       | R          | X    |          |       |        |              |        |        |          |             |
| Sulfonated Detergents   | 50       | D   | C    | E  |      | A      |        |     |      |       | C          | A    |          |       | X      | A            | A      |        |          | E           |
| Sulfur                  |          | D   | C    | C  | A    | A      | A      |     | A    | A     | A          | A    | A*       |       | X      | A            | A      | A      | A        | A           |
| Sulfur Chloride         | 90       | E*  | D    | X  | A    | A      | A      | E*  |      | R     | A          | X    | R*       |       | X      | X            | X      | X      | X        | A           |
| Sulfur Dichloride       |          |     | X    | X  | R    | A      | A      | A   |      |       | R          | X    |          |       | X      | X            | X      | X      | X        | B           |
| Sulfur Dioxide -wet     | 10       | X   | E?   | D* | A?   | A      | A      | E*  | A    | A     | D?         | D    |          | R     | X      | X            | B      | X      | X        | A           |
| Sulfur Trioxide         | 90       | X   | X?   | X  | X    | A      | A      |     | A    | R     | R*         | R*   |          |       | B*     | X            | A*     | X      | X        | A*          |
| Sulfuric Acid           | 10       | D   | C    | C  | A    | A      | A      | A   | B    | A     | R*         | C*   |          | R*    | X      | X            | X?     | X      | X        | C           |
| Sulfuric Acid           | 30       | D   | C    | C  | A    | A      | A      | A   | A*   | B     | A          | C*   |          | R*    | X      | X            | X      | X      | X        | C           |
| Sulfuric Acid           | 50       | D   | C    | C  | B    | A      | A      | R   | X    | B     | A          | D    |          | R*    | X      | X            | X      | X      | X        | C           |
| Sulfuric Acid           | 60       | D   | C    | C  | A    | A      | A      |     | X    | B     | A*         | X    |          | R*    | X      | X            | X      | X      | X        | C           |
| Sulfuric Acid           | 70       | D   | C    | C* | B    | A      | A      |     | X    | B     | A*         | D    |          | R*    | X      | X            | X      | X      | X        | C           |
| Sulfuric Acid           | 80       | X   | D    | R* | B    | A      | A      |     | X    | B     | B*         | R    |          | X     | X      | X            | R?     | R?     | X        | C           |
| Sulfuric Acid           | 90       | X   | C?   | R* | C*   | A      | A      |     | X    | B     | B          | R    |          | X     | X      | X            | R*     | R*     | X        | C           |
| Sulfuric Acid           | 93       | X   | C?   | R* | D*   | A      | A      |     | X    | B     | C          | X    |          | X     | X      | X            | R*     | R*     | X        | C           |
| Sulfuric Acid           | 94       | X   | D?   | R* | D*   | A      | A      |     | X    | B     | C*         | X    |          | X     | X      | X            | R*     | R*     | X        | C           |
| Sulfuric Acid           | 95       | X   | D?   | R? | E*   | A      | A      | X   | X    | B     | D*         | X    |          | X     | R*     | R*           | R*     | R*     | X        | C           |
| Sulfuric Acid           | 96       | X   | D?   | R? | E*   | A      | A      |     | X    | B     | D*         | X    |          | X     | R*     | R*           | R*     | R*     | X        | C           |
| Sulfuric Acid           | 98       | X   | D?   | E? | X    | A      | A      |     | X    | B     | E*         | X    |          | X     | R*     | R*           | R*     | R*     | X        | C           |
| Sulfuric Acid           | 100      | X   | X    | X  | X    | A      | A      |     | X    | B     | X?         | X    |          | X     | E      | X            | B      | B      | X        | C           |
| Sulfurous Acid          | 10       | D   | C    | C  | A    | A      | A      | B   | R    | R     | B*         | B    | X        |       | X      | X            | D*     | D*     | A        | A           |
| Summiton (insecticide)  |          | X   | X    | D  | A    | A      | A      |     |      |       | D          | D    |          |       |        |              |        |        |          |             |
| Tail Oil                |          | D   | C    | C  | A    | A      | A      |     |      |       | A          | X    |          |       | E*     | B*           | A*     |        |          | A           |
| Tannic Acid             | 10       | D   | C    | C  | A    | A      | A      | B   | A    | R     | R          | C    |          |       | X      | C            | B      | B      | B        | B*          |
| Tanning Liquors         |          | D   | C    | D  | R    | A      | A      |     |      |       | C          | R    |          | R     | X      | D*           | D*     | R      | R        | A           |
| Tar & Tar oil           |          | X   | X    | C  | R    | A      | A      |     | R    | B     | A          | D?   |          |       | C      | C            | C      | C      | C        | C           |
| Tartaric Acid           | 30       | D*  | C    | C* | A    | A      | A      | B   | A    | E     | A          | C?   |          |       | R?     | A            | A      | A      | B        | B           |
| Tertiary Butyl Alcohol  |          | R   | D    | C  | A    | A      | A      | C   |      |       | R?         | C    |          |       | R      | R            | R      | R      | C        | R           |
| Tertiary Butyl Catechol |          | X   |      |    | R    |        |        |     |      |       | R          |      |          |       |        |              |        |        |          |             |
| Tetrachloroethane       |          | X   | X    | R* | A    | A      | A      | X   | R    | R     | R          | X    |          |       | R      | R            | D      | D      | R        | B           |
| Tetrachloroethylene     |          | X   | X    | X  | A*   | A      | A      | X   | E    | A     | X          | R?   |          |       | A*     | A            | A      | A      | B        | B           |
| Tetraethyl Lead         |          | R*  | E*   | R* | A    | A      | A      | R   |      |       | R          | X    |          |       | R*     | R            | A      | A      | A        | B           |
| Tetrahydrofuran         |          | X   | X    | X  | E*   | A      | B      | X   | R    | E     | X          | X    |          |       | R      | R            | A      | A      | B        | B           |
| Tetralin                |          | X   | X    | E* | R    | R+     |        |     |      |       | R          | X    |          |       |        |              |        |        |          |             |
| Tetramethyl Amm. Hydrox | 50       | X   | X    | D  | B?   | A      |        |     |      |       | X          | X    |          |       |        |              |        |        |          |             |
| Thionyl Chloride        |          | X   | X    | E? | X    | A      | B      | X   |      |       | X          | X    |          |       | X      | X            | X      | X      | X        | C*          |
| Tin Chloride            |          | D   | C    | D  | A    | A      |        |     |      | C     | A          | R    |          |       |        | X            | D      |        |          | A           |
| Titanium Sulfate        |          | D   | B?   | C  | A    | A      |        |     |      |       | C          | A    |          |       | R      | R?           | R      |        |          | A           |
| Titanium Tetrachloride  |          | X?  | E*   | E* | D    | A      | B      |     |      |       | C          | X    | X        |       | R      | R?           | R      | A      |          | B           |

A: to 120°C, B: to 100°C, C: to 80°C, D: to 60°C, E: to 40°C, R: Room temperature, X: Not recommended, \*: Some mechanical damage possible, ?: Questionable data, +: May exceed (less data)

| CHEMICAL              | Plastics |     |      |     |      |        |        |     |      |       | Elastomers |      |          |       |        | Metals       |        |        |          |             |
|-----------------------|----------|-----|------|-----|------|--------|--------|-----|------|-------|------------|------|----------|-------|--------|--------------|--------|--------|----------|-------------|
|                       | %        | PVC | CPVC | PP  | PVDF | Teflon | Tetzel | PES | PEEK | Kel-F | Viton      | EPDM | Silicone | Aflas | Acetal | Carbon Steel | 304 SS | 316 SS | Titanium | Hastelloy C |
| Toluene (Toluol)      |          | X   | X    | E*? | C*   | A*     | A      | X   | R    | B*    | R+         | X    | X        | X     | D*     | A            | B      | A      | B        | B           |
| Tomato Juice          |          | D   | C    | C   | A    | A      | B      |     | B    | B     | C          | C    |          |       |        | X?           | R      | E      |          | E           |
| Transformer Oil       |          | D   | C    | E   |      | A      |        | A   | A    |       | A          | X    | R*       |       |        | R            | E      | A      |          | E           |
| Triacetin             |          |     |      |     |      | R      |        |     |      | R     | R          | R    |          |       |        |              |        |        |          |             |
| Tributyl Phosphate    |          | X   | X    | D   | E*   | A      | D      |     | R    | R     | R          | R*   | R?       |       | D      | R            | R      | R      | R        | R           |
| Trichloroacetic Acid  | 20       | R   | E    | E   | E*   | A      | A      |     | B    | A     | X          | R*   | X        | X     | X      | X            | X      | X      | X        | B           |
| Trichloroethylene     |          | X   | X    | E*? | C    | A      | A      | R*  | A    | E*    | R+         | X    | X        | X     | R*     | R*           | C*     | A*     | C        | C           |
| Triethanolamine       |          | R?  | X    | X?  | X?   | A      | D      | X   |      | R     | X?         | D?   | X        | R     | R      | R            | R      | B      | B        | B           |
| Triethylamine         |          | D*  | D    | X   | E*   | A      | B      |     | R    | R     | C          | D    |          | D     |        |              |        |        |          |             |
| Trimethyl propane     |          | D   | C    | X   | A    | A      | A      |     |      | A     | A          | R    |          |       | E      | D            | D      |        |          | E           |
| Trisodium Phosphate   | 10       | D   | C    | D   | A    | A      | A      |     |      | A     | A          | R    |          |       |        |              |        |        |          |             |
| Turbine Oil           |          | R   | R    | R   | A    | A      | A      |     |      | D     | D          | X    | X        |       |        |              |        |        |          |             |
| Turpentine            |          | D   | D    | R*  | A    | A      | A      |     | R*   | B     | A          | R?   | X        | R?    | D      | R            | B      | B      | B        | B           |
| Urea (urine)          | 28       | D*  | C    | C   | A    | A      | B      | B   | A    |       | D          | D    | R        | R*    | R*     | A            | A      | A      | A        | B*          |
| Varnish               |          | X   | C    | R   | A    | A      | B      |     | R    | B     | A          | X    | X        |       | X      | A            | A      | A      | A        | E           |
| Vaseline (Petrolatum) |          | D   | C    | C   | A    | A      |        |     | R    | R     | R          | X    | X        |       |        |              |        |        |          |             |
| Vegetable Oil         |          | R   | R    | R   | A    | A      | A      |     | A    | D     | D          | C*?  | R        |       | D      | D            | B      | B      | E        | E           |
| Vinegar               |          | D   | D    | D   | A    | A      | B      | B   | A    | A     | A          | B    | R        |       | R*     | R            | D      | D      | B        | B           |
| Vinyl Acetate         | 10       | X   | X    | R*  | A    | A      | A      |     | A    | X?    | D*         | X    | X        | X     | R*     | A            | A      | A      | A        | A           |
| Water, Acid Mine      |          | D   | C    | C   | B    | A      | B      |     |      | C     | C          | C    | R        |       | X      | X            | E*?    | E*?    | R        | R           |
| Water, Demineralized  |          | D   | C    | C   | A    | A      | B      |     | R    | C     | C          | A    |          |       | X      | X            | A      | A      | A        | C           |
| Water, Distilled      |          | D   | C    | C   | A    | A      | B      | B   | A    | R+    | C          | A    |          |       | X      | X            | A      | A      | A        | A           |
| Water, Potable        |          | D   | C    | C   | A    | A      | A      | B   | A    | A     | D          | B    | R*       | D     | X      | A            | A      | A      | A        | B           |
| Water, Sea/salt       |          | D   | C    | C   | A    | A      | A      | B   | A    | A     | C          | C    | C*       | B     | X      | R*           | A      | A      | B        | A           |
| Whisky                |          | D   | C    | D   | A    | A      | A      |     | B    | D     | D          | C    | R        | R*    | X      | B            | B      | B      | R        | R           |
| White Liquor          |          | D   | D    | D   | A    | A      | B      |     |      | C     | A          | A    |          |       | R*     | C            | C      | C      | R        |             |
| Wines                 |          | D   | C    | C   | A    | A      | B      |     | R    | E+    | C          | R    |          | D*    | X      | R            | D      | D      | R        |             |
| Xylene (Xylol)        |          | X   | X    | X   | A    | A      | A      | X   | R    | B     | R+         | X    | X        | R?    | B*     | B            | B      | B      | B        | E           |
| Zinc Acetate          |          | D   | C    | C   | A    | A      |        |     |      | B     | C          | C    | X        |       |        |              |        |        |          |             |
| Zinc Chloride         | 10       | D   | C    | C   | A    | A      | A      | B   | A    | B     | B          | R    | R        | R     | X      | X            | X      | B      | B        | B           |
| Zinc Nitrate          |          | D   | C    | C   | A    | A      | A      |     |      | B     | B          | C    |          |       |        |              |        |        |          |             |
| Zinc Sulfate          | 20       | D   | C    | C   | A    | A      | A      | B   | A    | B     | A          | A    | R        | R*    | X      | B            | B      | B      | B        | B*          |
| Industrial Atmosphere |          | A   |      | A   | A    | A      | A      |     | A    | A     |            |      |          |       | ?      | A            | A      | A      | A        | A           |
| Marine Atmosphere     |          | A   |      | A   | A    | A      | A      |     | A    |       |            |      |          |       | X      | A            | A      | A      | A        | A           |
| Sunlight              |          | ?   |      | A   | A    | A      | A      | ?   |      |       |            | A    | A        |       | A      | A            | A      | A      | A        | A           |
| Ultraviolet Light     |          | A   |      | ?   | A    | A      | A      | X   |      |       |            |      |          | ?     | A      | A            | A      | A      | A        | A           |

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