# CHEMICAL RESISTANCE CHART

**LEGEND:**
**1 = Recommended**
**2 = Suitable for Use**
**3 = Useable, not recommended**
**4 = Not Recommended**

Use of product in environments specified as "USEABLE, NOT RECOMMENDED" or "NOT RECOMMENDED" may lead to product failure and will void warranty. These ratings are intended to be used as a guide only. For decisive results, please call for a free product sample for on-site testing in actual conditions. Actual results may vary depending on concentration of chemicals.
Note: Ratings for products # 470, #474, #479, #480, #970, #974, #979, & #980 refer to top surface only. Copyright in Chicago, Illinois - July, 2004

| Chemical | Form | Chemical Family | Concentration | 045<br>340<br>345<br>346<br>447<br>470<br>474<br>480 | <br>543BL<br>544BL<br>545BL<br>549All<br>550BL<br>556BL<br>562BL | <br><br><br><br>750<br>970<br>974<br>980 | <br><br><br><br>551<br>755All<br>758All | <br><br><br>543RD<br>544RD<br>550RD<br>556RD<br>562RD | 035<br>406<br>410<br>411<br>413<br>415<br>417<br>419 | <br>420<br>422<br>479<br>520<br>520HD<br>522<br>522HD | <br><br>523<br>531<br>730<br>735<br>737<br>769 | <br>825<br>826<br>830<br>831<br>920HD<br>922HD<br>979 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Propanol (isopropal alcohol) | Liquid | Alcohol | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| Acetaldehyde | Liquid | Aldehyde | 50% | 2 | 2 | 2 | 4 | 4 | 3 | 3 | 3 | 3 |
| Acetic Acid | Liquid | Acid (weak, organic) | 50% | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 |
| Acetic Acid | Liquid | Glacial | | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 |
| Acetic Anhydride | Liquid | Acid (weak) | | 3 | 3 | 3 | 2 | 2 | 4 | 4 | 4 | 4 |
| Acetone | Liquid | Ketone | | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 |
| Ammonium Hydroxide | Liquid | Base (weak) | 28-30% | 4 | 4 | 4 | 4 | 4 | 1 | 1 | 1 | 1 |
| Amyl Acetate | Liquid | Carboxylic Acid (Aliphatic) | | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| Aniline | Liquid | Base (aromatic, weak) | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| ASTM #1 | Liquid | Paraffin Oil | | 4 | 4 | 4 | 1 | 1 | n/a | n/a | n/a | n/a |
| Beef Fat | Solid/Liquid | | | 4 | 4 | 4 | 1 | 2 | 2 | 2 | 2 | 2 |
| Benzene | Liquid | Aromatic HC | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Benzoic Acid | Liquid | Carboxylic Acid (Aromatic) | | 4 | 4 | 4 | 4 | 4 | 1 | 1 | 1 | 1 |
| Benzyl Alcohol | Liquid | Alcohol | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Boric Acid | Liquid | Acid (weak) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Brake Fluid | Liquid | Ether/Glycol | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Bromine | Liquid/Gas | Halogen | | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 |
| Butane | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 3 | 3 | 3 | 3 |
| Butter | Solid/Liquid | | | 4 | 4 | 4 | 1 | 2 | 1 | 1 | 1 | 1 |
| Butyl Acetate | Liquid | Carboxylic Acid (Aliphatic) | | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| Butyl Alcohol (butanol) | Liqud | Alcohol | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Calcium Chloride | Solid | Inorganic Salt | | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| Calcium Hydroxide | Solid | Metal Hydroxide | | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| Carbolic Acid (liquid phenol) | Liquid | Acid (organic) | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Carbon Monoxide | Gas | Inorganic Carbon Compound | | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 1 |
| Carbon Tetrachloride | Liquid | Halogenated Organic Liquid | | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 4 |
| Chicken Fat | Solid/Liquid | | | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 |
| Chloroacetone | Liquid | Ketone | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Chloroform | Liquid | Aliphatic HC | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Chromic Acid | Liquid | Acid (weak) | 50% | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| Citric Acid | Liquid | Acid (weak, organic) | 10% | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| Corn Oil | Liquid | Fatty Acid | | 4 | 4 | 4 | 1 | 2 | 1 | 1 | 1 | 1 |
| Cottonseed Oil | Liquid | Aliphatic HC | | 4 | 4 | 4 | 2 | 3 | 1 | 1 | 1 | 1 |
| Cyclohexane | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 4 | 4 | 4 | 4 |
| Cyclohexanol | Liquid | Alcohol (cyclic) | | 4 | 4 | 4 | 3 | 3 | 1 | 1 | 1 | 1 |
| Cyclohexanone | Liquid | Ketone | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Dibutyl Phthalate | Liquid | Ester | | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |
| Diesel fuel | Liquid | Petroleum HC | | 4 | 4 | 4 | 1 | 1 | 3 | 3 | 3 | 3 |
| Diesel Oil | Liquid | Petroleum HC | | 4 | 4 | 4 | 1 | 1 | 3 | 3 | 3 | 3 |
| Dioctyl Phthalate (DOP) | Liquid | Ester | | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 4 |
| Ethane | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 1 |
| Ethyl Acetate | Liquid | Ester | | 2 | 2 | 2 | 4 | 4 | 3 | 3 | 3 | 3 |
| Ethyl Alcohol (ethanol) | Liquid | Alcohol | | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 |
| Ethyl Ether | Liquid | Ether | | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 |
| Ethylene Glycol (antifreeze) | Liquid | Alcohol | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Formaldehyde | Liquid | Aldehyde | 37% | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 1 |
| Formic Acid | Liquid | Acid (weak, organic) | | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| Fresh Water | Liquid | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Fuel Oil | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Gasoline | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 3 | 3 | 3 | 3 |
| Gear Oil (85w-140) | Liquid | Paraffin Oil | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Glucose | Liquid | Sugar | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Glycerin | Liquid | Alcohol | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Heptane | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Hexane | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 3 | 3 | 3 | 3 |
| Hydraulic Fluid | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Hydrazine | Liquid | Base (weak) | | 4 | 4 | 4 | 2 | 2 | 1 | 1 | 1 | 1 |
| Hydrochloric Acid | Liquid | Acid (strong) | 30% | 2 | 2 | 2 | 4 | 4 | 2 | 2 | 2 | 2 |
| Hydrofluoric Acid | Liquid | Acid (weak) | 30% | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hydrogen Peroxide | Liquid | | | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 |
| Iodine | Liquid | Inorganic Halogenated Comp | | 4 | 4 | 4 | 3 | 3 | 1 | 1 | 1 | 1 |
| IRM 902 | Liquid | Napathenic Oil | | 4 | 4 | 4 | 2 | 2 | n/a | n/a | n/a | n/a |
| IRM 903 | Liquid | Napathenic Oil | | 4 | 4 | 4 | 2 | 2 | n/a | n/a | n/a | n/a |
| Jet Fuel | Liquid | Aromatic HC | | 4 | 4 | 4 | 1 | 1 | 3 | 3 | 3 | 3 |
| Kerosene | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 3 | 3 | 3 | 3 |
| Lacquers | Liquid | Aromatic HC (with alcohol) | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Linoleic Acid | Liquid | Fatty Acid | | 4 | 4 | 4 | 2 | 2 | --- | --- | --- | --- |
| Linseed Oil | Liquid | Fatty Acid | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Methane | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Methyl Alcohol (methanol) | Liquid | Alcohol | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Methyl Ethyl Ketone (MEK) | Liquid | Ketone | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Methyl Formate | Liquid | Alcohol | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Methyl Isobutyl Ketone (MIBK) | Liquid | Ketone | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Methyl Methacrylate | Liquid | Ester | | 4 | 4 | 4 | 4 | 4 | 1 | 1 | 1 | 1 |
| Methylene Chloride | Liquid | Aliphatic HC (halogenated) | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Mineral Oil | Liquid | Petroleum HC | | 4 | 4 | 4 | 1 | 1 | 3 | 3 | 3 | 3 |
| Mineral Spirits | Liquid | Aliphatic HC | | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 3 |
| Motor Oil 10w-30 (natural) | Liquid | Paraffin Oil | | 4 | 4 | 4 | 1 | 2 | 2 | 2 | 2 | 2 |
| Motor Oil 10w-30(synthetic) | Liquid | Paraffin Oil | | 4 | 4 | 4 | 1 | 2 | 2 | 2 | 2 | 2 |
| Napathenic | Liquid | Aromatic HC | | 4 | 4 | 4 | 1 | 1 | --- | --- | --- | --- |
| Naptha | Liquid | Aromatic HC | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Nitric Acid | Liquid | Acid (strong) | 20% | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 |
| Nitric Acid | Liquid | | Concentrated | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 |
| Nitrobenzene | Liquid | Aromatic HC | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Octane | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Oleic Acid | Liquid | Acid | | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 3 |
| Oxalic Acid | Liquid | Acid (weak) | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Peanut Oil | Liquid | Fatty Acid | | 4 | 4 | 4 | 2 | 2 | 1 | 1 | 1 | 1 |
| Pentane | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Perchloroethylene | Liquid | Aliphatic HC (chlorinated) | | 4 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 3 |
| Petroleum | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Phosphoric Acid | Liquid | Acid (weak) | | 2 | 2 | 2 | 3 | 3 | 1 | 1 | 1 | 1 |
| Pine Oil | Liquid | Turpene/Alcohol/Ether | 100% | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 |
| Pine Oil | Liquid | | 20%=Pine-Sol | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 |
| Potassium Hydroxide | Liquid | Base (strong) | 50% | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| Power Steering Fluid | Liquid | Napathenic Oil | | 4 | 4 | 4 | 1 | 2 | 2 | 2 | 2 | 2 |
| Propane | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 1 |
| Propyl Alcohol (propanol) | Liquid | Alcohol | | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| Propylene Dichloride | Liquid | Aliphatic HC | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Salt Water | Liquid | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Silicates | Solid | Alkali Metals | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Silver Nitrate | Solid | Inorganic Salt | | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 |
| Sodium Bicarbonate | Solid | Inorganic Salt | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sodium Hydroxide | Liquid | Base (strong) | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Sodium Hydroxide | Liquid | | 0.34% = Mr. Clean | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sodium Hypochlorite (bleach) | Liquid | Base | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Stearic Acid | Liquid | Fatty Acid | | 3 | 3 | 3 | 1 | 1 | 2 | 2 | 2 | 2 |
| Styrene | Liquid | Aromatic HC | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Sulfuric Acid | Liquid | Acid (strong) | <10% | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| Sulfuric Acid | Liquid | | 10-75% | 3 | 3 | 3 | 4 | 4 | 1 | 1 | 1 | 1 |
| Sulfuric Acid | Liquid | | Concentrated | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Tetrahydrofuran (THF) | Liquid | Ether | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Toluene (methyl benzene) | Liquid | Aromatic HC | | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 4 |
| Transmission Fluid | Liquid | Napatheic or Paraffin Oil | | 4 | 4 | 4 | 1 | 1 | 2 | 2 | 2 | 2 |
| Trinitrobenzene | Liquid | Aromatic HC | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Turpentine | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 1 | 4 | 4 | 4 | 4 |
| Vegetable Oil | Liquid | Aliphatic HC | | 4 | 4 | 4 | 1 | 2 | 1 | 1 | 1 | 1 |
| Vinegar | Liquid | Acid (weak, organic) | 5% Acetic Acid | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| Xylene | Liquid | Aromatic HC | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |