## Chemical Resistance Chart

Important note on service life, temperature, compatibility and chemical resistance:
The data provided in the tables are advisory values and not guaranteed. In all cases customers should conduct tests to ensure compatability with their chemicals and processes.

We recommend:
Place the tubing in the medium to be used for a period of 48 hours. After this time, examine the tubing for signs of swelling, softening or hardening. A judgement can then be made as to the likely suitability of the tubing.

Legend
X = Satisfactory
$\mathrm{O}=$ Use only after testing
$U=$ Unsatisfactory
= No data available

| Medium | PVC Silicone Viton |  |  | PVC Solva | Santoprene | Medium | PVC Silicone Viton |  |  | PVC Solva | $\begin{aligned} & \text { Santo- } \\ & \text { prene } \end{aligned}$ | Medium | PVC Silicone Viton |  |  | PVC Solva | Santoprene |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Acetaldehyde | U | X | U | X | X | Benzaldehyde | U | U | U | U | X | Ethyl bromide | U | - | X | X | - |
| Acetates (low mol. wt.) | U | 0 | U | X | X | Benzene | 0 | U | X | U | U | Ethyl chloride | U | U | X | X | U |
| Acetic acid (<5\%) | X | X | X | X | X | Benzene sulfonic acid | O | - | X | X | - | Ethylamine | U | - | U | X | - |
| Acetic acid (>5\%) | X | U | 0 | X | X | Benzoic acid | X | O | X | U | U | Ethylene chlorohydrin | U | U | X | X | U |
| Acetic anhydride | O | 0 | U | X | U | Benzyl alcohol | X | - | X | U | X | Ethylene di-chloride | U | U | X | X | U |
| Acetone | U | X | U | U | U | Bleaching liquors | X | O | X | X | X | Ethylene glycol | X | X | X | X | X |
| Acetyl bromide | U | - | - | X | - | Boric acid | X | X | X | X | X |  |  |  |  |  |  |
| Acetyl chloride | U | - | - | X | - | Bromine | X | U | X | X | U | Fatty acids | O | 0 | X | X | - |
| Air | X | X | X | X | X | Butane | O | U | X | U | U | Ferric chloride | X | 0 | X | X | - |
| Alcohols | X | X | X | X | - | Butanol | X | O | X | - | - | Ferric sulfate | x | 0 | X | x | X |
| Aliphatic hydrocarbons | X | 0 | U | U | - | Butyl acetate | U | - | U | U | U | Ferrous chloride | X | 0 | X | X | - |
| Aluminium chloride | X | 0 | X | X | - | Butyric acid | U | - | 0 | X | X | Ferrous sulfate | X | 0 | X | X | - |
| Aluminium sulfate | X | X | X | X | X |  |  |  |  |  |  | Fluoborate salts | X | - | - | X | X |
| Alums | X | - | X | X | - | Calcium salts | X | O | X | X | X | Fluoboric acid | X | - | - | X | X |
| Ammonia (gas-liquid) | O | X | U | X | X | Carbon bisulfide | U | - | X | U | - | Fluo-silicic acid | X | - | - | X | X |
| Ammonium acetate | X | - | - | X | - | Carbon dioxide | X | O | X | X | X | Formaldehyde | X | O | U | X | X |
| Ammonium carbonate | X | - | - | X | - | Carbon tetrachloride | O | U | X | X | U | Formic acid | X | O | U | X | X |
| Ammonium chloride | X | - | X | X | - | Chloracetic acid | U | - | U | X | U | Freon | U | U | 0 | U | U |
| Ammonium hydroxide | 0 | X | X | X | X | Chlorbenzene | U | - | X | U | U |  |  |  |  |  |  |
| Ammonium nitrate | X | 0 | - | X | - | Chlorine (wet) | O | U | x | X | U | Gasoline (non-aromatic) | U | U | $x$ | U | U |
| Ammonium phosphate | X | X | - | X | - | Chlorine (dry) | O | U | U | X | U | Gasoline (high aromatic) | $\cup$ | U | X | U | - |
| Ammonium sulfate | X | X | X | X | X | Chloroform | O | U | X | U | U | Glucose | X | X | X | X | X |
| Amyl acetate | U | U | U | U | U | Chlorsulfonic acid | O | U | U | X | U | Glue | x | - | X | X | - |
| Amyl alcohol | X | U | X | U | X | Chromatic acid | X | U | X | - | X | Glycerine | X | X | X | X | X |
| Amyl chloride | 0 | U | X | U | - | Chromium salts | X | - | - | X | X |  |  |  |  |  |  |
| Aniline | O | U | 0 | X | X | Copper salts | X | X | x | X | X | Hydriodic acid | $x$ | - | X | $x$ | - |
| Aniline hydrochloride | O | U | X | X | - | Cresol | O | X | X | U | U | Hydro-bromic-acid | X | U | X | X | X |
| Animal oils | U | 0 | X | X | X | Cyclohexanone | U | $\cup$ | X | U | U | Hydrochloric acid (dil.) | X | U | X | X | X |
| Antimony salts | X | - | 0 | X | - |  |  |  |  |  |  | Hydrochl. acid (med. conc.) | X | U | X | X | X |
| Aqua regia | U | - | 0 | X | U | Essential oils | O | - | - | X | X | Hydrochloric (conc.) | O | U | X | X | X |
| Aromatic hydrocarbons | U | 0 | X | $\cup$ | - | Ethers | O | U | 0 | U | U | Hydrocyanic acid | X | U | X | X | X |
| Arsenic salts | X | - | X | X | X | Ethyl acetate | U | O | U | U | U | Hydrofluoric acid | O | U | X | X | 0 |
| Barium salts | X | X | X | X | X | Ethyl alcohol | O | O | X | X | X | Hydrogen peroxide (dil.) | X | X | X | X | U |


| Hydrogen peroxyde (conc.) | PVC Silicone Viton |  |  | Solva <br> X | Santoprene | Medium <br> Potassium carbonate | PVC Silicone Viton |  |  | PVC <br> Solva | Santoprene | Medium | PVC | Silicon | iton | PVC <br> Solva | Santoprene |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | U | U | O |  | U |  | $X$ | - | $X$ | $X$ | - | Turpentine | X | U | X | U | - |
| Hydrogen sulfide | X | U | U | $x$ | X | Potassium chlorate | $x$ | - | $x$ | $X$ | - |  |  |  |  |  |  |
| Hypochlorus acid | $x$ | - | $X$ | $X$ | $X$ | Potassium hydroxyde | 0 | O | $x$ | $x$ | X | Urea <br> Uric acid | X | X | X | $x$ | $x$ |
|  |  |  |  |  |  | Potassium iodide | X | - | X | $X$ | - |  | X | - | - | $x$ | X |
| lodin and solutions | X | - | $X$ | U | $X$ | Pyridine | U | U | U | $X$ | U |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | Water | $x$ | $x$ | $x$ | $x$ | $x$ |
| Kerosene | U | U | $x$ | U | U | Silver nitrate | $x$ | $x$ | $x$ | $x$ | $x$ | Water (brine) | X | X | X | X | X |
| Ketones | U | U | U | U | - | Soap solutions | $x$ | $x$ | $x$ | $x$ | $X$ |  |  |  |  |  |  |
| Laquer solvents | U | U | U | X | U | Sodium bicarbonate | $x$ | $X$ | $x$ | $x$ | $X$ | Xylol | U | U | X | U | U |
| Lactic acid | 0 | - | X | U | O | Sodium bisulfate | $x$ | - | $x$ | $x$ | $X$ |  |  |  |  |  |  |
| Lead acetate | $X$ | U | U | X | - | Sodium bisulfite | $x$ | $X$ | $x$ | $X$ | $X$ | Zinc chloride | X | - | X | $X$ | - |
| Linseed oil | $x$ | X | X | U | $X$ | Sodium borate | $x$ | $X$ | $x$ | $X$ | $X$ |  |  |  |  |  |  |
|  |  |  |  |  |  | Sodium carbonate | $x$ | $X$ | $x$ | $X$ | $x$ | Food Products | O | - | - | - | O |
| Magnesium chloride | $x$ | X | $x$ | $x$ | - | Sodium chlorate | $x$ | - | $x$ | $x$ | $X$ | Alcohol | O | X | - | - | X |
| Magnesium sulfate | $x$ | - | $X$ | $x$ | $x$ | Sodium chloride | $x$ | $X$ | $x$ | $X$ | $X$ | Beer | O | - | - | - | 0 |
| Malic acid | $x$ | $x$ | $x$ | $x$ | $x$ | Sodium ferrocyanide | $x$ | - | $x$ | $x$ | $X$ | Brandy | $x$ | X | - | - | 0 |
| Manganese salts | $x$ | $X$ | $x$ | $X$ | $x$ | Sodium hydrosulfite | $x$ | 0 | $x$ | $X$ | - | Butter | $x$ | - | - | - | 0 |
| Mercury salts | $x$ | - | $x$ | $x$ | $X$ | Sodium hydroxide (dil.) | $x$ | 0 | $x$ | $X$ | O | Carrott | $X$ | - |  | - | $\bigcirc$ |
| Mixed acid (1) | $\bigcirc$ | - | $X$ | $X$ | - | Sodium hydroxide (med.conc.) Sodium hydroxide (conc.) | .) O | 0 | $X$ | $X$ | 0 | Certo <br> Chocolate syrup | X | - | - | - | O |
|  |  |  |  |  |  |  | O | O | O | $X$ | O |  | $x$ | - | - |  | O |
| Naphtha | 0 | U | $X$ | $X$ | U | Sodium hypochlorite | $X$ | - | X | $X$ | $X$ | Citric acid | $x$ | - | - | - | 0 |
| Natural gas | X | X | $x$ | U | $X$ | Sodium nitrate | $x$ | U | - | $x$ | $X$ | Fish | $x$ | - | - | - | 0 |
| Nickel salts | $X$ | $X$ | $x$ | $X$ | $x$ | Sodium silicate | $x$ | - | $x$ | $X$ | $X$ | Fruit juices | $x$ | - | - | - | 0 |
| Nitric acid (dil.) | $X$ | $\bigcirc$ | $X$ | $x$ | 0 | Sodium sulfide | $x$ | $x$ | $x$ | $x$ | - | Karo syrup | $x$ | - | - | - | 0 |
| Nitric acid (med. conc.) | $\bigcirc$ | U | $X$ | $X$ | 0 | Sodium sulphite | $X$ | $X$ | X | $X$ | $X$ | Mayonnaise | $X$ | - | - | - | $\bigcirc$ |
| Nitric acid (conc.) | O | U | 0 | $x$ | 0 | Stearic acid | $x$ | 0 | - | $X$ | X | Milk | X | - | - | - | 0 |
| Nitrobenzene | U | U | $X$ | $\cup$ | U | Sulfur chloride | O | U | $x$ | $x$ | U | Milk of magnesia | $x$ | - | - | - | 0 |
| Nitrogen oxides | $X$ | O | 0 | X | X | Sulfur dioxide | $x$ | 0 | $x$ | $x$ | X | Molasses | $x$ | - | - | - | 0 |
| Nitrous acid | $X$ | - | 0 | $X$ | U | Sulfur trioxide | $x$ | 0 | $x$ | $x$ | $X$ | Sauerkraut | $x$ | - | - | - | 0 |
|  |  |  |  |  |  | Sulfuric acid (dil.) | X | U | $x$ | $x$ | 0 | Sea foods | X | - | - | - | 0 |
| Oils, animal | U | 0 | $X$ | $X$ | $x$ | Sulfuric acid (med. conc.) | $x$ | U | $x$ | $x$ | 0 | Sugar | $x$ | - | - | - | 0 |
| Oils, mineral | U | 0 | $X$ | $\cup$ | $x$ | Sulfuric acid (conc.) | 0 | U | $x$ | $X$ | O | Tomato | $x$ | - | - | - | 0 |
| Oils, vegetable | $\bigcirc$ | X | $X$ | $X$ | $X$ | Sulfurous acid | X | U | $X$ | $X$ | X | Vegetable oil | $x$ | $X$ | - | - | 0 |
| Oleic acid | U | U | 0 | $X$ | 0 |  |  |  |  |  |  | Vinegar | $x$ | $X$ | - | - | 0 |
| Oxalic acid | X | O | X | $x$ | $X$ | Tannic acid | $x$ | O | $x$ | $x$ | $X$ | Whiskey | 0 | $X$ | - | - | 0 |
| Oxygen (gas) | $X$ | X | - | $x$ | $X$ | Tanning extracts | $x$ | - | $x$ | $x$ | $X$ | Wines | 0 | - | - | - | O |
|  |  |  |  |  |  | Tartaric acid | X | O | X | $x$ | - |  |  |  |  |  |  |
| Perchloric acid | U | U | $x$ | $X$ | $X$ | Tin salts | X | - | - | $x$ | - | 1) $40 \%$ Sulphuric |  |  |  |  |  |
| Phenol | O | U | $x$ | U | U | Titanium salts | X | - | - | $x$ | - | 15\% Nitric |  |  |  |  |  |
| Phosphoric acid (ortho.) | X | O | $x$ | X | $X$ | Toluol | U | U | X | U | - |  |  |  |  |  |  |
| Phtalic acid | $x$ | $x$ | $x$ | U | $x$ | Trichloracetic acid | U | - | $\cup$ | X | - |  |  |  |  |  |  |
| Plating solutions | X | U | $x$ | X | $X$ | Tri-sodium phosphate | X | - | X | X | - |  |  |  |  |  |  |

