

Chemical Resistance

The resistance information contained within this table is indicative only and is based on an ambient temperature of 20°C. Please note that higher temperatures will generally reduce the corrosion resistance of the materials. For modular runs, the reagent will also influence the style of gasket selected. Contact ACO for further advice.

Reagent	Stainless Steel	
	304	316
Acetic Acid 20%	✓	✓
Acetic Acid 80%	✓	✓
Acetone	✓	✓
Alcohol (Methyl or Ethyl)	✓	✓
Aluminium Chloride	?	?
Aluminium Sulphate	✓	✓
Ammonia Gas (Dry)	✓	✓
Ammonium Chloride	?	?
Ammonium Hydroxide	✓	✓
Ammonium Nitrate	✓	✓
Ammonium Phosphate	✓	✓
Ammonium Sulphate	?	✓
Ammonium Sulphide	✓	✓
Amyl Chloride	✓	✓
Aniline	✓	✓
Barium Chloride	✓	✓
Barium Hydroxide 10%	-	-
Barium Sulphate	✓	✓
Barium Sulphide	-	-
Beer	✓	✓
Beet Sugar Liquors	✓	✓
Benzene	✓	✓
Benzoic Acid	✓	✓
Bleach-12.5%Active Cl	-	-
Boric Acid	✓	✓
Bromic Acid	?	?
Bromine Water	✗	✗
Butane	✓	✓
Calcium Carbonate	✓	✓
Calcium Chloride	✗	?
Calcium Hydroxide	?	✓
Calcium Hypochlorite	✗	?
Calcium Sulphate	✓	✓
Cane Sugar Liquors	-	-
Carbon Acid	-	-
Carbon Bisulphide	✓	✓
Carbon Dioxide	✓	✓
Carbon Monoxide	✓	✓
Carbon Tetrachloride	?	?
Caustic Potash	✓	✓
Caustic Soda	✓	✓
Chloride (Dry)	?	?
Chloride (Wet)	✗	✗
Chloroacetic Acid	✗	✗
Chlorobenzene	✓	✓
Chloroform	?	?
Chrome Acid 50%	✗	✗
Chromic Acid 10%	✓	✓
Citric Acid	?	✓
Copper Chloride	✗	✗
Copper Cyanide	✓	✓
Copper Nitrate	✓	✓
Copper Sulphate	✓	✓
Cottonseed Oil	-	-
Cresol	-	-
Cyclohexanone	-	-
Cyclohexanol	-	-

Reagent	Stainless Steel	
	304	316
Dimethyleanine	-	-
Dionylphalate	-	-
Disodium Phosphate	-	-
Distilled Water	✓	✓
Ethyl Acetate	✓	✓
Ethylene Chloride	✓	✓
Ethylene Glycol	✓	✓
Fatty acids (cb)	✓	✓
Ferric Sulphate	✓	✓
Fluorene Gas (Wet)	✗	✗
Formaldehyde 37%	✓	✓
Formic Acid 90%	✗	✓
Freon 12	-	-
Fruit Juices & Pulp	?	✓
Furfural	-	-
Gasoline (Refined)	✓	✓
Glucose	-	-
Glycerine	✓	✓
Hydrobromic Acid 20%	✗	✗
Hydrochloric Acid 40%	✗	✗
Hydrocyanic Acid	✓	✓
Hydrogen Peroxide 90%	✓	✓
Hydroquinone	-	-
Hypochlorous Acid	-	-
Iodine	✓	?
Kerosene	✓	✓
Lactic Acid 25 %	✓	✓
Linseed Oil	✓	✓
Liqueurs	-	-
Magnesium Chloride	?	?
Magnesium Sulphate	✓	✓
Maleic Acid	?	?
Methyl Chloride	?	?
Methyl Ethyl Ketone	-	-
Milk	✓	✓
Mineral Oils	-	-
Muriatic Acid	✗	✗
Nickel Chloride	?	?
Nickel Sulphate	✓	✓
Oils and Fats	✓	✓
Oleic Acid	✓	✓
Oleum	-	-
Oxalic Acid	?	?
Palmitic Acid 10%	-	-
Perchloric Acid 10%	✗	✗
Perchloric Acid 70%	✗	✗
Petroleum Oils (Sour)	✓	✓
Phenol 5%	✓	✓
Phosphorous Trichloride	✓	✓
Photographic Solutions	?	✓
Picric Acid	✓	✓

Legend

- ✓ Recommended.
- ? Suitable. However, contact ACO for further advice.
- ✗ Not recommended.
- No data available.

Reagent	Stainless Steel	
	304	316
Plating Solutions	-	-
Potassium Carbonate	✓	✓
Potassium Chloride	✓	✓
Potassium Cyanide	✓	✓
Potassium Dichromate	✓	✓
Potassium Hydroxide	✓	✓
Potassium Permanganate	✓	✓
Potassium Sulphate	✓	✓
Propane Gas	-	-
Propyl Alcohol	-	-
Sea Water	✗	?
Sewerage	?	?
Silver Nitrate	✓	✓
Silver Sulphate	✓	✓
Sodium Bicarbonate	✓	✓
Sodium Bisulphite	✓	✓
Sodium Carbonate	✓	✓
Sodium Cyanide	-	-
Sodium Ferrocyanide	-	-
Sodium Hydroxide	✓	✓
Sodium Hypochlorite	?	✓
Sodium Sulphate	✓	✓
Sodium Sulphide	?	✓
Sodium Sulphite	?	✓
Sodium Thiosulphate	✓	✓
Stannous Chloride	?	?
Stearic Acid	✓	✓
Sulphite Liquor	-	-
Sulphurous Acid	?	?
Sulphur	?	✓
Sulphur Dioxide (Dry)	?	✓
Sulphur Dioxide (Wet)	?	✓
Sulphuric Acid 50%	✗	✗
Sulphuric Acid 70%	✗	✗
Sulphuric Acid 93%	✗	✗
Tannic Acid	✓	✓
Tanning Liquors	✓	✓
Taric Acid	-	-
Toluene	-	-
Trichloroethylene	✓	✓
Triethanolamine	-	-
Trisodium Phosphate	-	-
Turpentine	✓	✓
Urea	✓	✓
Urine	✓	✓
Vinegar	✓	✓
Water (Fresh)	✓	✓
Water (Mine)	✓	✓
Water (Salt)	✗	✓
Whisky	✓	✓
Wines	✓	✓
Xylene	-	-
Zinc Chloride	✗	✗
Zinc Sulphate	?	✓