

Thermowell Corrosive Service Guide

Corrodent	Temp. °F	Conc. %	Recommended Material
Acetic Acid	212	All	Monel
Acetic Anhydride	300		Nickel
Acetone	212	All	304 SS
Acetylene	400		304 SS
Alcohols	212	All	304 SS
Alum (Potassium or Sodium)	300	All	Hast. C
Aluminum Chloride	212	All	Hast. B
Aluminum Sulfate	212	All	316 SS
Ammonia, Dry	212	All	304 SS, 316 SS
Ammonium Chloride	300	50%	Monel
Ammonium Hydroxide (Ammonia, Aqua)	212	All	304 SS, 316 SS
Ammonium Nitrate	300	All	304 SS
Ammonium Sulfate	212	All	316 SS
Amyl Acetate	300	All	304 SS
Aniline	75		Monel
Asphalt	250		304 SS
Atmosphere, (Industrial and Marine)			304 SS
Barium Compounds	See Calcium		
Beer	70		304 SS
Benzene (Benzol)	212		Steel
Benzoic Acid	212	All	316 SS
Bleaching Powder	70	15%	Monel
Borax	212	All	Brass
Bordeaux Mixture	200		304 SS
Boric Acid	400	All	316 SS
Bromine	125	Dry	Monel
Butane	400	All	Steel
Butyl Alcohol	See Alcohols		
Butyric Acid	212		Hast. C
Calcium Bisulphite	75	All	Hast. C
Calcium Chloride	212	All	Hast. C
Calcium Hydroxide	300	20%	Hast. C
Calcium Hypochlorite	See Bleaching Powder		
Carbolic Acid	See Phenol		
Carbon Dioxide, Dry	800	All	Brass
Carbon Disulfide	200		304 SS
Carbon Tetrachloride	125	All	Monel
Carbonated Beverages	212		304 SS
Carbonated Water	212	All	304 SS
Chloracetic Acid	212	All	Monel
Chlorine, Dry	100		Monel
Chlorine, Moist	100	All	Monel
Chloroform, Dry	212		Monel
Chromic Acid	300	All	Hast. C
Cider	300	All	304 SS
Citric Acid	212	All	Hast. C
Copper (10) Chloride	212	All	Hast. C
Copper (10) Nitrate	300	All	316 SS
Copper (10) Sulfate	300	All	316 SS
Copper Plating Solution (Acid)	75		304 SS
Copper Plating Solution (Cyanide)	180		304 SS
Corn Oil	200		304 SS
Creosote	200	All	304 SS
Crude Oil	300		Monel
Ethanol	See Alcohols		
Ethyl Acetate	See Lacquer Thinner		
Ethyl Chloride, Dry	500		Steel
Ethylene Glycol (Uninhibited)	212	All	304 SS
Ethylene Oxide	75		Steel
Fatty Acids	500	All	316 SS
Ferric Chloride	75	All	Hast. C
Ferric Sulfate	300	All	304 SS
Formaldehyde	212	40%	316 SS
Formic Acid	300	All	316 SS
Fluorine, Anhydrous	100		304 SS
Freon	300		Steel
Furfural	450		316 SS
Gasoline	300		Steel
Glucose	300		304 SS
Glue ph 6-8	300	All	304 SS
Glycerine	212	All	Brass
Hydrobromic Acid	212	All	Hast. C

Corrodent	Temp. °F	Conc. %	Recommended Material
Hydrochloric Acid (37-38%)	225	All	Hast. B
Hydrocyanic Acid	212	All	304 SS
Hydrofluogilicic Acid	212	40%	Monel
Hydrofluoric Acid	212	60%	Monel
Hydrogen Chloride, Dry	500		304 SS
Hydrogen Fluoride, Dry	175		Steel
Hydrogen Peroxide	125	10-100%	304 SS
Kerosene	300	All	Steel
Lacquers & Thinners	300	All	304 SS
Lactic Acid	300	All	316 SS
Lime	212	All	316 SS
Linseed Oil	75		Steel
Magnesium Chloride	212	50%	Nickel
Magnesium Hydroxide (or Oxide)	75	All	304 SS
Magnesium Sulfate	212	40%	304 SS
Mercuric Chloride	75	10%	Hast. C
Mercury	700	100%	Steel
Methyl Chloride, Dry	75		Steel
Methylene Chloride	212	All	304 SS
Milk, fresh or sour	180		304 SS
Molasses	See Glucose		
Natural Gas	70		304 SS
Nitric Acid	75	All	304 SS
Nitric Acid	110	All	316 SS
Oleic Acid	See Fatty Acids		
Oxalic Acid	212	All	Monel
Oxygen	75	All	Steel
Palmitic Acid	See Fatty Acids		
Phenol	212	All	316 SS
Phosphoric Acid	212	All	316 SS
Photographic Bleaching	100	All	304 SS
Potassium Compounds	See Sodium Compounds		
Propane	300		Steel
Rosin	700	100%	316 SS
Salt or Brine	See Sodium Chloride		
Sea Water	75		Monel
Soap & Detergents	212	All	304 SS
Sodium Bicarbonate	212	20%	316 SS
Sodium Bisulfate	212	20%	304 SS
Sodium Bisulfite	212	20%	304 SS
Sodium Carbonate	212	40%	316 SS
Sodium Chloride	300	30%	Monel
Sodium Chromate	212	All	316 SS
Sodium Cyanide	212	All	304 SS
Sodium Hydroxide	212	30%	316 SS
Sodium Hypochlorite	75	10%	Hast. C
Sodium Nitrate	212	40%	304 SS
Sodium Nitrite	75	20%	316 SS
Sodium Phosphate	212	10%	Steel
Sodium Silicate	212	10%	Steel
Sodium Sulfate	212	30%	316 SS
Sodium Sulfide	212	10%	316 SS
Sodium Sulfite	212	30%	304 SS
Sodium Thiosulfate	212	All	304 SS
Steam			304 SS
Stearic Acid	See Fatty Acids		
Sugar Solutions	See Glucose		
Sulfur	500		304 SS
Sulfur Chloride	75	Dry	316 SS
Sulfur Dioxide	500	Dry	316 SS
Sulfur Trioxide	500	Dry	316 SS
Sulfuric Acid	212	10%	316 SS
Sulfuric Acid	212	10-90%	Hast. B
Sulfuric Acid	212	90-100%	Hast. B
Sulfuric Acid, Fuming	175		Carp. 20
Sulfurous Acid	75	20%	316 SS
Tannic Acid	75	40%	Hast. B
Titanium Tetrachloride	75	All	316 SS
Toluene	75		Steel
Trichloroacetic Acid	75	All	Hast. B
Trichlorethylene	300	Dry	Monel
Turpentine	75		316 SS
Varnish	150		Steel
Zinc Chloride	212	All	Hast. B
Zinc Sulfate	212	All	316 SS

This information is given as a guide only. Final material selection should be made by the user based on their knowledge of the application.