

Corrosive Service Guide To Materials

Corrodent	Temperature °F	Concentration %	Recom. Material	Corrodent	Temperature °F	Concentration %	Recom. Material
Acetic Acid	212	All	Monel	Chloroform, Dry	212		Monel
Acetic Anhydride	300		Nickel	Chromic Acid	300	All	Hast. C
Acetone	212	All	304 SS	Cider	300	All	304 SS
Acetylene	400		304 SS	Citric Acid	212	All	Hast. C
Alcohols	212	All	304 SS	Copper (10) Chloride	212	All	Hast. C
Alum. (Potassium or Sodium)	300	All	Hast. C	Copper (10) Nitrate	300	All	316 SS
Aluminum Chloride	212	All	Hast. B	Copper (10) Sulfate	300	All	316 SS
Aluminum Sulfate	212	All	316 SS	Copper Plating Solution180 (Cyanide)			304 SS
Ammonia, Dry	212	All	304,	Copper Plating Solution 75 (Acid)			304 SS
316 SS				Corn Oil	200		304 SS
Ammonium	212	All	304,	Creosote	200	All	304 SS
316 Hydroxide SS				Crude Oil	300		Monel
(Ammonia, Aqua)				Ethyl Acetate -			
Ammonium Chloride	300	50%	Monel	SEE LACQUER THINNER			
Ammonium Nitrate	300	All	304 SS	Ethyl Chloride, Dry	500		Steel
Ammonium Sulfate	212	All	316 SS	Ethanol - SEE ALCOHOLS			
Amyl Acetate	300	All	304 SS	Ethylene Glycol	212	All	304 SS
Aniline	75		Monel	(Uninhibited)			
Asphalt	250		304 SS	Ethylene Oxide	75		Steel
Atmosphere			304 SS	Fatty Acids	500	All	316 SS
(Industrial and Marine)				Ferric Chloride	75	All	Hast. C
Barium Compounds -				Ferric Sulfate	300	All	304 SS
SEE CALCIUM				Formaldehyde	212	40%	316 SS
Beer	70		304 SS	Formic Acid	300	All	316 SS
Benzene (Benzol)	212		Steel	Freon	300		Steel
Benzoic Acid	212	All	316 SS	Fluorine, Anhydrous	100		304 SS
Bleaching Powder	70	15%	Monel	Furfural	450		316 SS
Borax	212	All	Brass	Gasoline	300		Steel
Bordeaux Mixture	200		304 SS	Glucose	300		304 SS
Boric Acid	400	All	316 SS	Glue ph 6-8	300	All	304 SS
Bromine	125	Dry	Monel	Glycerine	212	All	Brass
Butane	400	All	Steel	Hydrobromic Acid	212	All	Hast. C
Butyl Alcohol -				Hydrochloric Acid	225	All	Hast. B
SEE ALCOHOLS				(37-38%)			
Butyric Acid	212		Hast. C	Hydrogen Chloride, Dry	500		304 SS
Calcium Bisulphite	75	All	Hast. C	Hydrocyanic Acid	212	All	304 SS
Calcium Chloride	212	All	Hast. C	Hydrofluoric Acid	212	60%	Monel
Calcium Hydroxide	300	20%	Hast. C	Hydrogen Fluoride, Dry	175		Steel
Calcium Hypochlorite -				Hydrofluogilicic Acid	212	40%	Monel
SEE BLEACHING POWDER				Hydrogen Peroxide	125	10-100%	304 SS
Carbolic Acid -				Kerosene	300	All	Steel
SEE PHENOL				Lacquers & Thinners	300	All	304 SS
Carbon Dioxide, Dry	800	All	Brass	Lactic Acid	300	All	316 SS
Carbonated Water	212	All	304 SS	Lime	212	All	316 SS
Carbonated				Linseed Oil	75		Steel
Beverages	212		304 SS	Magnesium Chloride	212	50%	Nickel
Carbon Disulfide	200		304 SS	Magnesium Hydroxide	75	All	304 SS
Carbon Tetrachloride	125	All	Monel	(or Oxide)			
Chlorine, Dry	100		Monel	Magnesium Sulfate	212	40%	304 SS
Chlorine, Moist	100	All	Monel	Mercuric Chloride	75	10%	Hast. C
Chloracetic Acid	212	All	Monel				

Corrodent	Temperature °F	Concentration %	Recom. Material
Mercury	700	100%	Steel
Methylene Chloride	212	All	304 SS
Methyl Chloride, Dry	75		Steel
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
Oxygen	75	All	Steel
Oleic Acid - SEE FATTY ACIDS			
Oxalic Acid	212	All	Monel
Photographic Bleaching	100	All	304 SS
Palmitic Acid - SEE FATTY ACIDS			
Phosphoric Acid	212	All	316 SS
Phenol	212	All	316 SS
Potassium Compounds SEE SODIUM COMPOUNDS			
Propane	300		Steel
Rosin	700	100%	316 SS
Sea Water	75		Monel
Soap & Detergents	212	All	304 SS
Sodium Bicarbonate	212	20%	316 SS
Sodium Bisulphate	212	20%	304 SS
Sodium Bisulphite	212	20%	304 SS
Sodium Carbinat	212	40%	316 SS
Sodium Chloride	300	30%	Monel
Sodium Chromate	212	All	316 SS
Salt or Brine - SEE SODIUM CHLORIDE			
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	Dr	316 SS
Sulfur Dioxide	500	Dry	316 SS
Sulfur Trioxide	500	Dry	316 SS
Sulfuric Acid	212	0%	316 SS

Corrodent	Temperature °F	Concentration %	Recom. Material
Sulfuric Acid	212	0-90%	Hast. B
Sulfuric Acid	212	90-100%	Hast. B
Sulfuric Acid, Fuming	175		Carp.20
Sulfurous Acid	75	20%	316 SS
Titanium Tetrachloride	75	All	316 SS
Tannic Acid	75	40%	Hast. B
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

In recommending the above materials, consideration has been given to providing good service life without undue cost. Where two or more materials are satisfactory, the least expensive is listed. Consult the factory for information on materials or services not given.