

CORROSION RESISTANCE TABLE

A — No Effect - Acceptable

B — Minor Effect - Acceptable

C — Moderate Effect - Questionable

D — Severe Effect - Not Recommended

Please Note: These recommendations are based upon information from material suppliers and careful examination of available published information and are believed to be accurate. However, since the resistance of metals can be affected by concentration, temperature, presence of other chemicals and other factors, this information should be considered as a general guide rather than an unqualified guarantee.

	302 Stainless Steel	304 Stainless Steel	316 Stainless Steel	Aluminum	Hastelloy C	Brass	Cast Iron	Carbon Steel
Acetic Acid	—	B	A	B	A	C	D	C
Acetone	A	A	A	A	A	A	A	A
Acetylene	A	A	A	A	—	—	A	A
Acrylonitrile	A	A	C	B	B	—	C	—
Ammonia, Anhydrous	A	B	A	B	A	—	D	B
Amyl Alcohol	—	A	A	B	A	—	—	A
Aniline	B	A	A	C	B	—	—	C
Barium Chloride	C	C	A	D	A	—	N	C
Benzene	B	A	A	B	B	A	B	C
Benzol	—	A	A	B	A	A	—	—
Boric Acid	B	A	A	B	A	C	D	—
Bromine (wet)	D	D	D	D	A	—	D	D
Butyl Acetate	—	—	C	A	A	—	—	A
Butyl Alcohol	A	A	A	B	A	C	C	C
Carbon Disulfide	—	B	A	C	—	C	B	C
Carbon Tetrachloride	B	C	B	C	A	A	C	D
Carbonic Acid	B	A	B	A	A	—	D	—
Chlorine (dry)	B	A	A	D	A	B	A	—
Chloroform	A	A	A	D	A	—	D	C
Chromic Acid (30%)	A	B	—	—	A	D	—	—
Cresols	—	A	A	B	—	C	—	—
Cyclohexane	—	A	—	A	—	—	—	A
Diesel Fuel	A	A	A	A	—	—	—	A
Epsom Salts	B	A	A	A	B	—	—	—
Ether	A	A	A	A	B	A	—	B
Ethyl Acetate	—	A	A	B	B	—	—	C
Ethyl Alcohol	—	A	A	B	A	C	A	A
Ethylene Chloride	—	A	A	C	B	—	C	C
Ethylene Glycol	—	A	A	A	A	B	B	C
Ferric Chloride	—	D	D	D	B	D	D	—
Ferric Nitrate	—	A	A	D	A	—	—	—
Ferric Sulfate	—	A	C	D	A	D	D	—
Fluorine	D	D	D	D	A	—	D	D
Formaldehyde	A	A	A	A	B	B	D	A
Formic Acid	C	A	B	D	A	C	D	D
Fuel Oils	A	A	A	A	A	—	C	B
Gasoline	A	A	A	A	A	—	A	A
Gelatin	A	A	A	A	A	C	D	D
Glycerine	A	A	A	A	A	B	B	B
Heptane	A	—	A	A	A	—	—	B
Hexane	A	A	A	A	A	—	—	B
Hydraulic Oils (petroleum)	A	A	A	A	—	—	A	A
Hydrobromic Acid	D	D	D	D	A	—	D	D
Hydrochloric Acid (dry gas)	D	C	A	D	A	—	—	D
Hydrocyanic Acid	A	A	A	A	A	D	—	C
Hydrofluoric Acid (20%)	—	D	D	D	B	—	D	—
Hydrogen Gas	A	A	A	A	—	—	B	B
Hydrogen Peroxide	—	A	B	A	A	D	D	D
Hydrogen Sulfide (aq)	—	A	A	C	A	C	D	—
Iodine	—	D	D	D	B	—	D	—
Isopropyl Alcohol	—	A	A	B	A	C	C	A
Isopropyl Ether	A	—	A	A	—	—	—	A
Kerosene	A	A	A	A	A	A	A	B
Ketones	A	A	A	B	A	—	A	A
Lacquers	A	A	A	A	—	C	C	C
Lactic Acid	A	A	B	C	A	—	D	D
Lead Acetate	B	A	A	D	A	—	—	D
Magnesium Chloride	B	B	B	D	A	C	D	C
Magnesium Hydroxide	A	A	A	D	A	B	B	B
Magnesium Sulfate	B	B	A	B	B	B	C	B
Maleic Acid	C	A	A	B	A	—	—	B
Malic Acid	B	A	A	C	A	—	—	D
Mercuric Chloride	D	D	D	D	B	D	D	D

	302 Stainless Steel	304 Stainless Steel	316 Stainless Steel	Aluminum	Hastelloy C	Brass	Cast Iron	Carbon Steel
Mercury	A	A	A	C	A	D	A	A
Methyl Alcohol	—	A	A	B	A	A	—	A
Methylene Chloride	A	A	A	A	A	—	—	B
Methyl Ethyl Ketone	—	A	A	A	A	—	—	B
Naphtha	A	A	A	A	A	—	—	B
Naphthalene	B	A	B	B	A	—	—	B
Nickel Chloride	—	A	B	D	B	—	—	D
Nickel Sulfate	B	A	B	D	D	B	—	D
Nitric Acid (10%)	A	A	A	B	B	A	—	D
Nitric Acid (concentrated)	—	D	B	B	B	B	—	D
Nitrobenzene	B	A	B	C	B	B	—	B
Oleic Acid	B	A	A	B	B	B	—	C
Oxalic Acid (cold)	C	A	B	C	B	—	—	C
Paraffin	A	A	A	A	—	—	—	B
Pentane	A	C	C	A	B	—	—	B
Perchloroethylene	B	A	A	A	—	—	—	B
Phenol	B	A	A	B	A	—	D	D
Phosphoric Acid (to 40%)	—	B	A	D	D	D	—	D
Phosphoric Acid (40-100%)	—	C	B	D	D	A	—	D
Phosphoric Acid (crude)	—	D	C	C	D	A	—	D
Photographic (developer)	—	C	A	C	D	A	—	D
Phthalic Anhydride	B	A	B	B	A	—	—	C
Picric Acid	B	A	A	C	A	B	—	D
Potassium Chlorate	B	A	A	B	B	—	—	B
Potassium Chloride	C	A	A	B	A	—	C	B
Potassium Dichromate	B	A	A	B	A	—	—	B
Potassium Hydroxide (50%)	A	B	B	D	A	—	D	C
Potassium Permanganate	B	A	B	B	A	—	—	B
Potassium Sulfate	B	A	B	A	A	—	—	B
Propane (liquified)	A	A	A	A	—	—	—	B
Propyl Alcohol	—	A	A	A	A	—	—	B
Propylene Glycol	B	B	—	A	A	—	—	B
Pyridine	—	C	—	B	B	—	—	B
Pyrogalllic Acid	B	A	A	B	A	—	—	B
Silver Nitrate	B	A	A	B	D	A	—	D
Sodium Acetate	B	A	A	A	B	—	—	C
Sodium Bicarbonate	B	A	A	A	C	—	—	C
Sodium Carbonate	B	A	A	B	C	—	—	C
Sodium Chloride	B	A	C	C	A	—	—	B
Sodium Cyanide	B	A	—	D	—	—	—	B
Sodium Fluoride	B	C	—	C	—	—	—	D
Sodium Hydroxide (20%)	—	A	A	D	A	—	—	D
Sodium Nitrate	B	A	A	A	B	—	—	C
Sodium Peroxide	B	A	A	C	B	—	—	D
Sodium Silicate	B	A	A	B	C	—	—	C
Sodium Sulfate	B	A	A	B	B	—	—	A
Sodium Sulfide	B	A	A	B	B	—	—	A
Stannic Chloride	D	D	D	D	B	—	—	D
Stearic Acid	B	A	A	B	A	—	—	C
Stoddard Solvent	A	A	A	A	A	—	—	B
Sulfur Dioxide	—	A	A	A	B	—	—	—
Sulfuric Acid (10-75%)	—	D	D	D	B	—	—	D
Tannic Acid	B	A	A	C	B	—	—	C
Tartaric Acid	B	A	B	C	B	—	—	D
Toluene	A	A	A	A	A	—	—	A
Trichloroethylene	B	A	A	B	A	—	—	A
Turpentine	B	A	A	A	C	—	—	B
Varnish	A	A	A	A	—	—	—	B
Vinogar	A	A	A	A	D	—	—	C
Xylene	A	A	A	A	A	—	—	A
Zinc Chloride	D	B	A	D	B	—	—	D
Zinc Sulfate	B	A	A	D	B	—	—	C