

GENERAL GUIDE FOR CORROSION RESISTANCE*

	Carbon Steel	Stainless Steel 18-8 (316)	Stainless Steel 18-8 (304)	Copper	Aluminum		Carbon Steel	Stainless Steel 18-8 (316)	Stainless Steel 18-8 (304)	Copper	Aluminum
X - Satisfactory											
Acetate Solvents, Crude		X	X		X	Coke Oven Gas	X	X	X		X
Acetate Solvents, Pure		X	X	X	X	Copper Sulfate		X	X		
Acetic Acid, Crude		X	X			Core Oils	X	X	X	X	
Acetic Acid, Pure		X	X		X	Cottonseed Oil	X	X	X		
Acetic Acid Vapors		X	X			Creosote, Crude	X	X	X		X
Acetic Anhydride		X	X		X	Doctor Solutions	X	X	X		
Acetone	X	X	X	X	X	Ethers		X	X	X	X
Acetylene	X	X	X		X	Ethylene Glycol	X	X	X	X	X
Alcohols	X	X	X	X	X	Ferric Chloride					
Aluminum Sulfate/Alums		X	X	X		Ferric Sulfate		X	X		
Ammonia Gas	X	X	X		X	Formaldehyde		X	X	X	X
Ammonium Chloride	X					Formic Acid		X	X		
Ammonium Hydroxide						Freon, Wet		X	X	X	X
Ammonia Liquors	X	X	X		X	Freon, Dry	X	X	X	X	X
Ammonium Nitrate	X	X	X		X	Furfural	X	X	X	X	X
Ammonium Phosphate:						Gasoline, Sour		X	X	X	X
Mono-Basic		X	X			Gasoline, Refined	X	X	X	X	X
Ammonium Phosphate:						Gelatine		X	X	X	X
Di-Basic		X	X		X	Glucose	X	X	X	X	X
Ammonium Phosphate:						Glue	X	X	X	X	X
Tri-Basic	X	X	X		X	Glycerine or Glycerol	X	X	X	X	X
Ammonium Sulfate	X	X	X			Hydrochloric Acid/Muriatic Acid					
Asphalt	X	X	X	X		Hydrocyanic Acid/					
Beer		X	X	X	X	Hydrogen Cyanide		X	X		X
Beet Sugar Liquors	X	X	X	X	X	Hydrofluoric Acid					
Benzene or Benzol	X	X	X	X	X	Hydrogen Gas	X	X		X	X
Benzine	X	X	X	X	X	Hydrogen Peroxide		X	X		X
Borax	X	X	X			Hydrogen Sulfide/					
Boric Acid		X	X		X	Organic Sulfur Compounds	X	X	X		X
Butane, Butylenes, Butadiene	X	X	X	X	X	Hydrogen Sulfide, Wet		X	X	X	X
Calcium Bisulfite		X	X			Lacquers/Lacquer Solvents		X	X	X	X
Calcium Chloride	X	X		X		Lime Sulfur	X	X	X		
Calcium Hypochlorite		X				Magnesium Chloride					
Cane Sugar Liquors	X	X	X	X	X	Magnesium Hydroxide	X	X	X		
Carbolic Acid or Phenol		X	X	X	X	Magnesium Sulfate	X	X	X	X	X
Carbon Dioxide, Dry	X	X	X	X	X	Mercuric Chloride		X	X		X
Carbon Dioxide, Wet		X	X	X	X	Mercury		X	X		X
Carbon, Disulfide	X	X	X		X	Milk		X	X		X
Carbonic Acid/						Molasses	X	X	X	X	X
Carbonated Beverages		X	X		X	Natural Gas	X	X	X		X
Carbon Tetrachloride						Nickel Chloride					
Chlorine, Dry						Nickel Sulfate					
Chlorine, Wet						Sodium Phosphate:Di-Basic		X	X	X	X
Chlorex	X			X		Sodium Phosphate:Tri-Basic	X	X	X		
Chromic Acid		X	X			Sodium Silicate	X	X	X		
Citric Acid		X	X		X	Sodium Sulfate	X	X	X	X	
Nitrating Acids						Sodium Sulfide	X	X	X		
(Water < 20%; Sulfuric >15%)						Sodium Thiosulfate/"Hype"		X	X		
Nitrating Acids						Sludge Acid					
(Water: 20%; Sulfuric: 15%)						Stearic Acid		X	X		X
Nitrating Acids						Sulfate Liquors	X	X	X		
(Water: -20%; Nitric: -15%)						Sulfur	X	X	X		X
Nitrating Acids						Sulfur Chloride		X	X		
(Sulfuric Nitric: 1% or less)					X	Sulfur, Dioxide, Dry	X	X	X	X	X
Nitric Acid, Crude			X			Sulfur Trioxide, Dry	X	X	X	X	X
Nitric Acid, Pure		X	X			Sulfuric Acid: 98% to Fuming	X	X			
Oilic Acid		X	X		X	Sulfuric Acid: 75% to 95%	X	X	X		
Oxalic Acid						Sulfuric Acid: 10% to 75%					
Oxygen	X	X	X	X	X	Sulfuric Acid: < 10% Fullurous		X			
Palmitic Acid		X	X		X	Tar (Wood)	X	X	X	X	X
Petroleum Oils/Not Refined	X	X	X			Tartaric Acid		X	X	X	X
Petroleum Oils/Refined	X	X	X	X	X	Toluene/Toluol	X	X	X	X	X
Phosphoric Acid, Crude		X	X			Trichloroethylene					
Phosphoric Acid, Pure 45%		X	X			Turpentine		X	X		X
Phosphoric Acid, Pure <45% Cold		X				Varnish		X	X	X	X
Phosphoric Acid, Pure 45% Hot						Vegetable Oils	X	X	X	X	X
Picric Acid, Molten	X	X	X			Vinegar		X	X		
Picric Acid, Aqueous Solution		X	X		X	Water, Acid Mine Containing					
Potassium Chloride	X	X	X	X		Oxidizing Salts		X	X		
Potassium Hydroxide		X	X			Water, Acid Mine					
Potassium Sulfate	X	X	X		X	No Oxidizing Salts		X	X		
Propane Gas	X	X	X	X	X	Water, Fresh: Boiler Feed, etc.	X	X	X	X	
Rosin, Dark	X	X	X		X	Water, Distilled: Lab. Grade		X	X		X
Rosin, Light		X	X		X	Water, Distilled:					
Shellac, Orange	X	X	X	X	X	Return Condensate		X	X	X	X
Shellac, Bleached		X	X		X	Water, Sale (Sea Water, etc.)		X	X	X	
Soda Ash, Sodium Carbonate	X	X	X			Whiskey & Wines		X	X		
Sodium Bicarbonate/Baking Soda		X	X			Zinc Chloride		X			
Sodium Bisulfate		X	X			Zinc Sulfate		X	X		
Sodium Chloride	X	X	X		X						
Sodium Hydroxide	X	X	X								
Sodium Cyanide	X	X	X								
Sodium Hypochlorite					X						
Sodium Metaphosphate		X	X		X						
Sodium Nitrate	X	X	X		X						
Sodium Perborate		X	X		X						
Sodium Peroxide		X	X		X						
Sodium Phosphate:											
Mono-Basic		X	X		X						