CORROSION RESISTANCE CHART

Warning: Corrosion rates may vary widely with factors such as concentration, temperature, abrasion and impurities of product. Serious injury may occur with contact of incompatible liquids with solids.

Compatibility Ratings

A = Excellent B = Good C = Fair to poor D = Poor Recommedation X = Not recommended - = No data available

Temperature Ratings:

1 = OK to 80° F 3 = OK to 95° F
2 = OK to 125° F 4 = OK to 205° F
All others listed at ambient temperature

	Epoxy		Plastics														Elastomers										Metals									Non-Metals		
CHEMICAL	Vinyl Ester VR-1	Epoxy EY-1	ABS Plastic	Acetal (Delrin)	CPVC	Epoxy	Hytrel®	HDPE	LDPE	Noryl®	Nylon	Polycarbonate	Polypropylene	PPS (Ryton)	PTFE (Teflon)	PVC	PVDF (Kynar®)	Buna N (Nitrile)	EPDM	Hypalon®	PCTFE	Natural rubber	Neoprene	Santoprene	Silicone	Tygon® (R-3603)	Viton®	304 stainless steel	316 stainless steel	Aluminum	Brass	Bronze	Carpenter 20	Cast iron	Copper	Hastelloy-C®	Titanium	Carbon graphite	Ceramic Al_2O_3	Ceramic magnet
Hydrazine	-	-	-	B	D	A	C	D	-	-	-	D	C	-	A	-	A	B	A	B	-	C	B	-	B	D	A	A	A	-	-	-	D	D	A	-	-	-	-	-
Hydrobromic Acid	A^2	A^2		X	-	-	-	-	-	-	-	-	B	A	A	-	A	X	A	-	A	-	C	A	-	-	A	-	X	X	-	-	-	X	-	-	-	-	-	-
Hydrobromic Acid 100%	A^2	-	B	D	A^2	D	-	D	B^1	B	D	-	C^1	A^1	A	A^1	A	D	A	A	A	A	D	-	D	A	A	D	D	D	D	-	D	D	D	C	A	A	-	A
Hydrobromic Acid 20%	A^2	A^2	-	C	A	B^1	-	D	B^2	B	D	-	A^2	-	-	B^2	A	D	A	A	A	A	D	-	D	A	A	D	D	D	D	-	C	D	D	A	A	A	-	A
Hydrochloric Acid 100%	A	A	A	C	A	-	-	D	-	A	D	D	B^1	D	A	D	A	D	D	D	A	D	D	A	D	A^1	A	D	D	D	D	D	D	D	D	A	D	A	C	A
Hydrochloric Acid 20%	A^4	A^4	A	C	A^2	A^1	B	A	A^2	A	D	B^1	A	A	A	A^2	A	C	A	A	A	A	B	A	D	A^1	A	D	D	D	-	D	D	C	D	A^1	D	A	C	A
Hydrochloric Acid 37%	A^2	A^4	A	C	A^2	A	C	A	B^2	A	D	D	B	A	A	B	A	B	A	B	A	A	B	A	B	A^1	A	D	D	D	-	D	D	D	D	A	D	A	C	A
Hydrochloric Acid, Dry Gas	A	A	-	-	A	A	-	D	A^2	A	A^1	-	B	D	A	A^2	A	-	-	-	A	-	-	A	-	-	-	D	D	D	D	A	D	-	D	A	C	A	-	A
Hydrocyanic Acid	A	-	B	B	A	A	C	A	A^2	A^1	B	-	A	B	A	B	A	B	B	A	-	B	B	A	C	A	A	B^1	A	A	D	A	D	D	D	A	B	A	-	-
Hydrocyanic Acid (Gas 10 %)	A	-	-	C	A	-	-	A	-	C	-	B^1	A	-	A	A	-	B	A	-	-	B	A	A	D	A	A	-	-	-	-	-	D	-	-	-	A	-	-	-
Hydrofluoric Acid (Conc.) Cold	-	-	-	X	-	-	X	-	-	-	-	-	X	A	A	-	A	-	C	-	A	-	C	X	-	-	B	-	X	C	-	-	-	X	-	B	-	-	-	-
Hydrofluoric Acid 100%	-	-	D	D	C^1	-	D	D	-	D	D	D	C^1	D	A	C	A	D	D	B	A	D	D	D	D	D	B	B^1	B^1	D	-	B^1	D	D	B	B	D	-	-	B
Hydrofluoric Acid 20%	-	-	C	D	C^1	A	-	A	A^2	C^1	C^1	D	A^2	A	A	B	A	D	D	B	B	B^1	B	D	D	A	A	D	D	D	-	B^2	D	D	B	B	D	A	-	B
Hydrofluoric Acid 50%	-	-	C	D	C^1	C^2	D	A	A^2	D	D	D	A^2	A	A	B^1	A	D	D	B	B	B^1	D	D	D	C	B	D	D	-D	-	B^2	D	D	B	B	D	A	-	B
Hydrofluoric Acid 75%	-	-	C	D	C^1	B^1	D	B	C^1	D	D	D	C^1	B	A	C	A	D	C	B	B	D	D	D	D	C	B	D	D	D	-	B^1	D	D	B	B	D	A	C	B
Hydrofluosilicic Acid 100%	A^2	-	-	A	-	C^1	-	C	B^1	B^2	D	-	A	A^1	A	B^1	A^1	B	A	B	B	A	B	-	D	D	A	D	D	D	-	B^2	D	D	-	B	D	A	-	-
Hydrofluosilicic Acid 20%	A^2	-	-	B	A	C^1	-	B	B^2	B^2	D	-	A	A	A	A^2	A	A	A	B	A	A	B	-	D	A	A	C^2	B^1	D	-	B^2	D	B	B	B	D	A	-	-
Hydrogen Bromide, Wet Gas	A^2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	D	-	-	-	D	-	-	-	A	-	-	-
Hydrogen Chloride, Wet Gas	A^4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	-	B	-	-	B	-	-	-	-
Hydrogen Fluoride (Anhydrous)	-	-	-	-	-	-	-	-	-	-	-	-	A	-	A	-	A	X	C	-	A	-	C	-	-	-	A	-	X	X	-	-	-	-	-	A	-	-	-	-
Hydrogen Gas	-	-	-	-	A^2	-	A	A	A^2	A^1	A^2	A^2	A	A	A	A^2	A	A	A	A	B	B	A	-	C	A	A	A	A	A	-	A	A	-	A	A	A	A	-	-
Hydrogen Peroxide 10%	A^2	A^2	A	D	A	C^1	X	A	A	A^2	C^1	A^2	A	A	A	A^1	A/120°	C	A	D	A	B	C	A	A	B-	A	B^2	A	A	-	B^1	C	B	D	A	A	C	-	A
Hydrogen Peroxide 100%	A^2	A^2	A	D	A	A	-	A	C^2	A	D	A	B^1	C	A	A	A^1	D	D	D	B	C	D	-	B	B	A	B^2	A^2	A	D	B^1	D	B	D	A	B	C	A	A
Hydrogen Peroxide 3%	A^2	A^2	-	-	-	-	X	-	-	-	-	-	A	X	A	-	A/120°	B	B	-	A	-	B	A	-	-	A	-	-	A	-	-	-	-	-	-	-	-	-	-
Hydrogen Peroxide 30%	A^2	A^2	-	D	A	B	X	A	C^2	A^2	D	A^2	A	A^1	A	A^1	A	C	B	D	A	C	D	A	B	B	A	B^2	B	A	-	B^1	B	B	D	A	B^1	C	-	A
Hydrogen Peroxide 50%	A^2	A^2	-	D	A	-	-	A	C^2	-	D	A^2	B^1	-	A	A^1	A^1	D	B	D	A	C	D	-	B	B	A	B^2	A^2	A	-	B^1	B	-	D	A	A	C	-	A
Hydrogen Peroxide 90%	-	-	-	-	-	-	X	-	-	-	-	-	A	X	A	-	-	C	B	-	A	-	B	A	-	-	A	-	A	A	-	-	-	B	-	A	-	-	-	-
Hydrogen Sulfide (aqua)	A^2	A^2	B	C	A	A	-	A	A	A^1	C^1	A	A^1	A	A	B^1	A	D	B	D	A^1	C	A	-	C	A	D	C	A	B	-	A	D	D	-	A	B	A	A	A
Hydrogen Sulfide (dry)	A^2	A^2	-	-	A	A	A	A	A	-	C^1	-	A^1	A	A	A^2	A	D	B	B	B	C	A	-	C	D	D	C^1	A	B	D	B	D	D	D	A	A	A	-	-
Hydrogen Sulfide (Wet)	A^2	A^2	-	C	-	-	A	-	-	-	-	-	A	A	A	-	A	X	A	-	A	-	C	A	-	-	X	-	$A/167^0$	A/90%	-	-	-	X	-	A	-	-	-	-
Hydroquinone	-	-	D	A	A	-	-	-	A	-	D	-	A	-	A	B	A	C	D	D	A	A	A	A	-	-	B	B	A/10%	A/90%	-	-	-	B	B	B	B	A	-	A
Hydrosulfite Bleach	A^2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	-
Hydroxyacetic Acid 70%	A^3	-	-	A	A	A	-	-	A	-	-	-	-	-	A	D	A	A	A	-	-	-	A	-	-	-	A	-	-	-	-	-	D	B	-	-	A	-	-	-
Hypochlorous Acid 10%	A^2	A^2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	B	-	-	-
Hypochlorous Acid 20%	A^2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	B	-	-	-
Hypophosphorous Acid	A^2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	B	-	-	-	B	-	-	B	-	-	-	-
Hyroxyacetic Acid - 10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	X	-	-	A	-	X	A	-	-	-	-	B	B	-	-	-	-	-	-	-	-	-	-
Ink	A^2	-	A	B	-	A	-	-	-	-	C	-	-	-	A	C	A	A	-	-	-	D	A	-	-	C	A	C	C	-	-	-	D	D	A	-	-	-	A	A
Insecticides	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C	-	-	-	C	-	-	B	-	-	-	-
Iodine	-	-	D	D	D	C	B	A	A^1	C^1	A	A/150°	C	D	A	A	A^2	B	B	D	A	D	B	A	-	A	A	D	D	A	-	A	D	D	D	A	A	D	-	-

Warning: Halogenated solvents such as 1,1,1, Trichloroethane and Methylene Chloride should not be used in Aluminum equipment. A violent explosion could occur with halogenated hydrocarbons such as Carbon Tetrachloride, Chloriform, Dichlorethylene, Methyl Chloride, Methylene Chloride, and Trichlorethylene.

Data shown is based on information that has not been independently verified. We do not guarantee its accuracy or imply or state the accuracy of these charts. Data is limited to the concentrations and temperature specified. Assume ambient temperatures where temperature restrictions are not indicated.