CHEMICAL RESISTANCE GUIDE

The following data is based on observations reported from Laboratory Test. Because of the effect of service exposure variables on corrosion resistance, the data must be used with caution and only as a general guideline to corrosion resistance. Laboratory or Field verification test should be utilized to verify corrosion resistance and material suitability to the chemical within its environment.

Recommended Service Temperatures °F

ENVIRONMENT	[1]304-L	[2]316-L	[3]PVC	[3]HDPE	[5]PP
Acetic Acid (10%)	180	400	100	140	140
Acetic Acid (11-50%)	70	400	100	140	140
Glacial Acetic Acid	70	400	100	104	70
Acetone (10%)	180	400	NR	140	140
Aluminum Potassium Sulfate (Alum)	NR	70*	140	140	140
Aluminum Sulfate (Saturated)	180	180	140	140	140
Aluminum Bicarbonate	180	70*	100	NR	NR
Ammonium Carbonate (Saturated)	180	400	140	140	140
Ammonium Chloride (10%)	200	200	100	140	140
Ammonium Hydroxide (10%)	100*	100*	140	140	200
Ammonium Nitrate (Saturated)	212	300	140	140	140
Ammonium Persulfate (10%)	NR	212*	140	140*	140
Ammonium Sulfate (10-40%)	NR	212*	140	140	212
Amyl Acetate	300*	300	NR	NR	NR
Aniline	500	500	NR	70	NR
Antimony Trichloride	NR	NR	140	140	140
Arsenic Acid	150*	300*	140	140	140
Barium Carbonate (Saturated)	70*	70*	140	140	212
Barium Chloride (Saturated)	NR	212*	140	140	212
Barium Sulfide	212	212	140	140	212
Benzene, Benzol	212	400	NR	70*	NR
Benzene Sulfonic Acid (100%)	212*	180	70	70*	70*
Benzonic Acidic Acid	400	400	140	140	140
Bleach (12.5% Active Chlorine)	NR	NR	140	140*	140*
Butyric Acid (5%)	70*	150*	NR	104	70
Calcium Chlorate (10%)	212	212	140	140	140
Calcium Chloride (Saturated)	70*	212*	140	140	212

[1]Type 304 Stainless Steel
[2]Type 316 Stainless Steel
[3]PVC – Poly Vinyl Chloride
[4]HDPE – High Density Polyethylene
[5]PP – Polypropylene
NR – Not Recommended
***May cause pitting, should be tested by user.**

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ENVIRONMENT	[1]304-L	[2]316-L	[3]PVC	[3]HDPE	[5]PP
Calcium Hydroxide (30%)	212	212	NR	140	140
Calcium Hypochlorite (Saturated)	NR	70*	140	140	140
Calcium Sulfate	212	212	140	140	140
Carbon Dioxide	212	212	140	140	140
Carbon Monoxide	500	500	140	140	140
Carbon Tetrachloride	212	400	NR	NR	NR
Chloracetic Acid	NR	NR	140*	140	140
Chlorine Water (Saturated)	NR	NR	140*	70*	NR
Chlorobenzene (Phenylchloride)	212	280	NR	NR	NR
Chromic Acid (10%)	70*	70*	140	70*	70*
Citric Acid (15%)	70*	212*	140	140	140
Copper Cyanide	212*	212*	140	140	140
Copper Nitrate	300	300	140	140	140
Copper Sulfate	212*	400*	140	140	140
Crude Oils	212	212	140	NR	140*
Dibutyl Phthalate	212	400	NR	70*	70*
Diesel Fuel	100	100	90*	70*	70*
Diethylene Glycol	70	170	NR	70*	70*
Ethylene Chlorohydrin	212	212	NR	140	140
Ethylene Glycol	212	340	140	140	212
Fatty Acids	290*	400	140*	70*	NR
Ferric Chloride	NR	NR	140*	140*	140*
Ferric Nitrate	200*	350*	140*	140*	140*
Ferric Sulfate (10%)	70*	212	140*	140*	140*
Ferric Chloride	NR	NR	140*	140*	140*
Ferrous Nitrate	NR	70*	140*	140*	140*
Ferrous Sulfate	212	212	140*	140*	140*
Fluoboric Acid (30%)	70*	90	140*	140*	140*
Fluosilicic Acid (32%)	NR	212*	140*	140	140
Formaldehyde (37%)	130*	350*	100*	140	140
Formic Acid (85%)	212*	400*	100*	140	70*
Gasoline	70*	70*	140	NR	NR
Glycerine	212	212	140	140	212
Hydrobromic Acid (50%)	NR	NR	140*	140	70*

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Hydrochloric Acid (30%)	NR	NR	140	140	70*
Hydrofluoric Acid (50%)	NR	NR	70*	140*	140*
Hydrogen Peroxide	100	100	140*	70*	NR
Hypochlorous Acid	NR	NR	140*	140*	140*
Jet Fuel (JP-4)	100*	400*	140	NR	70*
Kerosene	400*	400*	140	70	70*
Lactic Acid	70*	300*	70	140	140
Lead Acetate	212*	212*	140	140	140
Linseed Oil	70*	70*	140	140	140
Magnesium Carbonate	212*	212*	140	140	212
Magnesium Chloride	NR	212*	140	140	140
Magnesium Nitrate	150*	300*	140	176	176
Magnesium Sulfate	212	350*	140	176	176
Methyl Ethyl Ketone	150*	350*	NR	104*	70*
Milk	212	350	140	140	70*
Mineral Oil	90	350*	140	104*	70*
Naptha	150*	180*	140	70	70
Napthalene	400	400	NR	NR	212*
Nickel Chloride	90*	90*	140	140	140
Nickel Nitrate	400	400	140	140	140
Nickel Sulfate	212*	212*	140	140	140
Nitric Acid (5%)	212	212	100*	140	70*
Oleic Acid	290*	290	140	140	70*
Oxalic Acid	NR	350*	140	140	140
Perchlorethyloene	80	80	NR	NR	NR
Perchloric Acid (10%)	NR	NR	70*	70	NR
Phenol (10%)	212*	212*	NR	140	140*
Phosphoric Acid (50%)	150	212*	140	140	140
Phthalic Anhydride	500	500	NR	NR	NR
Potassium Bicarbonate (30%)	212	212	140	140	212
Potassium Chloride (30%)	212	350	140	140	212
Potassium Dichromate (30%)	212	350	140	140	140
Potassium Ferrocyanide (30%)	212*	212*	140	140	140
Potassium Hypochlorite	NR	70*	100*	104	NR

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Potassium Nitrate (80%)	212*	350*	140	140*	140*
Potassium Sulfate (10%)	212	350	140	140	140
Propylene Glycol	90*	212*	NR	140	140
Silver Nitrate	500*	500*	140	140	140
Sodium Acetate	500*	500*	140	140	212
Sodium Benzoate	NR	NR	140	140	140
Sodium Bromide	100*	350*	140	140	140
Sodium Carbonate (30%)	212*	350*	140	140	140
Sodium Chlorite (5%)	150*	150*	140*	140	140
Sodium Fluoride (10%)	NR	350*	140	140	140
Sodium Hypochlorite (20%)	NR	NR	140	70	70
Sodium Nitrate	212	350	140	140	140
Sodium Nitrite	212*	212*	140	140	140
Sodium Sulfate	400	400	140	140	140
Sodium Sulfite	212	212	140	140	212
Stearic Acid	350*	400	140	NR	NR
Sulfuric Acid (10%)	NR	NR	140	140	212
Sulfuric Acid (50%)	NR	NR	140	140	140
Sulfuric Acid (100%)	70*	212*	NR	NR	NR
Tannic Acid	212*	212*	140	140	70
Tartaric Acid	400	400	140	140	212
Trichloroacetic Acid (50%)	NR	NR	70*	140	140
Zinc Chloride	NR	212*	140	140	140
Zinc Nitrate	150*	150*	140	140*	140*
Urea	212*	212*	140	140	140
Sea Water	80*	250*	140	140	212

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