

Chemical Resistance Table for Acid

Chemical Environment	Temperature [°F]				
	Concentration	Hetron 922, FR992, 980	Hetron 197	Polypropylene	PVC
Acetic	25%	210	210	180	140
Acetic, Glacial	100%	NR/NR/—	LS 100	120	73
Acrylic Acid	25%	100	100	—	NR
Benzene Sulfonic	10%	210/210/220	200	180	140
Benzoic	Sat d	210	250	73	140
Boric	Sat d	210/210/220	200	185	180
Butyric	25%	180	120	180	73
Carbonic	Sat d	160	160	185	—
Chloroacetic	50%	100	90	—	140
Chromic	10%	100/100/150	180	150	140
Chromic	30%	NR	120	150	140
Chromic	50%	NR	LS 90	NR	NR
Citric	Sat d	210/210/220	200	180	140
Fatty Acids	Sat d	210/210/220	250	120	140
Fluoboric	10%	210/210/220	265	73	140
Fluosilicic	10%	150	180	—	140
Fluosilicic	35%	100	160	—	140
Formic	10%	180	200	73	73
Gallic	Sat d	—	80	—	140
Gluconic Acid	50%	100/100/125	125	—	—
Hydrobromic	48%	160	200	140	140
Hydrochloric	10%	210/210/220	230	150	140
Hydrochloric	20%	200	230	150	140
Hydrochloric	36%	125	150	150	140
Hydrochloric	37%	100	100	150	140
Hydrofluoric	5%	150	150	180	73
Hydrofluoric	10%	120	120	180	73
Hydrofluoric	20%	90	90	120	73
Hydrofluoric	40%	NR	90	150	73
Hydrofluosilicic	10%	150	180	140	140
Hydrofluosilicic	35%	100	160	140	140
Lactic	100%	210/210/220	200	150	73
Malic	10%	—	95	150	140
Nitric	5%	160	210	180	140
Nitric	10%	120/120/140	200	180	140

Chemical Resistance Table for Acid (continued)

Chemical Environment	Temperature [°F]				
	Concentration	Hetron 922, FR992, 980	Hetron 197	Polypropylene	PVC
Nitric	28%	100/100/130	—	120	140
Nitric	40%	NR	120	73	100
Nitric	50%	NR	110	100	100
Nitrous	10%	90	—	—	73
Oleic	100%	200/200/210	200	150	140
Oxalic	100%	210/210/220	220	180	140
Perchloric	10%	150	85	73	73
Perchloric	30%	80	85	73	—
Perchloric	70%	—	85	73	—
Phosphoric	85%	210/210/220	250	180	140
Phthalic	100%	210/210/220	—	—	73
Picric (alcoholic)	10%	100	100	170	170
Stearic	100%	210/210/220	250	73	140
Sulfamic	Sat d	210	160	180	140
Sulfuric	25%	210/210/220	220	180	140
Sulfuric	50%	200	200	150	140
Sulfuric	70%	180	190	120	140
Sulfurous	Sat d	100	150	140	100
Tannic	Sat d	210	250	180	140
Tartaric	Sat d	210	250	150	140
Trichloroacetic	50%	210	200	150	140

Chemical Resistance Table for Alkalies

Chemical Environment	Temperature [°F]				
	Concentration	Hetron 922, FR992, 980	Hetron 197	Polypropylene	PVC
Ammonia, Wet vapors	—	100/100/150	NR	150	140
Ammonium Bicarbonate	15%	160	130	—	—
Ammonium Carbonate	10%	100/100/150	NR	180	140
Ammonium Fluoride	10%	150	—	—	140
Ammonium Hydroxide	10%	160/160/180	NR	180	140
Ammonium Hydroxide	28%	125	NR	180	140
Barium Carbonate	100%	210/210/220	200	—	140
Barium Hydroxide	10%	150/150/160	—	—	140
Calcium Hydroxide	15%	180	—	180	140
Magnesium Carbonate	Sat d	180	160	—	140
Magnesium Hydroxide	Sat d	210/210/220	—	180	140
Potassium Bicarbonate	10%	160	90	170	140
Potassium Carbonate	10%	180	110	180	140
Potassium Hydroxide	25%	150	NR	150	140
Sodium Bicarbonate	10%	180	140	180	140
Sodium Carbonate	32%	160	—	180	140
Sodium Hydroxide	10%	160	NR	180	140
Sodium Hydroxide	50%	200/200/180	NR	180	140
Sodium Sulfide	10%	210/210/220	140	150	140
Trisodium Phosphate	25%	210	150	185	140

Chemical Resistance Table for Alcohol

Chemical Environment	Temperature [°F]				
	Concentration	Hetron 922, FR992, 980	Hetron 197	Polypropylene	PVC
Alcohol	100%	—	120	—	73
Amyl	100%	120/120/200	200	180	NR
Benzyl	100%	NR/NR/100	—	150	NR
Butyl	100%	80/80/120	100	100	100
Ethyl	50%	100/100/150	150	180	140
Methyl	100%	NR/NR/100	100	180	140
Polyviny Alcohol	100%	120	80	—	—

Chemical Resistance Table for Salts

Chemical Environment	Temperature [°F]				
	Concentration	Hetron 922, FR992, 980	Hetron 197	Polypropylene	PVC
Aluminum Chloride	100%	210/210/220	210	180	140
Aluminum Potassium Sulfate	100%	210/220	210	150	140
Aluminum Sulfate	100%	210/210/250	250	180	140
Ammonium Chloride	100%	210/210/250	210	180	140
Ammonia:Ammonium Nitrate: Hydroflousilic	15:5:2.5	—	250	—	—
Ammonium Sulfate	Sat d	210/210/220	220	180	140
Aniline Sulfate	Sat d	210/210/220	200	—	—
Antimony Trichloride	Sat d	200/200/220	200	180	140
Barium Chloride	100%	210	200	—	140
Barium Sulfide	Sat d	180	—	—	140
Calcium Chlorate	Sat d	210/210/220	250	—	140
Calcium Chloride	Sat d	210/210/220	250	180	140
Calcium Sulfate	Sat d	210/210/220	250	—	140
Copper Chloride	Sat d	210/210/220	250	—	140
Copper Cyanide	Sat d	210/210/220	200	—	140
Ferric Chloride	Sat d	210/210/220	250	180	140
Ferric Nitrate	Sat d	210/210/220	200	180	140
Ferric Sulfate	Sat d	210/210/220	200	180	140
Ferrous Chloride	Sat d	210/210/220	220	180	140
Ferrous Nitrate	Sat d	210/210/220	220	140	73
Ferrous Sulfate	10%	210/210/220	220	180	140
Lead Acetate	100%	210/210/220	160	180	140
Lithium Chloride	45%	210/210/220	250	—	—
Magnesium Chloride	Sat d	210/210/220	200	180	140
Magnesium Hydroxide	Sat d	210/210/220	—	180	140
Magnesium Nitrate	Sat d	160	—	180	140
Magnesium Sulfate	Sat d	210/210/220	200	180	140
Nickel Chloride	Sat d	210/210/220	220	180	140
Nickel Nitrate	Sat d	210/210/220	220	—	140
Nickel Sulfate	Sat d	210/210/220	220	180	140
Potassium Chloride	100%	210/210/220	250	180	140
Potassium Dichromate	100%	210/210/220	200	—	140
Potassium Ferricyanide	Sat d	210/210/220	—	—	140
Potassium Nitrate	Sat d	210/210/220	220	—	140
Potassium Permanganate	25%	210/210/220	150	150	73
Potassium Persulfate	100%	210/210/220	90	—	140
Potassium Sulfate	100%	210/210/220	220	180	140
Silver Nitrate	100%	210	220	180	140
Sodium Acetate	100%	210/210/220	200	180	140
Sodium Bisulfate	Sat d	210/210/220	200	180	140
Sodium Chloride	Sat d	210/210/220	250	180	140
Sodium Chlorite	Sat d	210/210/220	150	—	NR
Sodium Cyanide	50%	210	LS 150	180	140
Sodium Cyanide	Sat d	210	LS 160	180	140
Sodium Dichromate	20%	210	—	180	140
Sodium Ferricyanide	Sat d	210/210/220	250	140	100
Sodium Fluoride	100%	180	—	185	140
Sodium Nitrate	Sat d	210/210/220	250	180	140
Sodium Nitrite	Sat d	210/210/220	180	—	—
Sodium Silicate	6%	210/210/220	160	180	—
Sodium Sulfate	100%	210/210/220	220	150	140
Sodium Sulfite	100%	210/210/220	220	180	140
Stannic Chloride	15%	180	180	—	140
Stannous Chloride	100	210	250	—	—
Zinc Chloride	Sat d	210	265	180	140
Zinc Nitrate	Sat d	210	180	—	140
Zin Sulfate	100%	210	250	180	140

Chemical Resistance Table for Solvents

Chemical Environment	Temperature [°F]				
	Concentration	Hetron 922, FR992, 980	Hetron 197	Polypropylene	PVC
Acetone	100%	NR	NR		
Benzene	100%	NR/NR/100	90	NR	NR
Carbon Disulfide	100%	NR	NR	NR	NR
Carbon Tetrachloride	100%	LS 90/150/150	125	NR	73
Chlorobenzene	100%	NR/NR/80	NR	73	NR
Cyclohexane	100%	—	—	NR	NR
Ethyl Acetate	100%	NR	NR	120	NR
Ethyl Benzene	100	NR/NR/100	NR	NR	NR
Ethyl Chloride	100%	NR	90	73	NR
Ethyl Ether	100%	NR/NR/—	NR	—	—
Ethylene Glycol	100%	210	250	120	140
Heptane	100%	200	200	NR	140
Hexane	100%	160	160	73	73
Methyl Ethyl Ketone	100%	NR	NR	NR	NR
Naphtha	100%	180/180/200	200	73	140
Naphthalene	100%	180/180/200	90	—	NR
Styrene	100	NR/NR/80	NR	—	—
Tetrachloroethylene (Perchloroethylene)	100%	80/80/100	100	—	—
Toluene	100%	NR/NR/100	90	NR	NR
Xylene	100%	NR/NR/100	100	NR	NR

Chemical Resistance Table for Bleaches

Chemical Environment	Temperature [°F]				
	Concentration	Hetron 922, FR992, 980	Hetron 197	Polypropylene	PVC
Calcium Hypochlorite	Sat d	160	120	150	140
Chlorine Dioxide	5%	140/140/180	120	—	—
Chlorine Dioxide	15%	NR/NR/180	90	—	—
Chlorine Water	Sat d	180	200	—	140
Hydrogen Peroxide	5%	150	210	150	140
Sodium Chlorate	Sat d	210/210/220	200	180	73
Sodium Hypochlorite	2%	150	125	NR	73
Sodium Hypochlorite	10%	150	120	NR	73

Chemical Resistance Table for Gases and Vapors

Chemical Environment	Temperature [°F]				
	Concentration	Hetron 922, FR992, 980	Hetron 197	Polypropylene	PVC
Ammonia Dry Vapor	—	100/100/180	90	150	140
Ammonia Wet Vapor	—	100/100/150	NR	—	—
Bromine, Dry Gas	100%	90/90/100	140	NR	140
Carbon Dioxide, Wet, acidic	100%	210/210/250	250	150	140
Carbon Monoxide Gas	100%	210/210/220	250	—	140
Cyclohexane Vapor	—	180	175	120	NR
Chlorine Gas, Dry	100%	180/180/250	300	NR	73
Chlorine Gas, Wet	100%	180	220	NR	NR
Fluorine Gas	100%	250	—	NR	73
Hydrogen Fluoride wet	100%	90	—	73	NR
Hydrogen Sulfide	100%	220/220/210	250	150	140
Ozone (dry vapor)	3%	—	140	NR	140
Sulfuric Acid Vapor	50%	140	140	—	—
Sulfur Dioxide (dry or wet)	100%	210/210/250	250	73	73
Sulfur Trioxide Dry	100%	210/210/220	90	—	140
Sulfur Trioxide Wet	100%	NR/NR/—	90	—	140