



Chemical Resistance Tables

The data in the following tables were obtained from numerous sources in the industry. The information is based primarily on the immersion of unstressed strips in the chemicals at ambient temperature and, to a lesser degree, on field experience. The end user should be aware of the fact that actual service conditions will affect the chemical resistance. It should be noted in the following charts that the "A" rating does not mean or imply that material will perform within original specification. The chemical resistance table should be used for reference only. It is the ultimate responsibility of the end user to determine the compatibility of the chemical being used in his or her particular application.

Chemicals	Ultram (GF-40%)	PVC	CPVC	PPL	PVDF	PICGF (Fibertec)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Acetaldehyde	X	X	B	C	X	A	X	B	X	A	A	A	A
Acetaldehyde, Aq.	A	X	X	A	X	X	A	B	A				
Acetamide	A			A			A	C	A	A	A		
Acetate Solv., Crude	X	X	X	A	X								
Acetate Solv., Pure	X	X	X	A	X	A	X	C	X	A	A		
Acetic Acid 5%	A						A	A	A	B			
Acetic Acid 10%	A	A	A	A	A	A	X	B	B	A	A	B	
Acetic Acid 20%	A	A	B	A	A	A	C	B	B	A	B	A	
Acetic Acid 30%	A					A	A	C	A	B			
Acetic Acid 50%	A	A	A	A	A	A	C	B	A	A	C		
Acetic Acid 60%	A	A		B	A	A	C	C		A	X		
Acetic Acid 80%	A	B	B	C	A	C	A	C	B	C	A	X	
Acetic Acid, Glacial	C	X	X	B	B	C	A	X	B	X	A	X	B
Acetic Aldehyde							A	X	A	X			
Acetic Anhydride	X	C	B	B	X	A	X	C	C	A	X	B	
Acetic Ester							A	X	B	X			
Acetic Ether							A	X	B	X			
Acetol							A						
Acetone	C	X	X	B	X	X	A	X	A	C	A	A	A
Acetonitrile	C	X		B	A	X	A	C	A	C	A		
Acetophenone				A	A		A	X	A	C	A		
Acetyl Acetone	X	X		X	X	A	X	A	X				
Acetal Benzene							A	X	A	X			
Acetyl Bromide					A		A						
Acetyl Chloride	X	X	A	A	X	A	C	X	C	A			
Acetal Oxide							A	X	B	C			
Acetyl Propane							A	X	B	X			
Acetylene	C	C	A	A	C	A	A	A	A	A	A		
Acetylene Dichl.							A	A			X		
Acetylene Tetrachl.							A	A	X	X			
Acid Mine Water	A	A	B	A	A	A	A						

Chemicals	Ultram (GF-40%)	PVC	CPVC	PPL	PVDF	PICGF (Fibertec)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Acrylic Acid	X	X			A	X	A						
Acrylic Emulsions				X									
Acrylonitrile	X	X	B	A	X	A	X	X	C	C			
Adipic Acid, Aq.	A	A	A	A	A	A	A	A	A				
Air	A	A	A	A	A	A	A	A	A	A			
Alcohol							A	B	A	A			
Alcohol, Allyl	X	X	A	A	C	A	B	A	A		A		
Alcohol, Amyl	C	B	A	A	C	A	A	A	A	A		A	
Alcohol, Benzyl	X	X	A	A	X		A	C	X	A		A	
Alcohol, Butyl	C	A	A	A	C	A	A	A	A	A	A	A	
Alcohol, Diacetone	X		C	B	X	A	X	A	C	A		A	
Alcohol, Ether							A	B	A	C			
Alcohol, Ethyl	A	A	A	A	A	A	A	B	A	A	A	B	A
Alcohol, Hexyl	A		A		A	A	A	A	A	A		A	
Alcohol, Isobutyl					A		A	A	A	B	A		A
Alcohol, Isopropyl	A	A	A	B	A	A	A	A	B	A		A	
Alcohol, Methyl	A	X	A	A	A	A	X	A	A	A		A	
Alcohol, Octyl								A		B	A		A
Alcohol, Polyvinyl	A	A	A		A	A	A	A					
Alcohol, Propargyl	A												
Alcohol, Propyl	A	A	A	A	A	A	A	A	A	A		A	
Aldehyde								A	X	A	X		
Alkanes								A	A	X	A		
Alkazene								A	B	X	X		
Allyl Aldehyde								A	A		B		
Allyl Bromide								A	B		X		
Allyl Chloride	X				A	X	B	B	X	X	A		A
Allyl Trichloride								A	A		X		
Alum	A	A	A	A	A	A	A	A	A	A	A		A
Alum, Ammonium	X	X	A	A	C			A	A	A			
Alum, Chrome	A	A	A		A			A		A			

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.

Chemicals

	Ultem (GF 40%)	PVC	CPVC	PPL	PIVDF	PIVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Alum, Potassium	A	A	A	A	A	A	A	A	A				
Aluminum, Acetate						A	C	A	B				
Alum., Ammonium			A	A		A	A	A	B				
Aluminum, Bromide						A	A	A	A				
Aluminum, Chloride	A	A	A	A	A	A	A	A	A	C	X	C	
Alum. Chlorohydr.						A							
Aluminum, Citrate													
Aluminum, Fluoride	A	A		A	C		A	A	A	C	X	C	
Aluminum, Formate						A	X		X				
Alum. Hydroxide	A	A	A	A	C	A	C	A	A	A	A	A	A
Alum. Nitrate	A	A	A	A	A	A	B	A	A		A		
Alum. Oxychloride	A	A	A	A	A	X							
Alum. Phosphate						A	A	A	A				
Alum. Potassium	A	A	A	A	A	A	A	A	A		X		
Aluminum, Salts	A		A	A	A	A	A	A	A	X	X		
Aluminum, Sulfate	A	A	A	A	A	A	A	A	A	B	X	A	
Amber Acid	A	A	A	A	A	A	A						
Amines	C			B	C	A	X		X	A	A	B	
Ammonia 10%	A		A		A	A	A		X	A	A	A	
Ammonia, Anhydrous	X	X	A	B	X	A	X	A	C	A	A	B	
Ammonia, Aq. 25%	A	A	A	A	A						B		
Ammonia, Dry Gas	A	A	A		A	A	X	A	A		A	A	
Ammonia, Liquid	C	X		A	A	X	A	X	A	B	A	A	
Ammonia, Nitrate	B	B	A	A	C		A	A	B	A	A		
Ammonium Ph. Mono	A		A		A	A	A	A	A	A	A	A	
Ammonium Ph.Tri.	A		A		A	A	A	A	A	A	B	A	
Ammonium Acetate	A	A	A		A	A	A	A	A				
Ammonium Alum						A			B				
Ammonium Bichrom.						A		A	A				
Ammonium, Bifluoride	A	A	A	A	A	A	A	A	B	A			
Ammonium Bisulfide	A			A	A								
Ammonium Carbonate	A	A	A	A	A	A	A	A	C	B	B	A	
Ammonium Casenite										A			
Ammonium Chloride	A	A	A	A	A	A	A	A	B	B	C	A	
Ammonium Dichromate	A				A	A		A	A				
Ammonium, Fluoride						A			B				
Ammonium, Fluoride 10%	A	A	A	A	C	A	A	A					
Ammonium, Fluoride 20%	A		A	A	C	A	A	A					
Ammonium, Fluoride 25%	X	X	A	A	X								
Ammonium, Hydroxide	X	A	X	A	A	A	B	A	B	A	A	A	A
Ammon. Metaphosph.	A	A	A	A	A	A	A	A	A				

Chemicals

	Ultem (GF 40%)	PVC	CPVC	PPL	PIVDF	PIVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Ammonium, Nitrate	B	B	A	A	A		A	A	A	A	A		
Ammonium, Oxalate										A	A		
Ammonium, Persulfate	A	A	C	A	A	A	C	B	C	A	A	A	
Ammonium, Phosphate	A	A	A	A	A	A	A	A	A		A		
Ammonium, Ph. Di Basic	A	A	A		A	A	A	A	A	A	A	A	
Ammonium, Ph. Mono.		A	A		A		A		A	C	B	A	
Ammonium, Ph. Tri.		A	A		A		A		A	A	A	A	
Ammonium, Salts	A		A	A	A	A	C	A	A	X			
Ammonium, Sulfate	A	A	A	A	A	A	A	C	A	B	B	B	A
Ammonium, Sulfide	A	A	A	A	A	A	C	A	A				
Ammonium, Thiocyan.	A	A	A		A	A	A	A	A				
Ammonium, Thiosulf.						A	A	A	A	A		A	
Amyl Acetate	X	X	X	C	X	A	X	A	C	A		X	
Amyl Alcohol	C	B	A		C	A	A	A	A	A		C	
Amyl Borate				A		A	A	X	A				
Amyl Bromide						A	B	X	X				
Amyl Chloride	X	X	X	A	X	A	A	X	X	B	C	C	
Aniline	X	X	A	C	X	A	B	B	X	A	B	B	
Aniline Chlorohydrate	X				X								
Aniline Hydrochloride	X	X	A	A	X	A	B	B	C		X		
Anthraquinone Sulf. Ac.	A	A	A	A	A		A						
Anti-Freeze	C	A		A		A	A	A	A	A			
Antichlor						A	A	A	A				
Antimony Chloride				A	A		A	A	X				
Antimony Pentachloride						A			X				
Antimony Trichloride	A		A	A		A	A	A	A		X		
Aqua Regia	X	X	X	A		A	C	C	C	X	X	B	
Argon						A	A	A	C				
Arochlor							A	X					
Aromatic Hydrocarbons	X	X			X		A	X	X	A			
Arsenic Acid	A	A	A	A	A	A	A	A	B	B	B		
Arsenous Acid													
Aryl Supfonic Acid	X	X	X	X									
Asphalt	X	X	A	A	X	A	A	X	B	A	B		
Aviation Fuel							A						
Aviation Turbine Fuel							A						
Baking Soda							A	A	A	A		A	
Barium Acetate													
Barium Carbonate	A	A	A	A	A	A	A	A	A	B	B	A	
Barium Chloride	A	A	A	A	A	A	A	A	A	B	B	A	
Barium Cyanide							A		C	A			

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.



Chemicals

	Ultem (GF 40%)	PVC	CPVC	PPL	PIVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Barium Hydrate						A	A	A	A				
Barium Hydroxide	A	A	A	A	A	A	A	A	A	A	B	B	
Barium Nitrate	A	A	A		A	A	A		A	A	A	A	
Barium Salts	A		A	A	A	A	A	A	A	A			
Barium Sulfate	A	A	A	A	A	A	A		A	A	B	A	
Barium Sulfide	A	A	A	A	A	A	A	A	A	A	B		
Beer	A	A	A	A	A	A	A	A	C	A	A	A	
Beet Sugar Liquid	A	A	A		A	A	A	A	A	A	A		
Beet Sugar Liquors	A	A	A	A	A	A	A	A			B		
Benzaldehyde	X	X	C	C	X		C	C	X	A		A	
Benzalkonium Chl.	A												
Benzene	C	X	X	C	B	X	A	B	X	C	B	B	A
Benzene Sulf Ac .		X	X	X	B	X	A	A	X	C			
Benzene Sulf. Ac. 10%		X	X	X	B	X	A	A					
Benzil Chloride						A	A	X	X				
Benzoic Acid		A	A	A	A	A	A	A	B	X	B	B	A
Benzyl Alcohol	X			A		A	A	B	C				
Benzyl Benzoate						A	A	C	X				
Benzyl Chloride				A	X	A	X	X	X				
Bismuth Carbonate	A	A	A	A	A	A	A	A	A				
Black Liquor	A	A	A	A	A	A	A	B	A				
Bleach	A	A	A	A	A	A	A	A	X				
Borax	A	A	A	A	A	A	A	A	A	A	A	A	
Boric Acid	A	A	A	A	A	A	A	A	B	B	B	B	A
Brake Fluid	C					A	X	A	C				
Brewery Slop						A		A	A				
Brine	A	A	A	A	A	A	A	A	A				
Brine Acid	A	A	A	A	A	A	A	A	A				
Bromic Acid	A	A	X	A	A	A	A	B					
Bromine Dry						A	A	X	X		X		
Bromine Gas	C		X	A	C	A	A	X	X		X		
Bromine Liquid, Br	X	X	X	A	X	A	A	X	X		X		
Bromine Water	X	C	C	A	X	A	A	X	C	X	X	A	
Bromobenzene	X				X	A	A	X	C				
Bromotoluene	X		X		X								
Butadiene Gas	B	A	A	A	C	A	A	X	X	A	A		
Butane	A	A	A	A	A	A	A	X	A	A	A		
Butanediol	A	B		A	A		A	X					
Butanol						A				A			
Butter						A	A		A	A	A		
Buttermilk						A	A		A	A	A		

Chemicals

	Ultem (GF 40%)	PVC	CPVC	PPL	PIVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Butyl Acetate	C	X	X	C	B	X	A	X	B	C	C	B	
Butyl Acrylate Pure		X	X	X	A	X	A	X	A				
Butyl Acrylate Satur.								X	A				
Butyl Amine		X	X	X	B	X	A	X	X	C			
Butylbenzene							A	A		X			
Butyl Benzoate							A	A	A	X			
Butyl Bromide					A		A	B		X			
Butyl Butyrate							A	C	B	X			
Butyl Carbitol							A	A	A	C			
Butyl Cellosolve		A	X		A	A	A	X	B	C			
Butyl Chloride					A		A	A		X			
Butyl Diol		B	A	A	A	C	A	A	A				
Butyl Ether		X	X	X	A	X	A	X	X	B			
Butyl Formate							A			X			
Butyl Hydrate							A	A	B	A			
Butyl Hydride							A	A	X	A			
Butyl Hydroxide							A	A	B	A			
Butyl Mercaptan		X			A	X	A						
Butyl Phenol		C	A	A	A	C							
Butyl Phthalate		X	X	A	A	X	A	C	B	X			
Butyl Stearate					A		A	A	B	B			
Butylene		A	A	X	A	A	A	A	X	B	A		
Butyraldehyde							A	X	B	X			
Butyric Acid		X	B	A	A		A	B	B	X	B	C	A
Cadmium Cyanide		A	A			A	A						
Cadmium Salts				A	A		A	A					
Caffeine Citrate		A			A		A						
Calamine							A	A		B			
Calcium Acetate		A	A	A	A	A	A	X	A	B			
Calcium Bisulfide		A	A	A	A	A	A	A	X	A	B		A
Calcium Bisulfite		A	A	A	A	A	A	A	X	A		X	
Calcium Carbonate		A	A	A	A	A	A	A	A	A	A	A	A
Calcium Chlorate		A	A	A	A	A	A	A	A	A			
Calcium Chloride		A	A	A	A	A	A	A	A	A	B	B	A
Calcium Cyanide						A		A	A				
Calcium Hydroxide		A	A	A	A	A	A	A	A	A	A		A
Calcium Hypochloride							A	A	A	X			
Calcium Hypochlorite		A	A	A	B	A	A	A	A	B	X	X	B
Calcium Nitrate		A	A	A	A	A	A	A	A	B			
Calcium Oxide		A				A	A	A		A			
Calcium Phosphate							A	A	A	A			

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.

Chemicals	Ultram (GF-40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna IV)	316 SS	416 SS	Titanium
Calcium Sulfate	A	A	A	A	A	A	A	A	A	A	B	A	
Calcium Sulfide	A	A	A	A	A	A	A	A	A				
Calcium Thiosulfate						A	A	A	B				
Calgon			C	A	A	A		A	A				
Cane Sugar Liquors	A	A	A	A	A	A	A	A	A	A			
Caprylic Acid				A	A			C					
Carbinol					A	X	A	A					
Carbolic Acid		A	A					C	A		B		
Carbon Bisulfide	X	X	X	A	X	A	A		X	C			
Carbon Dioxide	A	A	A	A	A	A	A	B	A	A	A	A	
Carbon Disulfide	X	X	X	A	X	A	A	X	C	A	B		
Carbon Monoxide	A	A	A		A	A	A	A	A	A	A		
Carbon Tetrachloride	A	X	X	X	A	X	A	B	X	C	A	A	A
Carbonic Acid		A	A	A	A	A	A	A	B	B	B		
Casein				A	A	A	A	A					
Castor Oil	A	C	A	A	A	A	A	B	A				
Catsup	A	A	A		A			A	A				
Caustic Lime						A	B	A	A				
Caustic Potash	A	A	A	A	A	A	X	A	A		B		
Caustic Soda	A	A	A	A	A	A	B	A	C		C		
Cellosolve	C	B	A	A		A	C	B	C				
Chloral Hydrate	A	A	A	A	A		A		C				
Chloroacetic Acid	A		X			A	X	B	X	X	X	A	
Chloric Acid	A			A		A		X	X	X			
Chloric Acid 20%	A	A	X	A	A								
Chlorinated Glue							A	B	C	A			
Chlorine Dioxide	A	A	C	A	A	A	A	X					
Chlorine, Dry						A	C	B	X	A		X	
Chlorine Gas, Dry	A	X	X	X	A	X	A	B	X	C			
Chlorine Gas, Wet	C	X	X	X	A	X	A	C	X	C			
Chlorine, Liquid		X	X	X	A	X	C			C			
Chlorine Water		A	A	C	A	A	A	B	C	X	X	A	
Chlorosulfonic, Acid		X	X	X	C	X	A	X	X	X	X	A	
Chlorox Bleach 5.5%	A	A	A	C	A	A	A	B	C	A			
Chocolate Syrup				A				A	A	A	A		
Chresylic Acid 50%	A			B			A	X	A				
Chrome Alum		A	A	A	A	A		A					
Chromic Acid 5%	A	A		X		A	A	A	X	A		A	
Chromic Acid 10%	A	A	A	B	A	A	A	B	X			A	
Chromic Acid 20%		B	B	X	A	C	A	B	B	C		A	
Chromic Acid 30%		B	B	X	A	C	A	A	X			A	

Chemicals	Ultram (GF-40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna IV)	316 SS	416 SS	Titanium
Chromic Acid 50%	C	X	X	X	A	X	A	A	B	X	X		A
Chromium Alum		A	A	A	A	A	A	A					
Citric Acid	A	A	A	A	A	A	A	A	A	B	A		A
Citric Oils				A			A	A	B	A	A		
Cobalt Chloride							A	A	A	A			
Coconut Oil		A	A	A	A	A	A	A	B	A			
Cod Liver Oil							A	A	A	B			
Coffee			A	A				A	A	A	A		
Coke Oven Gas		X	A	A	A	X	A	A	A	X			
Cola Concentrates				A									
Copper Acetate		A	A	A	A	A	A	X	A	B			
Copper Borofluoride		A	A	A	A	A	A	A	A				
Copper Carbonate		A	A	A	A	A	A	A	A	X			
Copper Chloride		A	A	A	A	A	A	A	A	A	B	B	A
Copper Cyanide		A	A	A	A	A	A	A	A	B	A	B	A
Copper Fluoborate		A			A	A	A		B	X			
Copper Fluoride		A	A	A	A	A	A	A					
Copper Nitrate		A	A	A	A	A	A	A	A	A	A	B	A
Copper Salts		A	A	A	A	A	A	A	A	A			
Copper Sulfate		A	A	A	A	A	A	B	A	B	A		A
Copper Sulfate 5%		A		A		A	A	A		A	A	B	A
Corn Oil		A	A	A		A	A	A	B	A			
Corn Syrup		A	A	A	A	A	A	A	B	A			
Cottonseed Oil		A	A	A	A	A	A	A	B	B			
Cream			A	A				A		A	A		
Creosol		X	X	C	C	X	A	A	X	X	A		
Creosote		X	X			X	A	A	X	B			
Cresols		X	X	C	A	X	A	A	X	X	A		
Cresylic Acid		C	C	A	A		A	A	X	X	A	A	A
Croton Aldehyde		X	X	A	C	X	A	A	B				
Crude Oil		A	A	A	A	A	A	A	X	X	A	B	
Cryolite		B	B	A	A		A	A	A	B			
Cupric Cyanide													
Cupric Fluoride		A	A	A	A	A	A	A	A				
Cupric Nitrate							A	A	A	A			
Cupric Salts		A		A	A	A	A	A	A		X		
Cupric Sulfate		A	A	A	A	A	A	A	A	A			
Cutting Oil							A	A	X	A			
Cyanic Acid							A		A	A			
Cyclohexane	A	X	X	X	A	X	A	A	X	C			A
Cyclohexanol		X	X	A	C	X	A	A	B	B			

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.



Chemicals	Ultem (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	376 SS	476 SS	Titanium
Cyclohexanone	X	X	B	C	X	A	X	C	C				
Decalin	X	X	A	A	X	A	A	X	X				
Decanal						A	X	X					
Decane				A	A	A	X	B					
Detergents	A	A	B	A	A	A	A	A	A	A			
Detergents, Heavy Duty	A	A	A	A	A								
Developers						A			A				A
Dextrin	A	A	A	A	A	A	A	A					
Dextrose	A	A	A	A	A	A	A	A	A				
Diacetone Alcohol	X	X	A	B	X	A	X	A	X				
Diallyl Phthalate													
Diazo Salts	A	A	A	A	A								
Dibenzyl Ether				A	A		C						
Dibutyl Amine				A	A	C	X	C					
Dibutyl Ether				A	A	C	C	C					
Dibutyl Phthalate	X	X	B	A	X	A	B	A	X				
Dibutyl Sebacate	B			A	A	C	B						
Dicalcium Phosphate													
Dichlorethane	X	X			X	A	C			A			
Dichloro Benzene	X				X	A	B	X	X				
Dichlorobenzene	X	X	X		A	X	A	A	X	X			
Dichloroethylene	X		X	A	X	A	A	X	X				
Dichloroisopropyl Ether				A									
Dichloromethane	X				A	B	X	X					
Diethyl Phthalate													
Diesel Fuel	A	A	A	B	A	A	A	X	A	A			
Diethanolamine													
Diethyl Cellosolve				A				X					
Diethyl Ether	X	X	B	A	X	A	C	C	X		A		
Diethyl Ketone						A	X	B	X				
Diethyl Oxide						A	X	X	B				
Diethylamine	X	X	A	C	X	A	X	B	B				
Diethylbenzene						A	A	X	X				
Diethylene Glycol	A		A	A		A	A		A	A			
Diethylenetriamine				A	A				B				
Diglycolic Acid	A	A	A	A	A	A	A	A					
Diisobutyl Ketone				A			X	X					
Diisobutylene				A	A	A	X						
Diisooctyl Phthalate	A					A	B	B					
Diisopropyl Ketone				B	A	X	B						
Dimethyl Amine	X	X	A	B	X	A	X	C	B				

Chemicals	Ultem (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	376 SS	476 SS	Titanium
Dimethyl Benzene							A	A	X	X			
Dimethyl Ether							A	B	B	B			
Dimethyl Formamide	X	X	X	A	A	X	A	C	B	B			
Dimethyl Ketone							A	X	A	X			
Dimethyl Phthalate					B		A	B	B	X			
Dimethylamine		X	X	A	X	X		X	X				
Diocetyl Phthalate		X	X	X	A	X	A	A	B	X			
Dioxane	X	X	X	B	X	X	A	X	B	X			
Dioxolane					X			X	X				
Diphenyl							A	A	X	X			
Diphenyl Ether													
Diphenyl Oxide								A	X	X			
Dipropylene Glycol							A	A		A			
Disod.Methylarsonate													
Disodium Phosphate		A	A	A	A	A	A		A	A			
Distilled Water		A	A	A	A	A							
Divinylbenzene		X	X	X	X	X							
Dolomite							A	A	B	A			
Dowtherm													
Dry Cleaning Solvents						X	A	A	X	A			
Epichlorohydrin		X	X	A	A		A	X	X				
Epsom Salt		A		A	A	A	A	A	A	A	A		A
Esters		X	X	C	A	X	A						
Ethane							A	A	X	A	A		A
Ethanol	A	A	A	A	A	A	A	B	A	A	A	B	A
Ethanolamine		X	X	X	X	X	A	X	A	B	A	A	
Ethers		X	X	C		X	A	C	C	X	A	B	
Ethyl Acetate	C	X	X	C	A	X	A	X	B	X	A	B	
Ethyl Acetoacetate		X	X		A	X	A	X	A	X			
Ethyl Acrylate	C	X	X	X	A	X	A	X	B	X			
Ethyl Alcohol		A	A	A	A	A	A	B	A	A	A	B	A
Ethyl Benzene					A		A	A	X	X			
Ethyl Benzene													
Ethyl Bromide				X									
Ethyl Butyrate													
Ethyl Cellosolve													
Ethyl Chloride		X	X	X	A	X	A	A	A	B	A	A	A
Ethyl Ether	A	X	X	B	A	X	A	C	X	X			
Ethyl Formate							A	B	B	X			
Ethyl Hexanol					A		A	A	A	B			
Ethyl Sulfate							A	X		C	X		

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.

Chemicals

	Ultem (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna IV)	316 SS	416 SS	Titanium
Ethylcellulose													
Ethylene Bromide	X	X	C	A	X	A	B	C	X				
Ethylene Chloride	X	X	C	A	X	A	A	C	X	A	A	B	
Ethylene Chlorohydrin	X	X	A	A	X	A	A	A	X				
Ethylene Diamine	X	X	X	A	C	X	A	X	A	A			
Ethylene Dichloride	X	X	C	A	X	A	A	X	X	A	A	A	
Ethylene Glycol	A	A	C	A	A	A	A	A	A	A	A	B	
Ethylene Oxide	X	X	X	A	X	A	X	X	X	A			
Extrin	A	A	A	A		A	A	A					
Fatty Acids	A	B	A	A	A	A	A	X	B	A	B	A	
Ferric Acetate	B				B	A	X		X				
Ferric Chl. Anhydrous	A	A	A	A	A	A	A	A	B	X	X	A	
Ferric Hydroxide	A	A	A		A	A	C	A					
Ferric Nitrate	A	A	A	A	A	A	A	A	A	B	B	A	
Ferric Sulfate	A	A	A	A	A		A	A	B	B	B	A	
Ferrous Chloride	A	A	A	A	A	A	A	A	B	X	X	A	
Ferrous Nitrate	A	A	A	A	A	A	A	B	A				
Ferrous Sulfate	A	A	A	A	A	A	A	A	A	C	B	A	
Fish Solubles	A	A	B		A								
Fluoboric Acid	B	A	A	A	A		A	A	B	B		X	
Fluorine Gas (Wet)	A	A	B	A	C	A	A	A	X				
Fluorine Liquid	C	X	A	X	B	B	C	X	X			X	
Fluosilicic Acid 25%	A	A	A	A		A	A	A	A	B	C	X	
Formaldehyde	A	X	A	A	A	B	A	B	B	B	A	B	A
Formaldehyde 35%	A	A	A	A	A	A	A	A			B		
Formaldehyde 50%	A	A	A	A	A	A	B	X					
Formic Acid	B	A	A	A	A	A	X	A	C	B	B	C	
Freon 11	X	A	A	A	X	A	B	X	B	A	A		
Freon 113	A			A	A	A	B	X	A	A	A		
Freon 114	A			A	A	A	A	C	A				
Freon 12	C	A	A	A	C	A	B	A	B	A	A		
Freon 12 (Wet)	B		A		C	A	A	B	A	X	A		
Freon 22	X	X	A	A	X	A	X	B	X	A	A		
Freon TF	A	B	B	X		C	A	B	X	A	A	A	
Fructose	A	A	A	A	A	A	A	A	A	A			
Fruit Juice	A	A	A	A	A	A	A		A	A			
Fruit Pulp	A	A	A	A	A		A						
Fuel Oil	B		B	A	C	A	A	X	A	A		A	
Fumaric Acid						A	A		A				
Furan						A	X	X					
Furfural (Ant Oil)	X	X	C	B	X	A	X	B	X	A	A		

Chemicals

	Ultem (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna IV)	316 SS	416 SS	Titanium
Furfuryl Alcohol					B	A	X	C					
Gallic Acid		A	A	A	A	A	A	A	A	A	A	B	
Gas, Natural		A	A	A	A	A		A	X	A			
Gasoline, Leaded	A	A	X	X	A	A	A	B	X	A	A	A	X
Gasoline, Sour		A	B	X	A	A	A	A	X	A	A	A	X
Gasoline, Unleaded	A	C	X	X	A	C	A	B	X	A	A	A	X
Gelatin		A	A	A	A	A	A	A	A	A	A	A	
Gin		A	A	A	A	A	A	A	A				
Gluconic Acid 50%													
Glucose		A	A	A	A	A	A	A	A	A	A	A	
Glue		A	A	A	A	A	A	A	B	A	A	A	A
Glycerin	A	A	A	A	A	A	A	A	A	A	A	A	A
Glycerol		A	A	A	A	A	A	A	A	A	A		
Glycolic Acid		A	A	A	A	A	A	A	A				
Glycols		A	A	A	A	A	A	A	A	A			
Glyoxal								A					
Gold Monocyanide								A		A	A		
Grape Juice		A	A			A		A		A	A		
Grape Sugar		A	A	A	A	A	A	A	A	A			
Grease		A		A	A	A	A	X	B	A			
Green Liquor		A	A	A	A	A	A	A	A	B			
Helium								A	A	A	A		
Heptane		A	A	B	A	A	A	A	X	A	A		
Hexane		A	X	A	B	A	X	A	X	A	A		
Hexene								A	A	X	A		
Hexyl Alcohol		A	A	A	A	A	A	A	B				
Honey		A		A	A	A	A	A		A	A		
Hydraulic Oil	A							A	A	X	A		
Hydraulic Oil (Synth.)				X		C		A		C	A		
Hydrazine		X	X	X	X	X	A	X	A	C	A		
Hydrobromic Acid		A	A	B	A	A	A	A	A	X	X	X	A
Hydrobromic Acid 20%		A	A	A	A	A	A	A	A	X	X	X	A
Hydrobromic Acid 50%		A	A	B	A	A	A	A	A	X	C	X	X
Hydrochloric Acid	A	A						A		A			
Hydrochloric Acid 10%	A	A	A	A	A	A	A	A	A	B		X	C
Hydrochloric Acid 20%	A	A	A	A	A	A	A	A	A	B	X	X	C
Hydrochloric Acid 25%	A	A	A	A	A	A	A	A	A	C		X	
Hydrochloric Acid 37%	A	A		A	A	A	A	A	C	C	X	X	C
Hydrocyanic Acid		A	A	A	A	A	A	A	A	B	A	B	A
Hydrocyanic Acid 10%		A	A	A	A	A	A	A	A	B	X	X	
Hydrofluoric Acid 10%		A	A	A	A	C	A	A	A	B		X	

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.



Chemicals	Uitem (GF-40%)	PVC	CPVC	PPL	PVDF	PVCeF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Hydrofluoric Acid 20%	A	A	A	C	A	A	A	X	X	X	X	X	X
Hydrofluoric Acid 30%	A	A	A	A	C	A	A	A			X		
Hydrofluoric Acid 40%	B	X	A	A	C	A	A	A			X		
Hvdrofluoric Acid 50%	A	X	X	A	B	X	A	A	C	X	X	X	
Hydrofluoric Acid 65%					A	A	B	X		X			
Hydrofluoric Acid 75%	X	C	A	A	X	A	A	X	X	X	X		
Hydrofluosilic Acid	A	A	A	A	A	A	A	A	X	X	A		
Hydrofluosilic Acid 20%	A	A	A		A	A	A	B	X	X	X		
Hydrogen	A	A	A	A	A	A	A	A	A	A	A		
Hydrogen Chl. Gas Dry			A	A						X			
Hydrogen Cyanide	A	A	A	A	A	A	A	B		C			
Hydrogen Fluoride	X	X	A	A	X					C			
Hydrogen Peroxide 5%	A	X	A	A	A	A	A			B			
Hydrogen Peroxide 10%	A	A	A	A	A	A		A	C	B	C		
Hydrogen Peroxide 30%	A	A	X	C		A	A	B	X	B	B	B	
Hydrogen Peroxide 50%	B	B	A	A	C	A	A	C	X		C		
Hydrogen Peroxide 90%	X	X	X	A	C	A	B	C	X		X		
Hydrogen Peroxide	A		A	A	A	A	B	C	B	B	B	B	
Hydrogen Phosphide	X	A	A	A	C			C					
Hydrogen Sulfide	A		A	A	A	A	A			C			
Hydrogen Sulf. (Aq. Sol.)	A	A	A		A	A	C	A	C	A	C	A	
Hydrogen Sulfide (Dry)	A	A	A	A	A	A	A	A	A	C			
Hydroquinone	A	A	A	A	A	A	A	X					
Hydroxyacetic Acid		A			A	A	A			A			
Hydroxyacetic Acid 70%	A	A			A	A	A	A			B		
Hydroxylamine Sulfate	A	A	A	A	A		A						
Hypochlorous Acid	A	A	A	A	A	A	B	B	X	X			
Ink			A	A				A	A				
Iodine Solution	A	X	A	C	A	X	A	A	A	C	X	X	A
Isobutyl Alcohol	A			A	A	A	A						
Isooctane	A	A	A	A	A	A	A	X	A				
Isophorone	X	X			X	X	X						
Isopropyl Acetate					A	X	B	X	B				
Isopropyl Alcohol	A	A	A	B	A	A	A	A	B	A		A	
Isopropyl Ether	X	X	C	A	X	A	X	X	B	A			
Jet Fuel JP-3			A		A	A	X	A	A	A			
Jet Fuel JP-4	A	A	C	A	A	A	X	B	A	A			
Jet Fuel JP-5	A	A	A	C	A	A	A	X	A	A	A		
Kerosene	A	A	A	A	A	A	A	X	A	A	A	A	
Ketones	X	X	A	A	X	A	X	C	X	A		A	
Kraft Liquor	A	A	A	A	A								

Chemicals	Uitem (GF-40%)	PVC	CPVC	PPL	PVDF	PVCeF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Lacquer				A			A	X	X	X	A		
Lacquer Thinner		C	B		C	A		A	X	A		A	
Lactic Acid	A	A	A	A	A	A	B	B	B	A	C	B	
Lard	A	A	A	A	A	A	A	C	A	A	A		
Lard Oil		A	A	A	A	A	A	A					
Latex			A			A	A	B	B	A	A		
Lauric Acid		A	A	A	A	A							
Lauryl Chloride		A	A	A	A	A							
Lead Acetate		A	A	A	A	A	C	A	B	B	B	A	
Lead Chloride		A	A	A	A	A	A	A					
Lead Nitrate		A	A	A		A	A	A	A		B		
Lead Sulfate		A	A	A	A	A	A	A	A				
Lemon Oil		A	A	X	A	A	X						
Levulinic Acid													
Ligroin	X	X	C	A	X		A	C	A	A			
Lime (Calcium Oxide)	A		A		A	A	C	A	A		A		
Lime - Sulfur Solution	A	A	A	A	A			X		B			
Linoleic Acid	B	A	A	A	C	A	B	X	B		A		
Linseed Oil	A	A	A	A	A	A	A	B	A		A		
Lithium Bromide	A			A	A	A	A		A				
Lithium Chloride					A						X		
LPG						A							
Lubricants	A		A		A	A	A		A	A	A	A	
Lubricating Oil	A	A	A	A	A	A	A				A		
Lye Solution													
Machine Oil	A	A	A	A	A	A	A						
Magnesium Acetate						A	X		X				
Magnesium Carbonate	A	A	A	A	A	A	A	B	A	A	A		
Magnesium Chloride	A	A	A	A	A	A	A	A	A	B	B	A	
Magnesium Citrate	A	A	A	A	A	A	A						
Magnesium Hydroxide	A	A	A	A	A	A	A						
Magnesium Nitrate	A	A	A	A	A	A	A	B	A	A	A	A	
Magnesium Oxide						A	A	A	A	A	B		
Magnesium Sulfate	A	A	A	A	A	A	A	C	A	A	A	A	
Maleic Acid	A	A	A	A	A	A	C	X	A	A	A		
Maleic Anhydride							A	X					
Malic Acid	A	A	A	A	A	A	A	X	A	A	B	A	
Manganese Sulfate	A	A	A		A	A	A	A					
Mash									A	A			
Mayonnaise			A			A	A		A	A			
Melamine									C	X			

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended.
 Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.

Chemicals

	Ultem (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna IV)	316 SS	416 SS	Titanium
Mercuric Chloride	A	A	A	A	A	A	A	A	A	X	X	A	
Mercuric Cyanide	A	A	A	A	A	A	A	B	A	A	X	A	
Mercuric Nitrate						A	A	A			A		
Mercuric Sulfate	A	A	A	A	A	A	A	A	A				
Mercurous Chloride													
Mercurous Nitrate	A	A	A	A	A	A	A	A					
Mercury	A	A	A	A	A	A	A	A	A	A	A	B	
Methacrylic Ac.Glacial	X												
Methane	A	A	A	A	A	A	A	C	A		A		
Methane Sulfonic Ac.					A	A							
Methanol	A	A	X	A	A	A	X	A	A	A		A	
Methoxyethyl Oleate	A				A								
Methyl "Cellosolve"	X	X	A	A	X		X	B	X				
Methyl Acetate	X	X	B	A	X	A	X	B	X	A			
Methyl Acetone						A	X		X	A			
Methyl Acrylate					A	A	X	B	X	A			
Methyl Alcohol	A	A	A	A	A	A	C	A	A		B		
Methyl Benzene						A	A	X	X				
Methyl Bromide	X	X	X	A	X	A	A	C	X				
Methyl Butanol						A	B		A				
Methyl Butyl Ketone						A	X	B	X	A			
Methyl Chloride	X	X	X	A	X	A	C	C	C	A	B	A	
Methyl Chloroform	X	X	C	A	X	A	B	X					
Methyl Ether						A	C	C	B				
Methyl Ethyl Ketone	C	X	X	C	X	X	A	X	A	X	A	A	
Methyl Formate							X	A					
Methyl Isobutyl Alcohol									X				
Methyl Isobutyl Carbinol						A	A	A					
Methyl Isobutyl Ketone	X	X	C	A	X	A	X	B	X	A		A	
Methyl Isopropyl Ketone	X	X	B	A	X	A	X	C	X	A			
Methyl Methacrylate	C	A				A	X	X	X				
Methyl Propanol						A	A	B	A				
Methyl Salicylate	A	A	A	A	A								
Methyl Sulfate	B	A	A	A	C								
Methylamine	X	X	X	C	X	A		A	B	A			
Methylene Bromide	X			X	X								
Methylene Chloride	X	X	X	C	X	A	B	X	X	A	B	A	
Methylene Iodine	X			C	X	A	A						
Methylhexane						A	A	X	A				
Methylisobutyl Carb.	A	A	A	A	A		A	A					
Methylmethacrylate					A	A	X	X					

Chemicals

	Ultem (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna IV)	316 SS	416 SS	Titanium	
Methylsulfuric Acid		A	A	A	A	A								
Milk		B	A	A	A	A	A	A	A	A	A	A		
Mineral Oil		A	B	A	A	A	A	A	X	A		A		
Molasses		A	A	A		A	A	A	C	A	A	A		
Monochloroacetic Acid		A	A	B	A	A	A	B	C			X		
Monochlorobenzene				B	A		A	A	X					
Monoethanolamine		X			X	X	A	A	A	A		A		
Morpholine							A				A			
Motor Oil	A	A	A	C	A	A	A	A	X	A				
Mustard		A	A	A		A		A		B	A			
Naphtha	A	A	A	A	A	A	A	X	B	A	A	A		
Naphthalene		X	X	B	A	X	A	B	X	X	B	A	A	
Natural Gas		A	A	A	A	A		A	X	A				
Neon							A	A	A	A				
Nickel		A	A	A		A	A	A	A	A				
Nickel Acetate		A	A	A	A	A	A	X	A	B				
Nickel Chloride		A	A	A	A	A	A	A	A	B	B	X	A	
Nickel Cyanide		A	A			A								
Nickel Nitrate		A	A	A	A	A	A	A	B	A		B		
Nickel Sulfate		A	A	A	A	A	A	A	A	A	C	B		
Nicotine		A	A	X	C	A	A							
Nicotine Acid		A	A	A	A	A	A		A					
Nitric Acid 10%		A	A	A	A	A	A	A	B	X	A	B	A	
Nitric Acid 20%		A	A		A		A	A	X	X		B		
Nitric Acid 30%		A	A	A	A	B	A	A	A	B	X		B	
Nitric Acid 40%		A	A	A	C	B	A		A	X	X		C	
Nitric Acid 50%		A	A	C	B	A	A	A	X	X		X		
Nitric Acid 70%		A	X	X	X	X	X	A	C	X	X		X	
Nitric Acid Concentr.		X	X	X	X	X	A	C	X	X			C	
Nitric Acid Fuming		X	X	X	X	X							C	
Nitrobenzene		C	X	X	C	A	X	A	C	C	C	B	B	A
Nitroethane						A		A	X	A				
Nitrogen								A	A	A	A		A	
Nitrogen Dioxide						A		A						
Nitrogen Solutions														
Nitroglycerine		X								A				
Nitromethane						A		A		B				
Nitrous Oxide		A	A	A	A	A	A	A	A	A				
Ocenol		A	A	X	A	A								
Octane						A		A	A	X				
Octyl Acid						A		A			C			

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.



Chemicals	Uitem (GF-40%)	PVC	CPVC	PPL	PVDF	PVCcF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Octylamine						A	X		C				
Oils	A	A	A	A	A								
Oils, Aniline	X		A		X	A	A	B	X	A			A
Oils, Anise		X								A			
Oils, Bay		X					A			A			
Oils, Bone							A		A	A			
Oils, Castor	A	C					A	B	A	A			
Oils, Cinnamon	A	X					A			A			
Oils, Citric		X	A				A		A	A			
Oils, Clove		X	B						A	A			
Oils, Coconut		C	A				A	A	A	A			
Oils, Cod Liver		C	A				A	A	A	A			
Oils, Corn		C	A				A	C	A	A			
Oils, Cotton Seed	A	C	A		A	A	A	C	A	A			
Oils, Creosote			X		X		A	X	B	A			
Oils, Crude Sour												C	
Oils, Diesel Fuel		A	A		A		A	X	A	A			
Oils, Fuel	A				A	A	A	X	B	A			A
Oils, Linseed	A	C	A		A		A	X	A	A			
Oils, Mineral	A	A	A		A		A	X	A	A	A		
Oils, Olive	A	C	A		A	A	A	B	A	A	A		
Oils, Pine	A	X			A	A	A		C	A			
Oils, Silicone		A	A		A		A		A	A			
Oils, Vegetable	A	C	A		A	A	A		A	A			
Oleic Acid	A	A	B	A	A	A	A	B	C	B	A	B	
Oleum	X	X	X	X	X	X	X	X	X	A			
Orange Extract		X	A		A								
Oxalic Acid	A	A	A	A	A	A	A	A	B	B	C	C	
Oxygen Gas	A	A	A	A	A	A	A	A	C				
Ozone	B	B	C	A	B		A	A	X				
Palmitic Acid 10%	A	A	A	A	A	A	A	B	A				
Palmitic Acid 70%	X	A	A			A	A	B	A				
Paraffin	A	A	A	A	A	A	B	X	A	A	A		
Pentane						A	A	X	A	C			
Peracetic Acid 40%	X	X	X	A	X	A	A	B					
Perchloric Acid 10%	A	A	A	A	A	A	A	B	X		B		
Perchloric Acid 70%	X	X	X	A	A	X	A	A	X		X		
Perchloroethylene	X	X	C	A	X	A	A	X	X	A			
Perphosphate	A	A	A		A	A	A	A					
Petrolatum	A	A	A	A	A	A	A	C	A	A			
Petroleum (Sour)	A				A		A	X	A		C		

Chemicals	Uitem (GF-40%)	PVC	CPVC	PPL	PVDF	PVCcF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Petroleum Oils		A	A	B	A	A	A	A	X	A		A	
Phenols 100%	X	X	A	A	A	X	A	B	C	X	A		C
Phenylacetate							A	X	B	X			
Phenylhydrazine	X	X	X	A	X	A	C	C	X				
Phenylhydrazine Hydrochl	X	A	X	A	X								
Phosgene Gas	X	X	C	A	X		X	A	X				
Phosgene Liquid	X	X	X	C	X		X	A	X				
Phosphoric Acid 10%	A	A	A	A	A	A	A	A	C	A		B	
Phosphoric Acid 20%	A	A	A	A	A	A	A	A	C				
Phosphoric Acid 40%	A	A		A	A	A	A	B	X	A		A	
Phosphoric Acid 50%	A	A	A	A	A	A	A	A	C	B		B	
Phosphoric Acid 80%	A	A	A	A	A	A	A	A					
Phosphoric Acid 85%	A	A	A	A	B	A	A	A	C	B		C	
Phosphoric Acid 100%		A		A		A	A	B	X	B		B	
Phosphoric Acid Crude						A	A	B	C	C		C	
Phosphorous Oxychloride							A						
Phosphorous Red		A	A	A	A	A	A						
Phosphorous Trichloride	X	X	C	A	X	A	C	C	X	A			
Phosphorous Yellow	A	A	A	A	A	A							
Photographic Developer	A	A	A	A	A		A		A	A		A	
Photographic Solutions	A	A	A	A	A	A	A		A				
Phthalic Acid	X	X	X	A	X	A	A	A				B	
Phthalic Anhydride	X	X	X		X	A	A	A	C	B	A		
Pickle Brine	A	A	A	A	A								
Pickling Solutions	A	A	A	A	A	A	B	C	X				
Picric Acid	X	C	A	A	X	A	A	C	B	A	B		
Pine Oil					A	A	A	X	B				
Plating Sol. Antimony	A	A	A		A	A	A		A	A		A	
Plating Sol. Arsenic	A	A	A		A		A		A	A		A	
Plating Solutions, Brass	A	A	A	A	A	A	A	A	A	A		A	
Plating Solutions, Bronze	A	A	A		A	A	A		A	A		A	
Plating Sol. Cadmium	A	A	C	A	A	A	A	A	A	A		A	
Plating Solutions, Chrome	A	A	C	A	A	A	C	B	X	C	A	A	
Plating Solutions, Copper	A	A	A	A	A	A	A	A	A	A	X		A
Plating Solutions, Gold	A	A	C	A	A	A	A	A	A	C		A	
Plating Solutions, Indium	A	A	A		A	A	A		A	C		A	
Plating Solutions, Iron	X	A	C		X	A	A		A	C		A	
Plating Solutions, Lead	A	A	A	A	A	A	A	A	B	C		X	
Plating Solutions, Nickel	A	A	A	A	A	A	A	A	A	C		A	
Plating Solut. Rhodium	A	A	A	A	A	A	A	A	A	X		X	
Plating Solutions, Silver	A	A	A	A	A	A	A	A	A	A		A	

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.

Chemicals

	Ultem (GF-40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna IV)	316 SS	416 SS	Titanium
Plating Solutions, Tin	A	A	A	A	A	A	A	A	B	C			X
Plating Solutions, Zinc	A	A	A	A	A	A	A	A	A	X			A
Polyethylene Glycol	A	A	A	A	A	A	A	A	A				
Polyvinyl Acetate Emul				A		A	A	A					
Polyvinyl Alcohol	A	X	A	A	A	A	A	A					
Potash	A	A	A	A	A	A	C	B	C	A			
Potassium Acetate	A	A	A	A	A	A	X	A	B				
Potassium Alum	A	A	A	A	A	A	A	A	A		B		
Potassium Bicarbonate	A	A	A	A	A	A	A	A	A	B	B	A	
Potassium Bichromate	A	A	A	A	A	A	A	A	A		B		
Potassium Bisulfate	A	A	A	A	A	A	A	A	A				
Potassium Bromate	A	A	A	A	A	A	A	A	A				
Potassium Bromide	A	A	A	A	A	A	A	A	A	B	B	A	
Potassium Carbonate	A	A	A	A	A	A	A	A	B	A	B	A	
Potassium Chlorate	A	A	A	A	A	A	A	A	A	A	B	A	
Potassium Chloride	A	A	A	A	A	A	A	A	A	A	B	A	
Potassium Chromate	A	A	A	A	A	A	A	A	A	B	B		
Potass. Coppercyanide	A	A	A	A	A	A	A	A					
Potassium Cyanide	A	A	A	A	A	A	B	A	A	B	B	A	
Potassium Dichromate	A	A	A	A	A	A	A	A	A	A	B	A	
Potassium Ferricyanide	A	A	A	A	A	A	A	A	A		A		
Potassium Ferrocyanide	A	A	A	A	A	A	A	A	C		A		
Potassium Fluoride	A	A	A	A	A	A	A	A	A				
Potassium Hydroxide	A	A	A	A	A	A	C	B	C	C	A	C	
Potassium Hydroxide 25%					A								
Potassium Hydroxide 50%	A	A	A	B	A								
Potassium Hypochlorite	A	A	A	A	A	A	A	A	X		X		
Potassium Iodide	A	A	A	A	A	A	A	A	A		A		
Potassium Nitrate	A	A	A	A	A	A	B	A	A	B	B	A	
Potassium Perborate	A	A	A	A	A	A							
Potassium Perchlorate	A	A	A		A	A		A					
Potassium Permangan.	A	A	B	A	A	A	B	A	C	B	B	B	
Potassium Persulfate	A	A	A	A	A	A		A					
Potassium Phosphate									A				
Potassium Salts			A	A		A	A	A					
Potassium Sulfate	A	A	A	A	A	A	A	A	A	B	B	A	
Potassium Sulfide	A				A	A	A	A	A		B		
Potassium Thiosulfate						A	A		A				
Propane	A	A	B	A	A	A	A	X	A	A	A		
Propanol						A	A	A	A		A		
Propargyl Alcohol	A	A	A	A	A								

Chemicals

	Ultem (GF-40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fiberloc)	Teflon	Viton	EPDM	Nitrile (Buna IV)	316 SS	416 SS	Titanium
Propyl Acetate					A		A	X	B	X			
Propyl Alcohol		A	A	A	A	A	A	A	A	A		A	
Propylene							A	A	X	X			
Propylene Dichloride		X	X	C	A	X	A	B	X	X			
Propylene Glycol	A		C				A	A	A	A	A		
Pyridine	X	X	X	C	C	X	B	X	C	X	C	B	
Pyrogallic Acid		B			X	C	A	A		A	A	B	
Quaternary Amm. Salts													
Rayon Coagulating Bath	A	A	A	A	A								
Rhodan Salts	A	A	A	A	A	A	A	A					
Rosins				A			A	A		A	A	B	
Rum	A		A			A	A	B	A	A			
Rust Inhibitors				A				A		A	A		
Salad Dressings	A		A		A		A		A	A			
Salicylaldehyde	X	X			C	X	A	A	A				
Salicylic Acid	A	A			A	A	A	A	A	C		B	
Saline Solutions	A	A	A	A	A								
Salt Brine	A	A	A	A	A	A	A	A	A				
Sea Water	A	A	A	A	A	A	A	A	A	A	C	C	A
Selenic Acid	A	A	A	A	A								
Sewage	A	A	A	A	A	A	A	A	A				
Shellac Bleached				A			A			A	A	A	
Shellac Orange				A						A			
Silicic Acid	A	A	A	A	A	A	A	A					
Silicone Oil	A	A	A			A	A	A	A	A			
Silver Bromide											C	X	
Silver Cyanide	A	A	A	A	A	A	A	A			A		
Silver Nitrate	A	A	A	A	A	A	A	C	C	B	B	A	
Silver Salts	A		A	A	A	A	A			A			
Silver Sulfate	A	A	A	A	A	A	A	A	C				A
Soap Solutions	A	A	A	A	A	A	A	A	A	A	A	A	A
Soda Ash							A	A	A	A			
Sodium	A	A	A	A	A	A	A	A					
Sodium Acetate	A	A	A	A	A	A	C	A	C	B	B	A	
Sodium Alum	A	A	A	A	A	A	A	A					
Sodium Aluminate							A	A	A	A	C	B	
Sodium Benzoate	A	A	A	A	A	A							
Sodium Bicarbonate	A	A	A	A	A	A	A	A	A	A	A	A	A
Sodium Bichromate	A	A	A	A	A	A	A	A			B		
Sodium Bisulfate	A	A	A	A	A	A	A	A	B	A	A	A	
Sodium Bisulfite	A	A	A	A	A	A	A	A	A	A	C	A	

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.



HAYWARD®

Chemicals	Ultem (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fibertec)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Sodium Borate	C	A	A	A	C	A	A	A	A	A	A	A	
Sodium Bromate													
Sodium Bromide	A	A	A	A	A	A	A	A				C	
Sodium Carbonate	A	A	A	A	A	A	A	A	A	A	A	A	
Sodium Chlorate	A	A	A	A	A	A	A	A	C	B	B	A	
Sodium Chloride	A	A	A	A	A	A	A	A	A	C	B	A	
Sodium Chlorite	X	X	X		X	B	X	X					
Sodium Chromate				A		A	B		A	A	B		
Sodium Cyanide	A	A	A	A	A	A	A	A	A	A	A	A	
Sodium Dichromate	A	A	A	A	A	A	A						
Sodium Ferricyanide	A	A	A	A	A	A	A				B		
Sodium Ferrocyanide	A	A	A	A	A	A	A						
Sodium Fluoride	A	A	A	A	A	A	B	A	C		C	A	
Sodium Hydrosulfide													
Sodium Hydrosulfite	C					A	A						
Sod. Hydroxide 15%	A	A	A	A	A	A	C	A	A	B	B	A	
Sodium Hydroxide 20%	A	A	A	A	A	A	C	A	A	B	B	A	
Sodium Hydroxide 30%	A	A	A	A	A	A	C	A		B	B		
Sodium Hydroxide 50%	A	A	A	A	A	A	C	A	X	B	C	A	
Sodium Hydroxide 70%	A	A	B	B	A	A	X	A	X		X	A	
Sod. Hydroxide Conc	A	A	A	A	A	A	B	A	X		C		
Sod. Hypochlorite 20%	A	A	B	A	A	A	A	B	C	C		A	
Sodium Hypochlorite	A	A	A	B	A	A	A	X	X	X			
Sodium Hyposulfate						A				A			
Sodium Metaphosphate	A	A	C	A	A	A	A	A	A				
Sodium Metasilicate	A	A	A	A	A	A	A	A	A	A	A		
Sodium Nitrate	A	A	A	A	A	A	B	A	C	B	B	A	
Sodium Nitrite	A	A	A	A	A	A	A			B			
Sodium Palmitate	A	A	A	A	A	A							
Sodium Perborate	A	A	A	A	A	A	A	A	C	C	B		
Sodium Perchlorate	A	A	A	A	A	A							
Sodium Peroxide	A	A	A	A	A	A	A	B	C	A	A		
Sodium Phosphate Ac	A	A	A	A	A	A	A	A					
Sodium Phosph. Alkal	A	A	A	A	A	A	A	A					
Sodium Phosph. Neutr	A	A	A	A	A	A	A	A					
Sodium Polyphosph						A	A	A	B	A		A	
Sodium Silicate	A	A	A	A	A		A	A	A	B	B	A	
Sodium Sulfate	A	A	A	A	A	A	A	A	A	B	B	A	
Sodium Sulfide	A	A	A	A	A	A	A	A	C	B	X	A	
Sodium Sulfite	A	A	A	A	A	A	A	A	A	C	B	A	
Sodium Tetraborate	A						A		A	A	A		

Chemicals	Ultem (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fibertec)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Sodium Thiocyanate	A	A	A	A	A	A	A	A					
Sodium Thiosulfate	A	A	A	A	A	A	A	A	B	A	A		
Sorghum							A		A	A			
Soy Sauce							A		A	A			
Soybean Oil	A	A	A	A	A	A	A	A					
Stannic Chloride	A	A	A	A	A	A	A	A	A	A	X	A	
Stannic Salts	A		A	A	A	A	A						
Stannous Chloride	A	A	A	A	A	A	B	B	C	C	C	A	
Starch	A	A	A		A	A	A	A	A	A			
Stearic Acid	A	A	B	A	A	A	A	C	B	B	B	A	
Stoddard Solvent	X	X	C	A	X	A	A	X	B	A		A	
Strontium Carbonate													
Styrene				A		A	C	X	X	A			
Succinic Acid	A	A	A	A	A	A	A	A					
Sugar Solutions				A		A	A		A	A	A		
Sulfamic Acid	X	X	X	X	X								
Sulfate Liquors	A	A	A	A	A		A	A	A	C	A		
Sulfated Detergents	A	A	A	A	A								
Sulfur 10%	A				A	A	A	X	C	C		A	
Sulfur Dioxide	X		X		C	A	C	A	X	A		A	
Sulfite Liquor	A	A	A	A	A	A	A	A	B		X		
Sulfur	A	A	X	A	A	A	A	C	C		A		
Sulfur Chloride	A	A	C	A	A	A	A	X	X	X	C		
Sulfur Dioxide Dry	A	A	A	A	A	A	A	A	X	B	B		
Sulfur Dioxide Wet	X	A	A	A	X	A	A	A	X		B		
Sulfur Slurries	A	A	A	A	A								
Sulfur Trioxide Dry	C	C	X	X	C	B	C	C	C	C	B		
Sulfuric Acid 10%	A	A	A	A	A	A	A	B	C	C	X	A	
Sulfuric Acid 30%	A	A	A	A	A	A	A	A	C	X	X	C	
Sulfuric Acid 50%	A	A	A	A	A	A	A	B	C	X	X	C	
Sulfuric Acid 60%	A	A	A	B	A	A	A	B	X	X	X	C	
Sulfuric Acid 70%	A	A	C	A	A	A	A	A	C	X	X	C	
Sulfuric Acid 80%	X	A	A	A	X	A	A	A	C	X	X	X	
Sulfuric Acid 90%	X	A	C	A	X	A	A	A	C	X	X	X	
Sulfuric Acid 95%	X	X	C	X	A	X	A	A	X	X	X	X	
Sulfuric Acid 98%	X	X	X	A	X	B	X	X		X	X		
Sulfuric Acid 100%	X	X	X	C	X	B	C	X	X	C	C	X	
Sulfurous Acid	A	A	A	A	A	A	A	C	X	B	C	A	
Sulfuryl Chloride	A					A							
Syrup	A				A	A			A	A			
Tall Oil	A	A	A	A	A	A	A	X	A		X		

A = Excellent, no effect • B = Good, minor effect • C = Fair, data not conclusive, testing recommended • X = Not recommended. Ratings are based on testing at an ambient temperature of 70 F. Customer should test to determine application suitability.

Chemicals

	UHMW (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fibercoc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Tallow				A	A	A	A	A	A	A			
Tannic Acid		A	A	A	A	A	A	B	C	C	B	A	
Tanning Liquors		A	A	A	A	A	A	B	C	A		A	
Tar		X	X	B	A	X	A	X	C		B		
Tartaric Acid		A	A	A	A	A	A	B	C	B	B	A	
Tertiary Butyl Alcohol		A	A	A	A	A	A	B					
Tetrachlorethane		X		A		X	A	X	X	A		A	
Tetrochloroethane					A	X	A	X					
Tetraethyl Lead		B	A	A	A	C	A	B	X	C			
Tetrahydrofuron	X	X	X	B	B	X	A	X	X	X	A		
Tetralin		X	X	X	A	X	A	X	X				
Thionyl Chloride		X	X	X	X	X	A						
Thread Cutting Oils		A	A	A	A	A		X					
Titanium Tetrachloride		X	X	X	X	X	A	X	C				
Titanous Sulfate		A	A	A	A	A	A						
Toluene	C	X	X	C	A	X	A	B	X		A	A	
Toluene Toluol		X	X	C	B	X	A	C	X	X	A	A	A
Tomato Juice		A	A	C	A	A	A		A	A	A	C	
Toxaphene-Xylene		X	X	X	A	X							
Transformer Oil		A	A	A	A	A	A	X	A				
Tributyl Phosphate		X	X	C	A	X	A	X	A	X			
Trichloroacetic Acid		A	A	C	A	A	A	X	X	X	X	X	
Trichloroethane	X					X	A	A	X	X	A		A
Trichloroethylene	X	X	X	B	A	X	A	A	X	C	A	A	B
Trichloropropane						X	A	A		A	A	A	
Tricresyl Phosphate		X				X	A	B	A	X	A		B
Triethanolamine		B		C	C	C		X	A				
Triethyl Phosphate	C	A	A	A	A	A	A	A	A		A		
Triethylamine	A	A	A	X	C	A		A		A			
Trimethylpropane		A	A	A	A	A	A						
Trisodium Phosphate		A	A	A	A	A	A	A	A	A	A	B	
Turbine Oil		A	A	B		A	A	A	X	B			
Turpentine	A	X	A	B	A		A	A	C	C	A	B	
Urea	A	A	A	A	A	A	A	A	A	C			
Urine		A	A	A	A	A	A	A	A	A			

Chemicals

	UHMW (GF 40%)	PVC	CPVC	PPL	PVDF	PVCGF (Fibercoc)	Teflon	Viton	EPDM	Nitrile (Buna N)	316 SS	416 SS	Titanium
Vanilla Extract				A	A	A							
Varnish				A	A		A	A	X	B	A	A	
Vaseline		X	A	A	A	X	A	A	X	A			
Vegetable Oil		A	C	A	A	A	A	A	A	A	A		
Vinegar	A	A	A	A	A	A	A	A	A	C	A	A	A
Vinyl Acetate	X	X	X		A	X	A	X	B	X			
Vinyl Chloride							A	A	C	X		A	
Vinyl Ether							A	X		B			
Water Acid Mine		A	A	A	A	A	A	A	A	A	A	C	
Water Deionized		A	A	A	A	A	A	B	A	A	A		
Water Demineralized		A	A	A	A	A		A	A	A			
Water Distilled		A	A	A	A	A	A	A	A	A	A	A	A
Water Potable		A	A	A	A	A	A	A	A	A	A	A	A
Water Salt		A	A	A	A	A	A	A	A	A	A	C	
Water Sewage		A	A	A	A	A	A	A	A	A			
Weed Killers								A		B	A		
Whey									A	A	A		
Whiskey		A	A	A	A	A	A	A	A	A	A		
White Acid					A	A							
White Liquor		A	A	A	A	A	A	A	A	B	A		
Wines		A	A	A	A	A	A	A	A	A	A	C	
Xenon							A	A	A	A			
Xylene	X	X	X	X	A	X	A	B	X	X	A		
Xylo		X	X	X	A	X	A	A	X	C			
Yeast					A	A		A	A	A			
Zeolite							A	A	A	B			
Zinc Acetate		A	A	A	A	A	A	C	A	B			
Zinc Carbonate							A	A		A		B	
Zinc Chloride	A	A	A	A	A	A	A	A	A	A	B	C	A
Zinc Chromate							A						
Zinc Nitrate		A	A	A	A	A	A	A	A				
Zinc Phosphate													
Zinc Salts					A	A	A	A	A	A			
Zinc Sulfate		A	A	A	A	A	A	A	A	A	A	A	A
Zirillite							A	C	A	B			



HAYWARD®

Hayward Industrial Products, Inc.

One Hayward Industrial Drive, Clemmons, NC 27012
 Tel: 1-888-429-4635 (1-888-HAYINDL) • Fax: 336-712-9935
 E-mail: industrial@haywardnet.com
 Web Site: <http://www.haywardindustrial.com>

Hayward Industrial Products Canada Inc.

2880 Plymouth Drive, Oakville, Ontario L6H 5R4
 Tel: 905 829-2880 • Fax: 905 829-3636

Hayward Industrial Products (UK) Ltd.

Unit 2, Crownsgate, Wyncolls Road
 Colchester, Essex CO4 4HT
 Tel: 441-206-854454 • Fax: 441-206-851240