

Chemline

Your Pipeline To Quality

Chemical Resistance Guide



 **CHEMLINE**
Plastics Limited


CHEMLINE
Established in 1968

Materials of Construction

Thermoplastics

PVC (Polyvinyl Chloride)

The most economical and largest selection of Checline valves are moulded from PVC. It offers excellent mechanical and chemical resistance properties at low cost. The working temperature range of PVC valves is **0 to 60°C (30 to 140°F)**.

PVC used for Checline valves is identified by cell classification number **11564-A** as per ASTM Standard D 1784. The suffix "A" refers to the highest chemical resistance rating. Most other PVC valves as well as pipe and fittings have only a "B" chemical resistance rating.

The special PVC "A" compound used in Checline valves resists attack of most acids, strong alkalais, salts and many other chemicals. High chemical resistance of this material allows its application on aggressive services such as 98% H₂SO₄, dry chlorine and low pressure wet chlorine gas. PVC is attacked by chlorinated hydrocarbons, ketones, esters and some aromatic compounds. It can be used on solutions containing up to 1000 ppm solvents.

Checline PVC valves are non-toxic. They meet CSA standard B137.0 for toxicity.

They are resistant to damaging effects of sunlight and weathering, thus painting is not necessary.

CPVC (Chlorinated Polyvinyl Chloride)

CPVC is very similar to PVC in mechanical properties and chemical resistance. It is suitable for applications from **0 to 95°C (30 to 200°F)**.

The special CPVC compound used for Checline valves is classified as **23567-A** as per ASTM D 1784. The suffix "A" denotes conformance to the highest chemical resistance rating. The compound is non-toxic, conforming to CSA toxicity standard B137.0.

CPVC valves have proven to be an excellent choice for applications at temperatures too high for PVC or when an extra margin of safety is required.

PP (Polypropylene)

PP is light weight and high in chemical resistance. Valves are suitable for service from **-20 to 90°C (-5° to 195°F)**. PP is unaffected by alkalais, salts, organic solvents and most acids, particularly hydrochloric and phosphoric acid. It is unsuitable on strong acids, chlorinated hydrocarbons, aromatic compounds and high concentrations of free chlorine.

PP is very inert thus popular for high purity applications such as deionized water, etc. The material comes normally opaqued by addition of grey-beige pigment to prevent ultraviolet light penetration. Natural translucent material without pigment will degrade if exposed to UV light (sun light). Checline offers PP pipe, fittings and valves in pigmented and unpigmented PP, both approved by the FDA for contact with food.

PVDF (Polyvinylidene Fluoride)

PVDF is superior to other valve thermoplastics in chemical resistance and abrasion resistance. It has remarkable strength over the largest working temperature range.

The working temperature range of PVDF valves is **-40 to 120°C (-40 to 250°F)**.

PVDF's impact strength is over twice that of PVC. The valves are extremely durable under mechanical abuse even at -40°F. They also offer the highest abrasion resistance of thermoplastic valves.

PVDF has excellent chemical resistance against halogens such as chlorine and bromine, strong acids such as hydrofluoric and nitric acids, organic solvents and oils. PVDF is not resistant to hot bases.

It is also non toxic and imparts no odours or tastes into the fluid. Our PVDF conforms with USDA Title 21, P121.2593 requirements for contact with food.

Gas permeability of PVDF is extremely low. A patented PVDF gas permeability barrier is available on Type 14 and DV Series Diaphragm Valves. It is a backing to the Teflon® diaphragm and has proven to increase the life of diaphragm valves on chlorine and strong acid services.

Teflon® PTFE (Polytetrafluoroethylene)

PTFE is almost totally insoluble and chemically inert. It has high temperature resistance. Teflon® PTFE ball seats, because of natural lubricity, require no lubrication. Teflon® PTFE diaphragms and flange gaskets are used in the most severe chemical resistance applications.

Elastomers

EPDM (Ethylene Propylene Terpolymer)

EPDM is a synthetic rubber used as the standard seal material for most Checline valves. It is the most economical choice of elastomer and has excellent chemical resistance on the great majority of applications including acids, alkalais, salts and many others at temperatures up to 90°C. EPDM is weak on organic compounds and cannot be used on oils and fats.

Checline valves seals of EPDM meet CSA standard B137.0 for non-toxicity.

Viton® (Fluorocarbon Rubber, abv. FPM)

Viton® is more expensive than EPDM so is used as an alternate elastomer when required. It has excellent resistance to mineral acids, oils and many aliphatic and aromatic hydrocarbons. Viton® is weak on sodium hydroxide.

CPE (Chlorinated Polyethylene)

CPE is superior to all other elastomers on sodium hypochlorite. It resists hypochlorite up to full strength (13%). Ball valves supplied with CPE seals are very price competitive on this service.

NITRILE (Acrylonitrile-Butadiene Copolymer, abv. NBR)

Nitrile is also known as Buna-N. It has high chemical resistance to oil and petroleums but is weak on oxidizing media i.e. acids. Nitrile has excellent abrasion resistance and is less expensive than Viton® for butterfly valve seats.

Chemical Resistance

Codes

- (A) Excellent = Recommended
- (B) Good = Recommended
- (C) Fair (limited life)
- (X) Not Recommended

Corrosion resistance data given in this publication are based on laboratory tests conducted by the manufacturers of the materials covered and are indicative only of the conditions under which the tests were made. The information may be considered as a basis for recommendation but not as a guarantee. Materials should be tested in actual service to determine suitability for a particular purpose.

Consult Chemline for ratings on other materials not shown in this book such as **Hypalon** or **Neoprene** seals, or **Polyamide** or **Polysulfone** flow meter tubes.

Chemical	Concentration (%)	Temp.									
		°C	°F	PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE
Acetic Acid CH ₃ COOH	80	20	68	A	B	A	A	A	A	X	C
		40	104	B	C	A	A	A			X
		60	140	C	X	C	B	A			
		80	176				C	A			
		100	212					A			
		120	248					A			
Acetic Acid (Glacial) CH ₃ COOH	99	20	68	X	X	A	A	A	A	X	X
		40	104			B	A	A			
		60	140			C	B	A			
		80	176					A			
		100	212					A			
		120	248					A			
Acetic Anhydride (CH ₃ CO) ₂ O	Pure	20	68	X	X	B	B	A	X	C	X
		40	104			C	C	A			
		60	140			X	X	A			
		80	176					A			
		100	212					A			
		120	248					A			
Acetone CH ₃ COCH ₃	Pure	20	68	X	X	A	X	A	X	A	X
		40	104			A		A			B
		60	140			C		A			
		80	176					A			
		100	212					A			
		120	248					A			
Acetone (Aqueous) CH ₃ COCH ₃	10 ppm	20	68	A	A	A	A	A	A	A	B
		40	104	A	A	A	A	A	A	B	A
		60	140	B	B	A	A	A	A	A	
		80	176			A	B	A			B
		100	212					B	A		
		120	248					B	A		
Acetaldehyde CH ₃ CHO	Pure	20	68	X	X	A	X	A	C	A	C
		40	104			A		A	B	A	
		60	140			B		A	X	B	
		80	176					A			
		100	212					A			
		120	248					A			
Acetaldehyde (Aqueous) CH ₃ CHO	40	20	68	X	X	A	X	A	B	A	X
		40	104			A		A	B	A	A
		60	140			A		C	A	A	
		80	176			B		X	B		B
		100	212					A			
		120	248					A			
Acetamide CH ₃ CONH ₂	Satu	20	68			A		A	A	A	
		40	104					A	A	A	
		60	140					A			
		80	176					A			
		100	212					A			
		120	248					A			
Acetic Acid CH ₃ COOH	10	20	68	A	A	A	A	A	B	A	
		40	104	A	A	A	A	A	B	A	
		60	140	A	A	A	A	A	C	B	
		80	176	A	A	A	A	A	X		
		100	212					A	A		
		120	248					B	A		
Acetic Acid CH ₃ COOH	20	20	68	A	A	A	A	A	B	A	X
		40	104	A	A	A	A	A	C	A	X
		60	140	A	B	A	A	A	C	B	
		80	176	C	B	B	A	X			
		100	212					B	A		
		120	248					B	A		
Acetic Acid CH ₃ COOH	50	20	68	A	A	A	A	A	C	B	
		40	104	A	B	A	A	A	X		
		60	140	B	C	A	A	A			
		80	176	X		B	A				
		100	212					B	A		
		120	248					A			
Acetyl Acetone CH ₃ COCH ₂ COCH ₃		20	68					X	A		
		40	104						A		
		60	140						A		
		80	176						A		
		100	212						A		
		120	248						A		
Acetyl Bromide CH ₃ COBr		20	68						A	A	
		40	104						A	A	
		60	140						A	A	
		80	176						B	A	
		100	212						A		
		120	248						A		
Acetyl Chloride CH ₃ COCl		20	68						A	A	X
		40	104						A	B	A
		60	140						C	C	A
		80	176						X	X	A
		100	212						A		
		120	248						A		
Acetylene C ₂ H ₂		20	68	A	X	A	A	A	A	C	A
		40	104	A	A	A	A	A	A	C	A
		60	140	A	A	A	A	A	A	A	X
		80	176	B	A	A	A	A	A	A	B
		100	212						A	B	
		120	248						B		

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Acrylonitrile $\text{CH}_2=\text{CHCN}$		20	68	X	X	B	A	A	X	A	X	Aluminum Nitrate $\text{Al}(\text{NO}_3)_3$	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104			C	B	A		A				40	104	A	A	A	A	A	A	A	A	
		60	140				C	A			B			60	140	A	A	A	A	A	A	A	A	
		80	176				X	A						80	176		A	A	A	A	A	A	B	
		100	212					A						100	212			A	A	A	A			
		120	248					A						120	248			A	A	A	A			
Adipic Acid $\text{HOOCC(CH}_2\text{)}_4\text{-COOH}$	Satu	20	68	A	A	A	A	A	A	A	A	Aluminum Sulfate $\text{Al}_2(\text{SO}_4)_3$	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176		B	B	A	A	A	A	B			80	176		A	A	A	A	A	A		
		100	212				A	A	B					100	212			A	A	A	A			
		120	248				A	A						120	248			A	A	A	A			
Allyl Alcohol $\text{CH}_2=\text{CHCH}_2\text{OH}$		20	68	A		A	A	A	A		A	Amber Acid (Succinic Acid) $\text{CH}_2=\text{COOH}$ $\text{CH}_2=\text{COOH}$	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104			A	A	A	A		B			40	104	A	A	A	A	A	A	A	A	
		60	140		B	A	A	A			B			60	140	A	A	A	A	A	A	A	A	
		80	176			A	A	B						80	176		B	B	A	A	A	A	A	
		100	212				A							100	212			A	A	A	A			
		120	248				B							120	248			A	A	A	A			
Allyl Chloride $\text{CH}_2=\text{CHCH}_2\text{Cl}$		20	68	X		A	A	B	X	B		Aminoacetic Acid $\text{NH}_2\text{CH}_2\text{COOH}$	10	20	68	A		A	A	A	B	A	A	A
		40	104			C	A	B		C				40	104	A		A	A	A	A			
		60	140			X	A	C		X				60	140			A	A					
		80	176			A								80	176			A	A					
		100	212			A								100	212			A						
		120	248			A								120	248			A						
Alum (Potassium alum) $\text{K}_2\text{SO}_4\text{Al}_2(\text{SO}_4)_3$	Satu	20	68	A	A	A	A	A	A	A	A	Ammonia Gas NH_3	100	20	68	A	C	A	A	A	X	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	C	A	A	A	A			
		60	140	A	A	A	A	A	A	A	A			60	140	A	X	B	A	A	A	B		
		80	176	A	A	A	A	A	A	B	B			80	176	X	B	A	A	B				
		100	212			A	A	A						100	212			B	A					
		120	248			A	A							120	248			B	A					
Aluminum Acetate $\text{Al}(\text{CH}_3\text{CO}_2)_3$	Satu	20	68	A	A	A	A	A	A	A	A	Ammonia Solution (Ammonium Hydroxide) NH_4OH	*10	20	68	A	C	A	A	A	B	A	A	
		40	104	B	B	A	A	A	B	A				40	104	A	C	A	A	C	A	B		
		60	140			A	A	A						60	140	A	X	A	A	X	A	B		
		80	176			A	A	A						80	176	X	B	A	A	A	A			
		100	212			A	A	A						100	212			A	A	A	A			
		120	248			A	A							120	248			B	A					
Aluminum Ammonium Sulfate (Ammonium Alum) $(\text{NH}_4)_2\text{Al}(\text{SO}_4)_2$	Satu	20	68			A	A	A	A	A	A	Ammonium Acetate $\text{NH}_4\text{CH}_3\text{CO}_2$	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104			A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140			A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176			A	A	A	A	A	B			80	176	B	B	A	A	B	B	B		
		100	212				A	A	A					100	212			A	A	B				
		120	248				A	A						120	248			B	A					
Aluminum Bromide Al Br_3	Satu	20	68	A	A	A	A	A	A	A	A	Ammonium Bicarbonate NH_4HCO_3		20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	A	A			80	176		A	A	A	A	A	A		
		100	212			A	A	A						100	212			A	A	A	A			
		120	248			A	A							120	248			A	A					
Aluminum Chloride Al Cl_3	Satu	20	68	A	A	A	A	A	A	A	A	Ammonium Carbonate $(\text{NH}_4)_2\text{CO}_3$	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	B	B	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176	B	A	A	A	A	A	A	A			80	176	A	A	A	A	A	A	A	A	
		100	212			A	A	A						100	212			A	A	A	A			
		120	248			A	A							120	248			A	A					
Aluminum Fluoride Al F_3	Satu	20	68	A	A	A	A	A	A	A	A	Ammonium Chloride NH_4Cl	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	A	A			80	176	B	B	A	A	A	A	A	B	
		100	212			A	A	A						100	212			A	A	A	A			
		120	248			A	A							120	248			A	A					
Aluminum Hydroxide Al(OH)_3	Satu	20	68	A	A	A	A	A	A	A	A	Ammonium Fluoride NH_4F	20	20	68	A		A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A		A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140		A	A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	B	B			80	176		B	A	A	A	A	A		
		100	212			A	A	B						100	212			A	A	A	A			
		120	248			A	A							120	248			A	A					

*30% Ammonia solution at 50°C, PVC & EPDM recommended.

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE
		°C	°F												°C	°F							
Ammonium Hydrogen-fluoride $\text{NH}_4\text{F}\cdot\text{HF}$	Satu	20	68	A	A	A	A	A	A	A	A	Amyl Acetate $\text{CH}_3\text{COOC}_5\text{H}_{11}$	Pure	20	68	X	X	X	A	A	X	B	X
		40	104	A	A	A	A	A	A	A	A			40	104			A	A		C		
		60	140	A	A	A	A	A	A	A	A			60	140			B	A				
		80	176		A	A	A	A	B	B	B			80	176			B	A				
		100	212			A	A	B						100	212			C	A				
		120	248				A	A						120	248								
Ammonium Hydroxide (Ammonium Solution) NH_4OH	10	20	68	A	C	A	A	A	B	A	A	Amyl Alcohol $\text{CH}_3(\text{CH}_2)_3\text{CH}_2\text{OH}$	Pure	20	68	A	A	A	A	A	A	A	A
		40	104	A	C	A	A	A	C	A	B			40	104	A	A	A	A	A	A	A	A
		60	140	A	X	A	A	A	X	A	B			60	140	A	A	A	A	B	A	A	A
		80	176		X	B	A	A						80	176			B	B	A	A	B	A
		100	212				A	A						100	212				A	A			
		120	248				B	A						120	248				A	A			
Ammonium Hydroxide (Ammonium Solution) NH_4OH	40	20	68	A	X	A	A	A	B	A	B	Amyl Borate $(\text{C}_5\text{H}_{11})_3\text{BO}_3$	Pure	20	68	X	X	X	A	A	A	B	A
		40	104	A	X	A	A	A	C	A	X			40	104			A	A				
		60	140	B	X	A	A	A	X	A				60	140			A	A				
		80	176		X	B	B	A						80	176			A	A				
		100	212				B	A						100	212			A	A				
		120	248				B	A						120	248			A	A				
Ammonium Metaphosphate NH_4PO_3		20	68	A	A	A	A	A	A	A	A	Amyl Chloride $\text{CH}_3(\text{CH}_2)_3\text{CH}_2\text{Cl}$	Pure	20	68	X	X	X	A	A	B	X	B
		40	104	A	A	A	A	A	A	A	B			40	104			A	A				
		60	140	A	A	A	A	A	A	A	B			60	140			A	A				
		80	176		A	A	A	A	A	A	A			80	176			A	A				
		100	212				A	A						100	212			A	A				
		120	248				A	A						120	248			A	A				
Ammonium Nitrate NH_4NO_3		20	68	A	B	A	A	A	A	A	A	Aniline $\text{C}_6\text{H}_5\text{NH}_2$	Pure	20	68	C	C	B	A	A	A	A	X
		40	104	A	B	A	A	A	A	A	A			40	104	X	X	B	B	A	B	C	
		60	140	B	B	A	A	A	A	A	A			60	140			C	B	A	B	X	
		80	176		A	A	A	A	A	A	A			80	176			X	C	A			
		100	212				A	A						100	212				X	A			
		120	248				A	A						120	248				A				
Ammonium Perchlorate NH_4ClO_4	10	20	68	A		A		A				Aniline Hydrochloride $\text{C}_6\text{H}_5\text{NH}_2 \cdot \text{HCl}$	Pure	20	68	B			A	A	A		
		40	104	A		A		A						40	104	B			A	A	A		
		60	140	A		A		A						60	140	C			B	A	A		
		80	176				A							80	176			X	A				
		100	212				A	A						100	212								
		120	248				A	A						120	248								
Ammonium Persulfate $(\text{NH}_4)_2\text{S}_2\text{O}_8$		20	68	A		A	A	A	A	A	A	Animal Oil (Lard)		20	68	A	A	A	A	A	A	A	A
		40	104	A		A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A
		60	140		B	A	A	A	A					60	140	A	A	A	A	A	A	A	A
		80	176				A							80	176	A	A	A	A				
		100	212				A	A						100	212			A	A				
		120	248				A	A						120	248			A	A				
Ammonium Phosphate $(\text{NH}_4)_3\text{PO}_4$		20	68	A	A	A	A	A	A	A	A	Antimony Trichloride SbCl_3	Satu	20	68	A		X	A	A	A	A	B
		40	104	A	A	A	A	A	A	A	A			40	104	A		A	A	A			
		60	140	A	A	A	A	A	A	A	B			60	140	B		B	A				
		80	176		A	A	A	A	A	A	A			80	176			B	B	B			
		100	212				A	A						100	212				B				
		120	248				A	A						120	248				B				
Ammonium Sulfate $(\text{NH}_4)_2\text{SO}_4$	Satu	20	68	A	A	A	A	A	A	A	A	Antimony Trioxide Sb_2O_3		20	68	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A			40	104			A	A				
		60	140	A	A	A	A	A	A	A	A			60	140			A	A				
		80	176		A	A	A	A	A	A	A			80	176			A	A				
		100	212				A	A						100	212			A	A				
		120	248				A	A						120	248			A	A				
Ammonium Sulfide $(\text{NH}_4)_2\text{S}$	Satu	20	68	A	A	A	A	A	X	A	X	Aqua Regia HNO_3+3HCl		20	68	C	C	C	A	A	B	A	X
		40	104	A		A	A	A	A					40	104	C	C	C	A	A	B		
		60	140	B		A	A	A	A					60	140			X	A	A	C		
		80	176		A	A	A	A						80	176			A	A				
		100	212				A	A						100	212			B	A				
		120	248				A	A						120	248			C	B				
Ammonium Sulfite $(\text{NH}_4)_2\text{SO}_3$		20	68	A		A	A	A	A	A	A	Arsenic Acid H_3AsO_4	Satu	20	68	A	A	A	A	A	A	A	A
		40	104	A		A	A	A	A	B				40	104	B	B	A	A	A	A	A	A
		60	140				A	A						60	140	C	B	B	A	A	B	B	B
		80	176				A	A						80	176	C	C	A	A	B	B	B	B
		100	212				A							100	212			A	A	B			
		120	248				A							120	248			A	A				

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Asphalt		20	68	X	X	A	A	A	A	X	B	Benzene Sulfonic Acid <chem>C6H5SO3H</chem>	10	20	68	A				A	A	A	A	X
		40	104			A	A	A	A		B			40	104			B	A	A				
		60	140			A	A	A	A					60	140			C	A	A				
		80	176			A	A	A	A					80	176			X	A					
		100	212			A	A							100	212					A				
		120	248			A	A							120	248					B				
Barium Carbonate <chem>BaCO3</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Benzine	Pure	20	68			A	A	A	A	X	A	
		40	104	A	A	A	A	A	A	A	A			40	104			B	A	A	A		A	
		60	140	A	A	A	A	A	A	A	A			60	140			C	B	A	A		B	
		80	176			A	A	A	A	A	B			80	176					A	B			
		100	212					A	A	A				100	212					A				
		120	248			A	A	A						120	248									
Barium Chloride <chem>BaCl2</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Benzoic Acid <chem>C6H5COOH</chem>	Pure	20	68	A	A	A	A	A	A	A	B	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	B	B	
		60	140	A	A	A	A	A	A	A	A			60	140	B	B		A	A	A	B	B	
		80	176			A	A	A	A	A	B			80	176	C		A	A	A				
		100	212					A	A	A				100	212			A	A	B				
		120	248			A	A	A						120	248			B						
Barium Hydroxide <chem>Ba(OH)2</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Benzoyl Chloride <chem>C6H5COCl</chem>		20	68	X	X	A	A	A	X	X	X	
		40	104	A	A	A	A	A	A	A	A			40	104			A	A					
		60	140	A	A	A	A	A	A	A	A			60	140			B	A					
		80	176			B	A	B	A	A	B			80	176				A					
		100	212					A	A	A				100	212									
		120	248			A	A	A						120	248									
Barium Nitrate <chem>Ba(NO3)2</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Benzyl Alcohol <chem>C6H5CH2OH</chem>	Pure	20	68			A	A	A	A	A	X	
		40	104	A	A	A	A	A	A	A	A			40	104			A	A	A	A	B		
		60	140	A	A	A	A	A	A	A	A			60	140			A	A	A	A	C		
		80	176			A	A	A	A	A	B			80	176			A	A	B				
		100	212					A	A	A				100	212			A	A	B				
		120	248			A	A	A						120	248			A	A					
Barium Sulfate <chem>BaSO4</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Benzyl Benzoate <chem>C6H5COOCH2-C6H5</chem>	Satu	20	68			A	A				B	X
		40	104	A	A	A	A	A	A	A	A			40	104			B	A					
		60	140	A	A	A	A	A	A	A	A			60	140			B	A					
		80	176			A	A	A	A	A	B			80	176									
		100	212					A	A	A				100	212									
		120	248			A	A	A						120	248									
Barium Sulfide <chem>BaS</chem>	Satu	20	68	A	A	A	A	A	A	A	B	Benzyl Chloride <chem>C6H5CH2Cl</chem>	Pure	20	68			A	A	A	C	B	X	
		40	104	A	A	A	A	A	A	A	B			40	104			A	A					
		60	140	A	A	A	A	A	A	A	A			60	140			A	A					
		80	176			A	A	A	A	A				80	176			A	A					
		100	212					A	A	A				100	212									
		120	248			A	A	A						120	248									
Beer		20	68	A	A	A	A	A	A	A	B	Black Liquor	Satu	20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	B			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	B			60	140	B	A	A	A	A	A	A	A	
		80	176			A	A	A	A	A	B			80	176	B	B	A	A	A	A	A	B	
		100	212					A	A	A				100	212			A	A	A	A			
		120	248			A	A	A						120	248			B						
Beet Sugar Liquors		20	68	A	A	A	A	A	A	A	A	Bleaching Agent <chem>Ca(ClO)2CaCl2-2H2O</chem>	5	20	68	A	A			A	A	A	A	C
		40	104	A	A	A	A	A	A	A	A			40	104	A	A		A	A	A	A		
		60	140	A	A	A	A	A	A	A	A			60	140	A	A		A	A				
		80	176			A	A	A	A	A				80	176			A	A					
		100	212					A	A	A				100	212			A	A					
		120	248			A	A	A						120	248			A	A					
Benzaldehyde <chem>C6H5CHO</chem>	Satu	20	68	X		A	A	A	C	C	X	Bleaching Agent <chem>Ca(ClO)2CaCl2-2H2O</chem>	12	20	68	A	A			A	A	A	B	C
		40	104				A	A						40	104	A	A		A	A				
		60	140				B	A						60	140	A	A		A	A				
		80	176					A						80	176			A	A					
		100	212					A						100	212			A	A					
		120	248					A						120	248			A	A					
Benzene <chem>C6H6</chem>	Pure	20	68	C	C	B	A	A	A	X	X	Borax (Sodium Borate) <chem>Na2B4O7·10H2O</chem>	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104	X	X	C	B	A	B					40	104	A	A	A	A	A	A	B		
		60	140				B	A	B					60	140	A	A	A	A	A	A	C		
		80	176			C	A	B						80	176	A	A	A	A	A	A	X		
		100	212				X	A						100	212			A	A					
		120	248				A							120	248			A	A					

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Boric Acid <chem>H3BO3</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Butyl Bromide <chem>C4H9Br</chem>	Pure	20	68					A	A			
		40	104	A	A	A	A	A	A	A	A			40	104					A	A			
		60	140	A	A	A	A	A	A	A	A			60	140					A	A			
		80	176	B	A	A	A	A	A	B	B			80	176					A	A			
		100	212					A	A	B				100	212					A	A			
		120	248					A	A					120	248					A	A			
Boron Trichloride <chem>BCl3</chem>		20	68	A		A	A	A	A	A	A	Butyl Carbitol <chem>CH2CH2OC4H9O<CH2CH2OH</chem>		20	68					A	A		A	A
		40	104	A		A	A	A	A	A	A			40	104					B	A			
		60	140	A		A	A	A	A	A	A			60	140					C	A			
		80	176			A	A	A	A	A				80	176									
		100	212			A	A							100	212									
		120	248					A						120	248									
Bromic Acid <chem>HBrO3</chem>	Pure	20	68	A	A	X	A	A				Butyl Cellosolve <chem>C4H9O(CH2)2OH</chem>		20	68					A	A	X		X
		40	104	A	A			A	A					40	104					A	A			
		60	140					A	A					60	140					B	A			
		80	176					A	A					80	176					C	A			
		100	212					A	A					100	212					X				
		120	248					B	A					120	248									
Bromine Vapor	25	20	68	B		X	A	A	A	X	X	Butyl Chloride <chem>CH3(CH2)3Cl</chem>		20	68	X	X	X	A	A				
		40	104	C			A	A	A					40	104					A	A			
		60	140				A	A	A					60	140					A	A			
		80	176				A	A						80	176					A	A			
		100	212				B	A						100	212					A	A			
		120	248				B	A						120	248					A	A			
Bromine Solution (Aqueous)	Satu	20	68	A	C	C	A	A	A	X	X	Butyn Diol <chem>HOCl2≡CCH2OH</chem>		20	68	A		A	A	A	A	A	A	A
		40	104	B		X	A	A	A					40	104	B		A	A	A	A	A	A	A
		60	140				A	A						60	140			A	A	A	A	A	A	A
		80	176				A	A						80	176			A	A					
		100	212				B	A						100	212			A						
		120	248				B	A						120	248			A						
Butadiene <chem>CH2=CHCH=CH2</chem>	Gas	20	68	A	A		A	A	A	X	B	Butyl Ether <chem>C4H9OC4H9</chem>		20	68	X	X	C	A	A	X	X	B	
		40	104	A	A		A	A	A		C			40	104			A	A					
		60	140	A			A	A	A					60	140			C	A					
		80	176				A	A						80	176			X						
		100	212				A	A						100	212									
		120	248				A	A						120	248									
Butane <chem>CH3(CH2)2CH3</chem>	Gas	20	68	A	A	A	A	A	A	X	A	Butyl Mercaptan <chem>CH3(CH2)3SH</chem>		20	68					A	A			
		40	104	A	A	A	A	A	A		B			40	104			A	A					
		60	140	A	A	A	A	A	A					60	140			A	A					
		80	176	A	A	A	A	A						80	176			A	A					
		100	212				A							100	212									
		120	248				A							120	248									
Butyl Acetate <chem>CH3COOC4H9</chem>	Pure	20	68	C	C	C	A	A	X	B	X	Butyl Phenol <chem>OH-C6H4(C(CH3)3)</chem>		20	68	C	C	A	A	A	C	X	X	
		40	104	X	X	X	B	A		C				40	104			B	A	A				
		60	140				X	A		X				60	140			A	A					
		80	176											80	176			A						
		100	212											100	212			A						
		120	248											120	248			A						
Butyl Acrylate <chem>CH2=CHCOOC4H9</chem>	Pure	20	68	X	X	X	A	A	X	A	X	Butyl Phthalate <chem>C6H4(COOCH3)COOH</chem>		20	68			A	A	A	B	B	X	
		40	104				B	A		A				40	104			A	B	A	B			
		60	140				C	A						60	140			A	C		X			
		80	176				X							80	176			X						
		100	212											100	212									
		120	248											120	248									
Butyl Alcohol <chem>C4H9OH</chem>	Pure	20	68	A	A	A	A	A	A	A	B	Butyl Stearate <chem>C17H35COOC4H9</chem>		20	68			A	A	A	C	A		
		40	104	A	A	A	A	A	B	A	B			40	104			A	A	A	B			
		60	140	B	A	A	A	A	C	A	B			60	140			A	A	A	A	C		
		80	176	B	A	A	A	A		A				80	176			A	A					
		100	212				A	A						100	212			A						
		120	248				A	A						120	248			A						
Butyl Amine <chem>C4H9NH2</chem>	Satu	20	68	X	X	X	B	A	A	X	A	Butylene <chem>CH3CH2CH=CH2</chem>		20	68			A	A	A				
		40	104				X	A						40	104			A	A	A				
		60	140					A						60	140			A	A	A				
		80	176											80	176			A	A	B				
		100	212											100	212			A	A	A				
		120	248											120	248			A	A	A				

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Butyric Acid <chem>CH3CH2CH2COOH</chem>	Pure	20	68	B	B	A	A	A	B	B	X	Calcium Sulfate <chem>CaSO4</chem>	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104			A	A	A	C					40	104	A	A	A	A	A	A	A	A	
		60	140			A	A	A	X					60	140	A	A	A	A	A	A	A	A	
		80	176			A	A	A						80	176	A	A	A	A	A	A	A	B	
		100	212					A	A					100	212			A	A	A				
		120	248					B	A					120	248			A	A	A				
Caffeine Citrate		20	68			A	A					Calcium Sulfide <chem>CaS</chem>	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104			A	A							40	104	A	A	A	A	A	A	A	A	
		60	140			A	A							60	140	A	A	A	A	A	A	A	A	
		80	176			A	A							80	176	A	A	A	A	A	A	A	B	
		100	212					A						100	212			A	A	A				
		120	248					A						120	248			A	A	A				
Calcium Acetate <chem>Ca(CH3COO)2</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Caprylic Acid <chem>CH3(CH2)6COOH</chem>	Pure	20	68									
		40	104	A	A	A	A	A	A	A	A			40	104									
		60	140	A	A	A	A	A	A	A	A			60	140									
		80	176	B	B	A	A	A	A	A	A			80	176									
		100	212					A	A					100	212			A	A	A				
		120	248					B	A					120	248			A	A	A				
Calcium Bisulfite (Calcium hydrogen sulfite) <chem>Ca2(HCO3)2</chem>		20	68	A	A	A	A	A	A	A	A	Carbitol <chem>C2H5(OCH2-CH2)2OH</chem>		20	68	A								
		40	104	A	A	A	A	A	A	A	A			40	104	B								
		60	140	A	A	A	A	A	A	A	A			60	140	C	A	C						
		80	176			A	A	A	A					80	176			A						
		100	212			A	A	A						100	212			A						
		120	248			A	A							120	248			A						
Calcium Bromide <chem>CaBr2</chem>		20	68	A	A	A	A	A	A	A	A	Carbon Dioxide Gas <chem>CO2</chem>	Wet	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	A
		80	176			A	A							80	176	A	A	A	A	A	A	A	B	
		100	212			A	A							100	212			A	A	A				
		120	248			A	A							120	248			A	A	A				
Calcium Carbonate <chem>CaCO3</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Carbon Dioxide Gas <chem>CO2</chem>	Dry	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A
		60	140	A	A	A	A	A	A	A	B			60	140	A	A	A	A	A	A	A	A	A
		80	176	A	A	A	A	A	A	A				80	176	A	A	A	A	A	A	A	A	A
		100	212			A	A	A						100	212			A	A	A				
		120	248			A	A	A						120	248			A	A	A				
Calcium Chlorate <chem>Ca(ClO3)2</chem>	Satu	20	68	A	A	A	A	A	A	A	C	Carbon Disulfide <chem>CS2</chem>	Pure	20	68	C	C	X	A	A	A	X	C	
		40	104	A	A	A	A	A	A	A				40	104	C	C		A	B	C			
		60	140	A	A	A	A	A	A	A				60	140	X	X		A	C	X			
		80	176	A	A	A	A	A	A	A				80	176			A	X					
		100	212			A	A	A						100	212			A						
		120	248			A	A	A						120	248			A						
Calcium Chloride <chem>CaCl2</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Carbon Monoxide <chem>CO</chem>	Gas	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A
		60	140	A	A	A	A	A	A	A	B			60	140	A	A	A	A	A	A	A	A	A
		80	176	A	A	A	A	A	A	A	B			80	176	A	A	A	A	A	A	A	B	
		100	212			A	A	A						100	212			A	A	A				
		120	248			A	A	A						120	248			A	A	A				
Calcium Hydroxide <chem>Ca(OH)2</chem>	Satu	20	68	A	A	A	A	A	A	A	A	Carbon Tetrachloride <chem>CCl4</chem>	Pure	20	68	C	C	X	A	A	B	X	X	
		40	104	A	A	A	A	A	A	A	A			40	104	X	X		A	A				
		60	140	A	A	A	A	A	A	A	A			60	140			A	A					
		80	176	B	A	A	A	A	A	A	C			80	176			A	A					
		100	212			B	A	A	A					100	212			A	A					
		120	248			A	A	A						120	248			A						
Calcium Hypochlorite <chem>Ca(ClO)2</chem>	Satu	20	68	A	A	A	A	A	A	B	C	Carbonic Acid <chem>H2CO3</chem>	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	B				40	104	A	A	A	A	A	A	A	A	A
		60	140	B	B	B	A	A	A	A	C			60	140	A	A	A	A	A	A	A	A	A
		80	176	C	C	A	A	B	A	B	C			80	176	B	B	A	A	A	A	B		
		100	212			B	A	C						100	212			A	A	B				
		120	248			A	A							120	248			A	A	A				
Calcium Nitrate <chem>Ca(NO3)2</chem>		20	68	A	A	A	A	A	A	A	A	Casein		20	68									
		40	104	A	A	A	A	A	A	A	A			40	104									
		60	140	A	A	A	A	A	A	A	A			60	140									
		80	176	A	A	A	A	A	A	A	A			80	176									
		100	212			A	A	A						100	212			A	A	A				
		120	248			A	A							120	248			A	A	A				

*Special Viton FPM-C required. Consult Chemline.

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F											°C	°F									
Castor Oil	Pure	20	68	A	A	A	A	A	A	A	A	Chromic Acid Anhydride CrO ₃	10	20	68	A	A	X	A	A	A	B	X	
		40	104	A	A	A	A	A	A	A	A		10	40	104	A	A		A	A	B	C		
		60	140	A	A	A	A	A	A	A	A		10	60	140	A	B		A	A	B	X		
		80	176	A	A	A	A	A	A	A	A		10	80	176	C		A	A	B				
		100	212					A	A				10	100	212			A	A	X				
		120	248					A	A				10	120	248									
Chloric Acid HClO ₃	20	20	68	A		X	A	A	A	A	C	Chromic Acid Anhydride CrO ₃	20	20	68	A	A	X	A	A	B	B	X	
		40	104	A			A	A			A		20	40	104	A	B		A	A	B		X	
		60	140	B				A	A				20	60	140	B	C		A	A	B			
		80	176				A	A			20	80	176			A	A	C						
		100	212					A	A			20	100	212			A	A	X					
		120	248					A				20	120	248										
Chlorine Dioxide ClO ₂	8 gm/li	20	68	A	A	C	A	A	A	A		Chromic Acid Anhydride CrO ₃	30	20	68	C	C	X	A	A	X	X	X	
		40	104	A	B	X	A	A					30	40	104	X	X		A	A				
		60	140	B	B			A	A				30	60	140			A	A					
		80	176				A	A			30	80	176			B	A							
		100	212					A	A			30	100	212			C	A						
		120	248					A				30	120	248										
Chlorine Dioxide ClO ₂	14 gm/li	20	68	A	A	C	A	A	A	A*		Chromic Acid Anhydride CrO ₃	50	20	68	C	C	X	A	A	X	X	X	
		40	104	A	B	X	A	A					50	40	104	X	X		A	A				
		60	140	B	B			A	A				50	60	140			A	A					
		80	176				A	A			50	80	176			B	A							
		100	212					A	A			50	100	212				A						
		120	248					A				50	120	248										
Chlorine Gas Cl ₂	** Wet	20	68	A	A	X	A	A	X	X	X	Chromic Potassium Alum KCr(SO ₄) ₂	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	B		A	A					Satu	40	104	A	A	A	A	A	A	A	A	A
		60	140	B	C			A	A				Satu	60	140	A	A	A	A	A	A	A	A	A
		80	176				A	A			Satu	80	176			A	A	A	A	B	B	B		
		100	212					A	A			Satu	100	212			A	A	A					
		120	248					A	A			Satu	120	248			B							
Chlorine Gas (up to 150 ppm moisture) Cl ₂	Dry	20	68	A	A	X	A	A	B	B	X	Citric Acid CH ₂ COOH	10	20	68	A	A	A	A	A	A	A	A	
		40	104	A	A		A	A	C	X			10	40	104	A	A	A	A	A	A	A	A	
		60	140	A	A			A	A	X			10	60	140	B	B	A	A	A	A	A	A	
		80	176				A	A			10	80	176	B	A	A	A	A	A	A	A	A		
		100	212					A	A			10	100	212			A	A	A					
		120	248					A	A			10	120	248										
Chlorine Solution (Chlorinated Water)	400 ppm	20	68	A	A	C	A	A	C	B	X	Coconut Oil	20	20	68	A	A	A	A	A	A	B	A	
		40	104	A	B	X	A	A	X	C			20	40	104	A	A	A	A	A	A	B	A	
		60	140	B	B			A	A				20	60	140	A	A	A	A	A	A			
		80	176				A	A			20	80	176	A	A	A	A							
		100	212					A	A			20	100	212			A	A						
		120	248					A	A			20	120	248			A	A						
Chlorine Solution (Chlorinated Water)	3000 ppm	20	68	A	A	X	A	A			X	Copper Acetate Cu(CH ₃ COO) ₂	Satu	20	68	A	A	A	A	A	A	A	A	
		40	104	A	A			A	A				Satu	40	104			A	A	A	A	A	A	A
		60	140										Satu	60	140			A	A	A				
		80	176										Satu	80	176			A	A					
		100	212										Satu	100	212			A	A					
		120	248										Satu	120	248			A	A					
Chlorobenzene (Monochloro-benzene) C ₆ H ₅ Cl	Pure	20	68	X	X	B	A	A	B	X	X	Copper Borofluoride Cu(BF ₄) ₂	20	20	68	A	A	A	A	A	A	A	A	
		40	104			C	A	A					20	40	104			A	A					
		60	140				A	A					20	60	140			A	A					
		80	176				B	A					20	80	176			A	A					
		100	212					B	A				20	100	212			A	A					
		120	248						B				20	120	248			A	A					
Chloroform (Trichloro-methane) CHCl ₃	Pure	20	68	X	X	C	A	A	B	X	X	Copper Carbonate Cu ₂ CO ₃	Satu	20	68	A	A	A	A	A	A	A	A	
		40	104			X	A	A					Satu	40	104	A			A	A				
		60	140				B	A					Satu	60	140			A	A					
		80	176				C	A					Satu	80	176			A	A					
		100	212				X	A					Satu	100	212			A	A					
		120	248										Satu	120	248			A	A					
Chloro-sulfonic Acid HSO ₃ Cl	Pure	20	68	X	X	X	C	A	X	X	X	Copper Chloride CuCl ₂	Satu	20	68	A	A	A	A	A	A	A	A	
		40	104				X	A					Satu	40	104	A	A	A	A	A	A	A	A	
		60	140					A					Satu	60	140	A	A	A	A	A	A	A	A	
		80	176										Satu	80	176	A	A	A	A	A	A	A	A	
		100	212										Satu	100	212			A	A	A				
		120	248										Satu	120	248			A	A					

**DV Series and Type 14 Diaphragm Valves with PVDF Gas Barriers are always recommended for Wet Chlorine gas. PVC or CPVC material bodies are recommended for maximum 21 psi services. Consult Chemline on all chlorine gas applications.

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Copper Cyanide CuCN	Satu	20	68	A	A	A	A	A	A	A	A	Cupric Bromide CuBr ₂		20	68	A				A	A		A	
		40	104			A	A	A						40	104									
		60	140			A	A	A						60	140									
		80	176			B	A	A						80	176									
		100	212				B	A						100	212									
		120	248				C							120	248									
Copper Fluoride CuF	Satu	20	68	A	A	A	A	A	A	A	A	Cupric Fluoride CuF ₂		20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	B	B	B	A	A						60	140	A	A	A	A	A	A	A	A	
		80	176				A	A						80	176			B	A	A				
		100	212				A	A						100	212				A	A				
		120	248				B							120	248				A	A				
Copper Nitrate Cu(NO ₃) ₂		20	68	A	A	A	A	A	A	A	A	Cuprous Chloride CuCl		20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	B	B	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176			B	A	A	A	A	A			80	176			A	A	A	A	A	A	
		100	212				A	A	A					100	212				A	A	A			
		120	248				A	A						120	248				A	A				
Copper Sulfate CuSO ₄	Satu	20	68	A	A	A	A	A	A	A	A	Cyclohexane C ₆ H ₁₂		20	68	X	X	C	A	A	A	X	B	
		40	104	A	A	A	A	A	A	A	A			40	104		X	A	A	A				
		60	140	A	A	A	A	A	A	A	A			60	140			A	A					
		80	176			B	A	A	A	A	A			80	176			A	A					
		100	212				A	A	A					100	212			A	A					
		120	248				A	A						120	248			A	A					
Corn Oil		20	68	A	A	A	A	A	A	B	A	Cyclohexanol C ₆ H ₁₁ OH		20	68	X	X	A	A	A	A	B	C	
		40	104	A	A	A	A	A	A	B	A			40	104			B	A	A	A			
		60	140	A	A	A	A	A	A	A	A			60	140			C	A	A				
		80	176				A	A						80	176			X	B	A				
		100	212				A	A						100	212			C	A					
		120	248				A	A						120	248									
Corn Syrup		20	68	A	A	A	A	A	A	A	A	Cyclohexanone C ₆ H ₁₀ O		20	68	X	X	B	A	A	X	C	X	
		40	104	A	A	A	A	A	A	A	A			40	104			C	A	A				
		60	140	A	A	A	A	A	A	A	A			60	140			X	B	A				
		80	176			B	A	A	A	A	B			80	176				A					
		100	212				A	A	B					100	212				A					
		120	248				A	A						120	248				A					
Cottonseed Oil		20	68	A	A	A	A	A	A	A	A	Decalin C ₁₀ H ₁₈		20	68			X	A	A	A	X	X	
		40	104	A	A	A	A	A	A	B	A			40	104			A	A					
		60	140	A	A	A	A	A	A	B	A			60	140			A	A					
		80	176			B	A	A	B	C	A			80	176			A	A					
		100	212				A	A	B					100	212				A					
		120	248				A	A						120	248				A					
Creosote		20	68	X	X	A	A	A	A	X	A	Decane CH ₃ (CH ₂) ₈ CH ₃		20	68				A	A			X	X
		40	104				A	A						40	104				A	A				
		60	140				A	A						60	140				A	A				
		80	176				A							80	176				A	A				
		100	212				A							100	212				A					
		120	248				A							120	248				A					
Cresol C ₆ H ₄ (CH ₃)OH	Pure	20	68	C	X	A	A	A	A	X	X	DEHPA (DI-2-Ethyl Hexyl Phosphoric Acid)		20	68	A	A		A	A	A			
		40	104			B	A	A	A					40	104	A	A		A	A	A			
		60	140			B	A	B						60	140				A	A	A			
		80	176			B	A							80	176				A	A	A			
		100	212			C	A							100	212				A	A	A			
		120	248				A							120	248				A	A				
Croton Aldehyde CH ₃ CH=CH·CHO	Pure	20	68	X		A	A	A	A	B	C	Dextrine (C ₆ H ₁₂ O ₅)n		20	68	A	A	A	A	A	A	A	A	
		40	104				A	A						40	104	A	A	A	A	A	A	A	A	
		60	140				B	A						60	140	A	A	A	A	A	A	A	A	
		80	176				B	A						80	176			A	A	A	A	B		
		100	212				C	A						100	212			A	A	A	A	A		
		120	248				A	A						120	248			A	A					
Cryolite Na ₃ AlF ₆		20	68	B	B	A	A	A				Dextrose (Glucose) C ₆ H ₁₂ O ₆		20	68	A	A	A	A	A	A	A	A	
		40	104	B	B	A	A	A						40	104	A	A	A	A	A	A	A		
		60	140	B	C	A	A	A						60	140	A	A	A	A	A	A	A		
		80	176		A	A	A							80	176		A	A	A	A	A	A		
		100	212				A	A						100	212			A	A	A	A	A		
		120	248				A	A						120	248			A	A					

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE
		°C	°F												°C	°F							
Dimethyl-formamide <chem>HCON(CH3)2</chem>	Pure	20	68	X	X	A	X	A	A	A	X	Ethyl Acetate <chem>CH3COOC2H5</chem>	Pure	20	68	X	X	B	B	A	X	B	X
		40	104			A		A						40	104			B	C	A			
		60	140			B		A						60	140			C		A			
		80	176					A						80	176					A			
		100	212					A						100	212					A			
		120	248											120	248								
Dimethyl Phthalate <chem>C6H4(COOCH3)2</chem>		20	68	X	X	B	B	A	B	B	X	Ethyl Acetoacetate <chem>CH3COCH2-COOCH2C2H5</chem>	Pure	20	68	X	X	X	A	A	X	A	X
		40	104			B	C	A						40	104				B	A			A
		60	140				X	A						60	140				C	A			
		80	176											80	176				X	A			
		100	212											100	212					A			
		120	248											120	248								
Dimethyl Sulfoxide (DMP) <chem>(CH3)2SO</chem>		20	68				X	A				Ethyl Acrylate <chem>H2CCH-COOCC2H5</chem>	Pure	20	68	X	X		A	A	X	B	X
		40	104											40	104				B	A			
		60	140											60	140				C	A			
		80	176											80	176				X	A			
		100	212											100	212					A			
		120	248											120	248								
Diethyl Phthalate (DOP) <chem>C6H4(COOC8H17)2</chem>		20	68	X	X		A	A	A	A	B	Ethyl Alcohol <chem>C2H5OH</chem>	Pure	20	68	A	A	A	A	A	A	A	A
		40	104				B	A						40	104	A	B	A	A	A	A	A	A
		60	140				C	A						60	140	B	B	A	A	A	A	A	A
		80	176				X	A						80	176	C	B	A	A	A	A	A	B
		100	212											100	212				A	A			
		120	248											120	248				A	A			
Dioxane <chem>O=C1CCC(O)CC1</chem>	Pure	20	68	X	X	B	C	A	X	X	X	Ethyl Benzene <chem>C2H5C2H5</chem>	Pure	20	68	X	X		A	A	A	X	C
		40	104			C	C	A						40	104				A	A			
		60	140				X	A						60	140				A	A			
		80	176											80	176				A				
		100	212											100	212				A				
		120	248											120	248				A				
Dioxolane <chem>OCC1OC(OCC)OC1</chem>		20	68	X	X		X	A	X	X	X	Ethyl Chloride <chem>C2H5Cl</chem>	Pure	20	68	X	X	C	A	A	A	A	B
		40	104											40	104			X	A	A	A	A	
		60	140											60	140				A	A	A		
		80	176											80	176				A	A	B		
		100	212											100	212				A	A			
		120	248											120	248				A	A			
Diphenyl Oxide <chem>C6H5OC6H5</chem>	Satu	20	68	X	X			A	A		X	Ethyl Ether <chem>(C2H5)2O</chem>	Pure	20	68	X	X	C	A	A	C	C	C
		40	104											40	104			X	B	A			
		60	140											60	140				C	A			
		80	176											80	176				X	A			
		100	212											100	212				A				
		120	248											120	248								
Disodium Hydrogen Ortho Phosphate <chem>Na2HPO4·12H2O</chem>		20	68	A	A			A	A			Ethyl Formate <chem>HCOOC2H5</chem>	Pure	20	68				A	A	X	B	X
		40	104	A	A			A	A					40	104				A				
		60	140	A	A			A	A					60	140				A				
		80	176	A				A	A					80	176				A				
		100	212					A	A					100	212				A				
		120	248					A	A					120	248								
Epichlorohydrin <chem>CH2-CH(Cl)-CH2Cl</chem>	Pure	20	68	X	X	X	C	A	A	X	X	2-Ethyl Hexanol <chem>CH3(CH2)3CH(C2H5)CH2OH</chem>	Pure	20	68				A	A			X
		40	104				X	A						40	104				A	A			
		60	140											60	140				A	A			
		80	176											80	176				B	A			
		100	212											100	212				A				
		120	248											120	248				A				
Ethanolamine (Monoethanolamine) <chem>H2NCH2CH2OH</chem>	Pure	20	68	X	X			X	A		A	Ethyl Mercaptan <chem>C2H5-SH</chem>	Pure	20	68				A	A	A	A	X
		40	104						A					40	104				A	A	A	A	
		60	140											60	140				A	A			
		80	176											80	176								
		100	212											100	212								
		120	248											120	248								
Ethers (see Ethyl Ether)		20	68	X	X	C	A	A	C	C	C	Ethyl Monochloroacetate <chem>ClCH2COOC2H5</chem>	Pure	20	68	C	X	A	A	A	C	A	X
		40	104			X	B	A						40	104			A	C	A			
		60	140			C	A							60	140			A		A			
		80	176			X	A							80	176			A					
		100	212				A							100	212				A				
		120	248											120	248								

Epsom Salts - See Magnesium Sulfate, page 15.

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE		
		°C	°F												°C	°F									
Ethyl Oxalate (COOC ₂ H ₅) ₂		20	68				X	A	X	A	X	Ferric Sulfate Fe ₂ (SO ₄) ₃		20	68	A	A	A	A	A	A	A	A	A	
		40	104					A						40	104	A	A	A	A	A	A	A	A		
		60	140					A						60	140	A	A	A	A	A	A	A	A		
		80	176											80	176			A	A	A	A	A	A		
		100	212											100	212					A	A				
		120	248											120	248					A	A				
Ethylene Bromide CH ₂ Br-CH ₂ Br	Pure	20	68	X	X			A	A	C	B	X	Ferric Sulfide Fe ₂ S ₃		20	68	A	A	A	A	A	A	A	A	A
		40	104						A	A					40	104	A	A	A	A	A	A	A	A	
		60	140						A	A					60	140	A	A	A	A	A	A	A	A	
		80	176						A	A					80	176	B	B	A	A	A	A	A	B	
		100	212							A					100	212					A	A			
		120	248							A					120	248					A	A			
Ethylene Chloride (Ethylene Dichloride) ClCH ₂ CH ₂ Cl		20	68	X	X	B	A	A	A	A	X	X	Ferric Chloride FeCl ₃	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104					X	A	A					40	104	A	A	A	A	A	A	A	A	
		60	140						A	A					60	140	B	A	A	A	A	A	A	A	
		80	176						A	A					80	176		A	A	A	A	A	A	B	
		100	212							A					100	212					A	A	B		
		120	248							A					120	248					A	A			
Ethylene Chlorohydrin ClCH ₂ -CH ₂ OH	Pure	20	68	X	X	A	B	A	X	A	X		Ferrous Hydroxide Fe(OH) ₂	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104					C	A						40	104	A	A	A	A	A	A	A	A	
		60	140						A						60	140	A	A	A	A	A	A	A	A	
		80	176						A						80	176		A	A	A	A	A	A	B	
		100	212						A						100	212					A	A			
		120	248												120	248					A	A			
Ethylene Diamine NH ₂ CH ₂ CH ₂ NH ₂	Pure	20	68	X	X	B	X	A					Ferrous Nitrate Fe(NO ₃) ₂	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104						A						40	104	A	A	A	A	A	A	A	A	
		60	140						A						60	140	A	A	A	A	A	A	A	A	
		80	176						A						80	176		A	A	A	A	A	A	B	
		100	212						A						100	212					A	A			
		120	248												120	248					A	A			
Ethylene Glycol HOCH ₂ -CH ₂ OH	Pure	20	68	A	A	A	A	A	A	A	A	A	Ferrous Sulfate FeSO ₄		20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176	B	A	A	A	A	A	A	A	A			80	176		A	A	A	A	A	A	B	
		100	212						A	A	A				100	212					A	A	B		
		120	248						A	A					120	248					A	A			
Ethylene Oxide CH ₂ O CH ₂	Pure	20	68	X	X			B	A	X	X	X	Fluoboric Acid HBF ₄	Pure	20	68	A	A	A	A	A	A	A	A	B
		40	104					C	A						40	104	A	A	A	A	A	A	A	A	
		60	140					C	A						60	140	B	A	A	A	A	A	A	A	
		80	176					X	A						80	176		B	B	A	A	A	B		
		100	212												100	212					A	A			
		120	248												120	248					A	A			
Fatty Acids RCOOH		20	68	A	B	A	A	A	A	A	X	A	Fluorine Gas F ₂	Wet	20	68	A		X	A	A	A	A	A	A
		40	104	A	B	B	A	A	A						40	104	B			A	A	A	A	A	
		60	140	A	B	B	A	A	A						60	140	X			A	A	B	B		
		80	176			C	A	A							80	176					A				
		100	212				A	A							100	212					A				
		120	248					A	A						120	248					A				
Ferrous Chloride FeCl ₂	Satu	20	68	A	A	A	A	A	A	A	A	A	Fluorosilicic Acid (Hydrofluoro-silicic Acid) H ₂ SiF ₆	50	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	B	
		60	140	B	A	A	A	A	A	A	A	A			60	140	B	B	A	A	A	A	A	B	
		80	176	A	A	A	A	A	A	A	A	B			80	176	C	B	A	A	A	B	B	B	
		100	212				A	A	B						100	212					A	A	A		
		120	248					A	A						120	248					A	A			
Ferric Hydroxide Fe(OH) ₃	Satu	20	68	A	A	A	A	A	A	A	A	A	Fluor Sulphonic Acid HSO ₄ F	50%	20	68									
		40	104	A	A	A	A	A	A	A	A	A			40	104									
		60	140	A	A	A	A	A	A	A	A	A			60	140									
		80	176	A	A	A	A	A	A	A	A	B			80	176									
		100	212				A	A	A						100	212									
		120	248					A	A						120	248									
Ferric Nitrate Fe(NO ₃) ₃	Satu	20	68	A	A	A	A	A	A	A	A	A	Formaldehyde HCHO	35	20	68	A	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A	B			60	140	C	B	A	B	A	A	A	A	
		80	176	A	B	A	A	A	A	A	A	B			80	176		B	X	A	A	A	A	A	
		100	212				A	A	A						100	212					A				
		120	248					A	A						120	248					A				

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F											°C	°F									
Formaldehyde HCHO	37	20	68	A	A	A	A	A	A	A	A	Furan <chem>CH=CH-C(=O)O</chem>		20	68					C	A	X	X	X
		40	104	A	A	A	A	A	A	A	A			40	104			X	A					
		60	140	C	B	A	B	A	A	A	A			60	140									
		80	176		B	X	A	A	A	A	A			80	176									
		100	212				A							100	212									
		120	248				A							120	248									
Formaldehyde HCHO	50	20	68	A	A	A	A	A	B	A		Furfural <chem>C4H3OCHO</chem>	Pure	20	68	X	X	C	B	A	B	A	X	
		40	104	A	A	A	A	A	A					40	104			X	B	A	B	A		
		60	140	C	B	A	B	A						60	140				C	A	C	A		
		80	176		B	X	A							80	176			X	A			B		
		100	212				A							100	212									
		120	248				A							120	248									
Formic Acid HCOOH	90	20	68	A	A	A	A	A	X	A	X	Furfuryl Alcohol <chem>C4H3OCH2OH</chem>	Pure	20	68	X	X			A	A	X	C	X
		40	104	B	B	B	A	A	A	A				40	104				A	A				
		60	140	X	X	X	A	A	A	A				60	140				B	A				
		80	176		A	A								80	176			X	A					
		100	212				B	A						100	212									
		120	248				C	A						120	248									
Freon F-11 CCl ₃ F		20	68	A			A	A	B	C	X	Gallic Acid <chem>C6H2(OH)3COOH</chem>		20	68					A	A	A	A	A
		40	104	A			A	A						40	104				B	A				
		60	140	A			A	A						60	140				C	A				
		80	176		A	A								80	176			X	A					
		100	212				A	A						100	212				A					
		120	248				A	A						120	248				A					
Freon F-12 CCl ₂ F ₂		20	68	A			A	A	B	B	C	Gasoline - Regular*		20	68	B			C	A	A	B	X	B
		40	104	A			A	A						40	104	B		X	A	A	B		B	
		60	140	A			A	A						60	140				A	A	B		B	
		80	176		A	A								80	176			A	A					
		100	212				A	A						100	212				A					
		120	248				A	A						120	248				A					
Freon F-21 CHCl ₂ F		20	68	X			A	A	C	C	X	Gasoline - Sour		20	68	B			C	A	A	B	X	B
		40	104				A	A	X					40	104	B		X	A	A				
		60	140				A	A						60	140				A	A				
		80	176		A	A								80	176			A	A					
		100	212				A	A						100	212				A					
		120	248				A	A						120	248				A					
Freon F-22 CHClF ₂		20	68	X			A	A	X	B	X	Gelatin & Glue		20	68	A	A	A	A	A	A	A	A	A
		40	104				A	A						40	104	A	A	A	A	A	A	A	A	A
		60	140				A	A						60	140	A	A	A	A	A	A	A	A	A
		80	176		A	A								80	176	A	A	A	A	A	A	A	B	
		100	212				A	A						100	212			A	A	A	A			
		120	248				A	A						120	248			A	A					
Freon F-113 CClF ₂ -CCl ₂ F		20	68	B			A	A	B	X	X	Glycerol (Glycerine) <chem>C3H5(OH)3</chem>	Pure	20	68	A	A	A	A	A	A	A	A	A
		40	104				A	A						40	104	A	A	A	A	A	A	A	A	A
		60	140				A	A						60	140	A	A	A	A	A	A	A	A	A
		80	176		A	A								80	176	A	A	A	A	A	A	A	A	A
		100	212				A	A						100	212			A	A					
		120	248				A	A						120	248			A	A					
Freon F-114 CClF ₂ -CClF ₂		20	68	B			A	A	A	C	B	Glycolic Acid <chem>HOCH2COOH</chem>	Satu	20	68			A	B	A	A	A	A	A
		40	104				A	A	A					40	104			A	X	A				
		60	140				A	A						60	140			A	X	A				
		80	176		A	A								80	176				X	A				
		100	212				A	A						100	212				A					
		120	248				A	A						120	248				A					
Fructose <chem>CH2OHCO(OH)2CO2H</chem>		20	68	A			A	A	A	A	A	Glycols (Ethylene Glycol)		20	68	A		A	A	A	A	A	A	A
		40	104	A			A	A	A	A	A			40	104	A		A	A	A	A	A	A	A
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	A
		80	176		A	A	A	A	A	A	B			80	176	B	A	A	A	A	A	A	A	A
		100	212				A	A	A	A	A			100	212			A	A	A	A	A	A	A
		120	248				A	A						120	248			A	A					
Fruit Juice	Pure	20	68	A			A	A	A	A	A	Heptane <chem>CH3(CH2)5CH3</chem>		20	68	A		A	A	A	A	A	X	A
		40	104	A			A	A	A	A	A			40	104	A		B	A	A	A			
		60	140	A			A	A	A	A	A			60	140	B		C	A	A	A			
		80	176		A	A	A	A	A	A				80	176			A	A					
		100	212				A	A						100	212			A	A					
		120	248				A	A						120	248			A	A					

*For Premium grade Gasoline, a special Buna-N elastomer is recommended over Viton. Consult Chemline.

Hydrofluorosilicic Acid - See Fluorosilicic Acid, page 11.

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F											°C	°F									
Hexane $\text{CH}_3(\text{CH}_2)_4\text{CH}_3$		20	68	A	A	A	A	A	A	X	A	Hydrofluoric Acid HF	40	20	68	B	B	A	A	A	A	A	A	X
		40	104	B		B	A	A						40	104	C	C	A	A	A	A	A	A	
		60	140		C	A	A							60	140	X	X	A	A	A	A	A	B	
		80	176			A	A							80	176			B	A	A	B	C		
		100	212			A	A							100	212			A	A					
		120	248			A	A							120	248									
Hexyl Alcohol $\text{CH}_3(\text{CH}_2)_5\text{OH}$	Pure	20	68	A	A	A	A	A	A	B	A	Hydrofluoric Acid HF	55	20	68	B	B	A	A	A	A	A	A	X
		40	104	A			A	A	A	B	A			40	104	C	X	A	A	A	A	A	B	
		60	140	B			A	A	A	C	B			60	140	X		A	A	A	A	A	C	
		80	176			B	A	A	X					80	176			B	A	A	B	X		
		100	212				A	A						100	212			A	A					
		120	248				A	B						120	248									
Hydrazine $\text{H}_2\text{N-NH}_2$	Pure	20	68	X	X	C	C	A	X	A	A	Hydrogen H ₂		20	68	A	A	A	A	A	A	A	A	A
		40	104		X	C	A							40	104	A	A	A	A	A	A	A	A	A
		60	140				X	A						60	140	A	A	A	A	A	A	A	A	A
		80	176				A							80	176	A	A	A	A	A	A	A	A	A
		100	212				A							100	212			A						
		120	248				A							120	248			A						
Hydrobromic Acid HBr	20	20	68	A	A	A	A	A	A	A	C	Hydrogen Fluoride (Anhydrous) HF		20	68			A	A	A	X	B	X	
		40	104	A	A	A	A	A	A	A	C			40	104			A	A					
		60	140	B	B	A	A	A	A	A	A			60	140			A	A					
		80	176	B	A	A	A							80	176			A	A					
		100	212				A	A						100	212			A	A					
		120	248				B	A						120	248			A	A					
Hydrobromic Acid HBr	47	20	68	A	A	A	A	A	A	A	C	Hydrogen Peroxide H ₂ O ₂	20	20	68	A	A	A	A	A	A	A	X	
		40	104	A	A	A	A	A	A	A	X			40	104	A	A	A	A	A	A	B		
		60	140	B	B	A	A	A	A	A				60	140	B	B	A	A	A	A	B		
		80	176	B	A	A	A							80	176	B	B	A	A	A	A	C		
		100	212				A	A						100	212			A	A					
		120	248				B	A						120	248			A	A					
Hydrochloric Acid HCl	25	20	68	A	A	A	A	A	A	A	C	Hydrogen Peroxide H ₂ O ₂	35	20	68	A	B	A	A	A	A	A	B	X
		40	104	A	A	A	A	A	A	A	X			40	104	B	C	B	A	A	A	C		
		60	140	A	A	A	A	A	A	A	A			60	140	C	X	B	A	A	C	X		
		80	176	A	A	A	A	A	B	X				80	176		C	A	A					
		100	212				A	A						100	212			A	A					
		120	248				B	A						120	248			A	A					
Hydrochloric Acid HCl	* 35	20	68	A	A	A	A	A	A	B	C	Hydrogen Peroxide H ₂ O ₂	** 50	20	68	B	C	C	A	A	C	X	X	
		40	104	A	A	A	A	A	A	B	B			40	104	C	X	X	A	A	X			
		60	140	B	A	A	A	A	A	X	X			60	140			A	A					
		80	176	B	B	A	A	A						80	176			A	A					
		100	212				A	A						100	212			A	A					
		120	248				C	A						120	248			A	A					
Hydrochloric Acid HCl	* 38	20	68	A	A	A	A	A	A	B	C	Hydrogen Sulfide Gas H ₂ S	Dry	20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	B	C			40	104	A	A	A	A	A	A	A	A	
		60	140	B	B	A	A	A	A	X	X			60	140	A	A	A	A	A	A	A	A	
		80	176	B	B	A	A	A						80	176	B	A	A	A	A	B	B	B	
		100	212				B	A						100	212			A	A					
		120	248				C	A						120	248			A	A					
Hydrocyanic Acid HCN		20	68	A	A	A	A	A	A	A	B	Hydrogen Sulfide (Aqueous) H ₂ S		20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A					40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A					60	140	A	A	A	A	A	B	A	A	
		80	176				A	A						80	176	A	A	A	A	A	A	A	A	
		100	212				A	A						100	212			A	A					
		120	248				A	A						120	248			A	A					
Hydrofluoric Acid HF	10	20	68	A	A	A	A	A	A	A	X	Hydroiodic Acid HI		20	68	A	A	A	A	A	A	A	A	
		40	104	A	B	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	C	B	A	A	A	A	A	A			60	140			A	A					
		80	176	C	A	A	A	A	A	A	A			80	176			A	A					
		100	212				B	A	A					100	212			A	A					
		120	248				C	A						120	248			A	A					
Hydrofluoric Acid HF	30	20	68	A	A	A	A	A	A	A	X	Hydroquinone C ₆ H ₄ (OH) ₂	Satu	20	68	A		A	A	A	A	A	A	B
		40	104	B	B	A	A	A	A	A	A			40	104	A		A	A	A	A			
		60	140	C	C	A	A	A	A	A	A			60	140	A		A	A	A				
		80	176	X	X	B	A	A	B	B	B			80	176			A	A	A				
		100	212				A	A						100	212			A	A					
		120	248											120	248			A	A					

*Hydrochloric Acid: 20° Baumé = 32%; 23° Baumé (Fuming) = 38% concentration.

**Hydrogen Peroxide: 35% at 55°C Viton = "A"; 40% at 66°C Viton = "B".

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Hypochlorous Acid HClO	10	20	68	A	A	A	A	A	A	A	C	Kerosene	20	68	B		A	A	A	A	X	A		
		40	104	A	A	B	A	A	A	A	B			40	104	B		C	A	A				
		60	140	A	A			A	A	A				60	140	C		X	A	A				
		80	176	B			A	A	B					80	176			A	A					
		100	212				A	A						100	212			A	A					
		120	248				B	A						120	248			B	A					
Iodine I₂		20	68	C		A	A	A	B	X		Lacquer (Nitroselrouse lacquer)	20	68	X		A	A	A	C	X	X	X	
		40	104	X			A	A						40	104				A					
		60	140				A	A						60	140				A					
		80	176				A	A						80	176				A					
		100	212				A							100	212				A					
		120	248				A							120	248				A					
Isobutyl Alcohol (CH₃)₃CHCH₂OH	Pure	20	68	A		A	A	A	A	A	B	Lactic Acid CH₃CH(OH)COOH	25	20	68	A	A	A	A	A	A	A	A	A
		40	104	A		A	A	A						40	104	A	A	A	A	A	A	A	B	
		60	140			A	A	A						60	140	A	A	A	A	A	A	A	C	
		80	176			A	A							80	176	B	A	A	A	A	A	A	A	
		100	212			A	A							100	212			A	A	A				
		120	248			A								120	248			A	A					
Iso-octane (CH₃)₂CCH₂CH(CH₃)₂		20	68	A		A	A	A	A	X	A	Lactic Acid CH₃CH(OH)COOH	80	20	68	A	A	A	A	A	A	A	A	A
		40	104			A	A							40	104	B	A	A	A	A	A	A	B	
		60	140				A	A						60	140		B	A	A	A	A	A	C	
		80	176			A	A							80	176		B	A	A	A	A	A	A	
		100	212			A	A							100	212		B	A	B					
		120	248			A								120	248			A						
Isophorone C₉H₁₄O	Pure	20	68				A	X	X	X	X	Lard (Animal Oil)		20	68	A	A	A	A	A	A	A	A	
		40	104				A							40	104			A	A	A	A	A	A	
		60	140				A							60	140			A	A	A	A	A	A	
		80	176											80	176			A	A					
		100	212											100	212			A	A					
		120	248											120	248			A	A					
Isopropyl Acetate (CH₃)COOCH(CH₃)₂	Pure	20	68				A	X	B	X		Lauric Acid CH₃(CH₂)₁₀COOH		20	68	A		A	A	A	A			
		40	104				A							40	104	A		A	A	A				
		60	140				A							60	140			A	A	A				
		80	176				A							80	176			A	A					
		100	212				A							100	212			A	A					
		120	248				A							120	248			A	A					
Isopropyl Alcohol (CH₃)₂CHOH	Pure	20	68	A	A	A	A	A	A	A	A	Lauroyl Chloride CH₃(CH₂)₁₀COCl	Pure	20	68			A	A					
		40	104	A	A	A	A	A	A	A	B			40	104			A	A					
		60	140	A	A	A	A	A	A	A	A			60	140			A	A					
		80	176			A	A	A						80	176			A	A					
		100	212				A	B						100	212			A	A					
		120	248			A								120	248			A	A					
Isopropyl Chloride (CH₃)₂CHCl		20	68				A	A	A	X	B	Lead Acetate Pb(CH₃COO)₂	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104				A	A						40	104	A	A	A	A	A	A	A	A	
		60	140				B	A						60	140	A	A	A	A	B	A	A		
		80	176				C	A						80	176	A	A	A	B	A	B	A		
		100	212				A							100	212			A	A					
		120	248				A							120	248			A	A					
Isopropyl Ether (CH₃)₂CHO-CH(CH₃)₂	Pure	20	68				A	A	C	C	B	Lead Chloride PbCl₂		20	68	A	A	A	A	A	A	A	A	A
		40	104				B	A						40	104	A	A	A	A	A	A	A	A	
		60	140				C	A						60	140	A	A	A	A	A	A	A	A	
		80	176				X	A						80	176			A	A	A	A	A	A	
		100	212											100	212			A	A	A	A	A	A	
		120	248											120	248			A	A					
Jet Fuel JP-4		20	68	A		B	A	A	A	X	B	Lead Nitrate Pb(NO₃)₂	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104	A		X	A	A						40	104	A	A	A	A	A	A	A	A	
		60	140	B			A	A						60	140	A	A	A	A	A	A	A	A	
		80	176				A	A						80	176	A	A	A	A	A	A	A	A	
		100	212				A	A						100	212			A	A	A	A	A	A	
		120	248				A							120	248			A	A					
Jet Fuel JP-5		20	68	A		B	A	A	A	X	A	Lead Sulfate PbSO₄		20	68	A	A	A	A	A	A	A	A	A
		40	104	A		X	A	A						40	104	A	A	A	A	A	A	A	A	
		60	140	B			A	A						60	140	A	A	A	A	A	A	A	A	
		80	176				A	A						80	176	A	A	A	A	A	A	A	A	
		100	212				A	A						100	212			A	A	A	A	A	A	
		120	248				A							120	248			A	A					

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE		
		°C	°F												°C	°F									
Lemon Oil		20	68			C	A	A	A	C	A	Magnesium Fluoride MgF_2	Satu	20	68	A	A	A	A	A	A	A	A	A	
		40	104			X	A	A						40	104	A	A	A	A	A	A	A	A	A	
		60	140					A	A					60	140	A	A	A	A	A	A	A	A	A	
		80	176					A	A					80	176			A	A	A	A	A	A	A	A
		100	212					A	A					100	212			A	A	A	A	A	A	A	A
		120	248					A	A					120	248			A							
Linoleic Acid $CH_3(CH=CH-CH_3)_3-(CH_2)_7COOH$		20	68	A		B	A	A	A	X	A	Magnesium Hydroxide $Mg(OH)_2$	Satu	20	68	A	A	A	A	A	A	A	A	A	
		40	104	A				A	A					40	104	A	A	A	A	A	A	A	A	A	
		60	140	B				A	A					60	140	A		A	A	A	A	A	A	A	
		80	176					A	A					80	176			A	A	A	A	A	A	A	A
		100	212					A	A					100	212			B	A	A					
		120	248					A	A					120	248			B	A						
Linoleic Oil		20	68	A				A	A	A		Magnesium Nitrate $Mg(NO_3)_2$		20	68	A	A	A	A	A	A	A	A	A	
		40	104	A				A	A	B				40	104	A	A	A	A	A	A	A	A	A	
		60	140	B				A	A	X				60	140	A	A	A	A	A	A	A	A	A	
		80	176					A	A					80	176			A	A	A	A	A	A	B	
		100	212					A	A					100	212			A	A	A	A	A	A		
		120	248					A	A					120	248			A	A						
Linseed Oil		20	68	A	A	A	A	A	A	B	A	Magnesium Sulfate (Epsom Salts) $MgSO_4$		20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A				40	104	A	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A				60	140	A	A	A	A	A	A	A	A	A	
		80	176			B	A	A						80	176			A	A	A	A	A	A	A	A
		100	212					A	A					100	212			A	A	A	A	A	A	A	A
		120	248					A	A					120	248			A	A						
Lithium Bromide LiBr	60	20	68	A				A	A	A	A	Maleic Acid $HOOCC_2H_2COOH$		20	68	A	A	A	A	A	A	A	A	B	
		40	104	A				A	A	A	A			40	104	A	A	A	A	A	A	B	B		
		60	140	A				A	A	A	A			60	140	B	A	A	A	B	A	B	B		
		80	176			A	A	A	A	A				80	176	A	A	A	A	B	A	A			
		100	212					A	A					100	212			A	A						
		120	248					A	A					120	248			A	A						
Lithium Chloride LiCl	Satu	20	68	A	A	A	A	A	A	A	A	Malic Acid $HOOCH_2CH(-OH)COOH$	Satu	20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	B	A	A	A		
		80	176			A	A	A	A	A				80	176	A	A	A	A	A	A	B			
		100	212					A	A					100	212			A	A						
		120	248					B	A					120	248			A	A						
Lithium Hydroxide LiOH		20	68	A				A	A	A	A	Manganese Chloride $MnCl_2$		20	68	A		A	A	A	A	A	A	A	
		40	104	A				A	A	A	A			40	104	A		A	A	A	A	A	A	A	
		60	140	A				A	A	A	A			60	140	B		A	A	A	A	A	A	A	
		80	176			A	A	A	A	A				80	176	B	A	A	A	A	A				
		100	212					A	A					100	212			A	A						
		120	248					A	A					120	248			A	A						
Liquor (Gin, Whiskey, etc.)		20	68	A	A	A	A	A	A	A	A	Manganese Sulfate $MnSO_4$		20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140			A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	A	
		80	176			A	A	A	A	A	A			80	176	B	A	A	A	A	A	A	A	A	
		100	212					A	A					100	212			A	A						
		120	248					A	A					120	248			A	A						
Magnesium Carbonate $MgCO_3$		20	68	A	A	A	A	A	A	A	A	Mercuric Chloride $HgCl_2$		20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	A	
		80	176	B	A	A	A	A	A	A	B			80	176			A	A	A					
		100	212					A	A	A				100	212			A	A						
		120	248					A	A					120	248			A	A						
Magnesium Chloride $MgCl_2$	Satu	20	68	A	A	A	A	A	A	A	A	Mercuric Cyanide $Hg(CN)_2$	Satu	20	68	A		A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A		A	A	A	A	A			
		60	140	B	A	A	A	A	A	A	A			60	140	A		A	A	A	A	A			
		80	176	B	A	A	A	A	A	A	B			80	176			A	A	A					
		100	212					A	A	B				100	212			A	A						
		120	248					A	A					120	248			A	A						
Magnesium Citrate $Mg_3(C_6H_5O_7)_2$		20	68	A	A	A	A	A	A	A	A	Mercuric Nitrate $Hg(NO_3)_2$		20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	A	B			80	176			A	A	A					
		100	212					A	A	A				100	212			A	A						
		120	248					A	A					120	248			A	A						

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE
		°C	°F												°C	°F							
Mercuric Sulfate HgSO ₄	Satu	20	68	A	A	A	A	A	A	A	A	Methyl Chloride CH ₃ Cl	20	68	X		C	A	A	C	B	X	
		40	104	A	A	A	A	A	A	A	A		40	104			A	A					
		60	140	A	A	A	A	A	A	A	A		60	140			A	A					
		80	176	A	A	A	A	A	A	A	A		80	176			A	A					
		100	212					A	A	A			100	212			A	A					
		120	248					A	A				120	248			A	A					
Mercurous Nitrate Hg ₂ (NO ₃) ₂	Satu	20	68	A		A	A	A	A	A	A	Methyl Chloroform CH ₃ CCl ₃	20	68	X		C	A	A	B	X	X	
		40	104	A				A	A				40	104			B	A					
		60	140	A				A	A				60	140			A						
		80	176					A	A				80	176			A						
		100	212					A	A				100	212			A						
		120	248					A	A				120	248									
Mercury Hg		20	68	A	A	A	A	A	A	A	A	Methyl Ethyl Ketone (MEK) CH ₃ -CO-C ₂ H ₅	20	68	X	X	A	X	A	X	B	X	
		40	104	A	A	A	A	A	A	A	A		40	104			C	A			C		
		60	140	A	A	A	A	A	A	A	A		60	140			X	A					
		80	176	A	A	A	A	A	A	A	A		80	176			A						
		100	212					A	A				100	212			B						
		120	248					A	A				120	248									
Methane CH ₄		20	68	A	A	A	A	A	A	A	A	Methyl Formate HCOOCH ₃	20	68			A	A	X	B	X		
		40	104	A	A	A	A	A	A	A	A		40	104			B	A					
		60	140	B	B	B	A	A	A	A	A		60	140			C	A					
		80	176				A	A	A	B			80	176			C	A					
		100	212				A	A	B				100	212									
		120	248				A	A					120	248									
Methane Sulfonic Acid CH ₃ SO ₃ H	50	20	68					A	A			Methyl Isobutyl Carbinol (CH ₃) ₂ CHCH ₂ CH ₃ - (-OH)CH ₃	20	68			A	A	A				
		40	104					A	A				40	104			A	A	A				
		60	140					A	A				60	140			B	A					
		80	176					A	A				80	176			B	A					
		100	212					A					100	212			A						
		120	248					A					120	248									
Methyl Acetate CH ₃ COOCH ₃	Pure	20	68	X	X	B	A	A	X	B	X	Methyl Isobutyl Ketone (CH ₃) ₂ CHCH ₂ - -COCH ₃	20	68	X	X	A	X	A	X	B	X	
		40	104				B	A		C			40	104			A						
		60	140				C	A					60	140			A						
		80	176				X	A					80	176			A						
		100	212				A						100	212			A						
		120	248				A						120	248									
Methyl Acrylate CH ₂ CHCOOCH ₃	Pure	20	68				A	A	X	B	X	Methyl Isopropyl Ketone (CH ₃) ₂ CHCOCH ₃	20	68			X	A		X	X		
		40	104				B	A					40	104			A						
		60	140				C	A					60	140			A						
		80	176				X	A					80	176			A						
		100	212				A						100	212									
		120	248				A						120	248									
Methyl Alcohol CH ₃ OH	Pure	20	68	A	A	A	A	A	B	A	A	Methyl Methacrylate CH ₂ C(CH ₃)- -COOCH ₃	20	68			A	A	X	X	X		
		40	104	B	B	A	A	A	B	A	B		40	104			B	A					
		60	140	B	B	A	A	A	C	A	C		60	140			C	A					
		80	176			B	A	A	C	B			80	176			X	A					
		100	212			A	A	C					100	212									
		120	248			A	A						120	248									
Methyl Amine CH ₃ NH ₂		20	68	X	X	B	C	A	A	A	C	Methyl Monochloro-acetate ClCH ₂ COOCH ₃	20	68	C	X	A	A	A	C	A	X	
		40	104				X	A					40	104			A	C	A				
		60	140				A						60	140			A		A				
		80	176				A						80	176			A						
		100	212				A						100	212			A						
		120	248				A						120	248									
Methyl Bromide CH ₃ Br		20	68	C		X	A	A	A	B	X	Methyl Salicylate C ₆ H ₄ (OH)COOCH ₃	20	68			A	A	A	A	X	X	
		40	104				A	A					40	104									
		60	140				A	A					60	140									
		80	176				A	A					80	176									
		100	212				A						100	212									
		120	248				A						120	248									
Methyl Cellosolve HOCH ₂ CH ₂ OCH ₃		20	68	A		A	A	A		B		Methylene Bromide CH ₂ Br ₂	20	68			A	A	A	X	X		
		40	104				A	A					40	104			A	A					
		60	140				A	A					60	140			A	A					
		80	176				A						80	176			A						
		100	212				A						100	212			A						
		120	248				A						120	248			A						

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Methylene Chloride <chem>CH2Cl2</chem>	**	20	68	X	X	X	B	A	C	X	X	Nickel Dichloride <chem>NiCl2</chem>	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104				B	A						40	104	A	A	A	A	A	A	A	A	
		60	140				X	A						60	140	A	A	A	A	A	A	A	A	
		80	176											80	176			A	A	A	A	A	A	
		100	212											100	212					A	A	A		
		120	248											120	248					A	A			
Methylene Iodine <chem>CH2I2</chem>		20	68				A	A	A			Nickel Nitrate <chem>Ni(NO3)2</chem>	Satu	20	68	A		A	A	A	A	A	A	A
		40	104				A	A						40	104	A		A	A	A	A	A	A	
		60	140				A	A						60	140	A		A	A	A	A	A	A	
		80	176				A							80	176			A	A	A	A	A	B	
		100	212					A						100	212					A	A	A		
		120	248				A							120	248					A	A			
Monochlor-acetic acid <chem>ClCH2COOH</chem>	50	20	68	A	A	B	A	A	B	C	X	Nickel Sulfate <chem>NiSO4</chem>	Satu	20	68	A	A	A	A	A	A	A	A	A
		40	104	B	B	B	A	A	A	X				40	104	A	A	A	A	A	A	A	A	
		60	140	B	B	X	A	A						60	140	A	A	A	A	A	A	A	A	
		80	176				A	A						80	176		B	B	A	A	A	A	A	
		100	212					A						100	212				A	A	B			
		120	248											120	248					A	A			
Monochloro-benzene <chem>C6H5Cl</chem>		20	68	X	X	B	A	A	B	X	X	Nicotine <chem>C10H14N2</chem>		20	68	A		A	A	A				
		40	104			C	A	A						40	104	A		A	B	A				
		60	140				A	A						60	140	A				A				
		80	176				B	A						80	176					A				
		100	212				B	A						100	212					A				
		120	248											120	248					A				
Monoethanol-amine (Ethanolamine) <chem>H2NCH2CH2OH</chem>		20	68	X	X		X	A		A	A	Nicotinic Acid <chem>C3H4NCOOH</chem>		20	68	A		A	A	A				
		40	104					A						40	104	A		A	A	A				
		60	140											60	140	A		A	A	A				
		80	176											80	176			A	A	A				
		100	212											100	212			A	A	A				
		120	248											120	248			A	A					
Monomethyl-aniline <chem>C6H5NHCH3</chem>		20	68				A	A	A	X	X	Nitric Acid <chem>HNO3</chem>	10	20	68	A	A	A	A	A	A	A	A	X
		40	104				B	A						40	104	A	A	A	A	A	A	A	A	
		60	140				X	A						60	140	A	A	A	A	A	A	B		
		80	176				A							80	176		B	B	A	A	A	A	X	
		100	212											100	212				A	A	A			
		120	248											120	248				A	A				
Morpholine <chem>O(CH2CH2)2NH</chem>	Pure	20	68	X	X	A	A	A	A	C	X	Nitric Acid <chem>HNO3</chem>	*30	20	68	A	A	A	A	A	A	B	X	
		40	104			A	A	A						40	104	A	B	A	A	A	A	B		
		60	140			A	C	A						60	140	B	C	B	A	A	B	X		
		80	176				A							80	176	X	B	A	A	C				
		100	212											100	212			A	A	C				
		120	248											120	248				B	A				
Naphtha		20	68	A		A	A	A	A	X	B	Nitric Acid <chem>HNO3</chem>	*50	20	68	A	A	A	A	A	A	A	X	X
		40	104			B	A	A						40	104	B	B	B	A	A	B			
		60	140			C	A	A						60	140	B	C	C	A	A	C			
		80	176				A	A						80	176	X	X	A	A	X				
		100	212				A	A						100	212			C	A					
		120	248				A	A						120	248			A	A					
Naphthalene <chem>C10H8</chem>		20	68	X		B	A	A	A	X	X	Nitric Acid <chem>HNO3</chem>	*70	20	68	A	B	C	A	A	C	X	X	
		40	104				A	A	A					40	104	B	C	X	A	A	X			
		60	140				A	A	A					60	140	C	X		B	A				
		80	176				A	A	A					80	176			C	A					
		100	212				A	A						100	212			X	A					
		120	248				A	A						120	248									
Natural Gas		20	68	A			A	A	A	A	A	Nitric Acid <chem>HNO3</chem>	*98	20	68	X	X	X	A	A	C	X	X	
		40	104	A			A	A						40	104				B	B				
		60	140	B			A	A						60	140				X	B				
		80	176				A	A						80	176				C					
		100	212				A							100	212				C					
		120	248				A							120	248									
Nickel Acetate <chem>(CH3CO2)2Ni</chem>	Satu	20	68	A	A	A	A	A	C	A	A	Nitrobenzene <chem>C6H5NO2</chem>		20	68	X	X	A	B	A	B	B	B	X
		40	104	A	A	A	A	A						40	104			B	C	A				
		60	140	A	A	A	A	A						60	140			C	X	A				
		80	176	A	A	A	A	A						80	176			A						
		100	212				A	A						100	212			A						
		120	248				A	A						120	248			A						

**Methylene Chloride: PP & Viton recommended at 1 gm/litre concentration. *When DV Series Diaphragm Valves are used on nitric acid, the PVDF Gas Barrier is always recommended if a Teflon diaphragm.

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE
		°C	°F												°C	°F							
Nitroethane <chem>CH3CH2NO2</chem>	Pure	20	68				A	A	X	A	X	Oil - Lubricating (ASTM 2 and 3)	20	68	A		B	A	A	A	X	A	
		40	104				A						40	104	A		C	A	A	A		B	
		60	140				A						60	140	A		X	A	A	A			
		80	176				A						80	176			A	A	A				
		100	212										100	212			A	A	B				
		120	248										120	248			A	A					
Nitrogen Dioxide <chem>NO2</chem>		20	68	A	A	A	A	A	A	A	A	Oil - Sulfonated	20	68	A		A	A	A	A	A	A	
		40	104				A	A					40	104									
		60	140				A	A					60	140									
		80	176				A	A					80	176									
		100	212				A						100	212									
		120	248				A						120	248									
Nitromethane <chem>CH3NO2</chem>	Pure	20	68				A	A		B	X	Oil - Machine, Mineral, Motor	20	68	A		A	A	A	A	X	A	
		40	104				A	A					40	104	A		B	A	A	A		A	
		60	140				A						60	140	A		C	A	A	A		B	
		80	176				A						80	176			A	A					
		100	212										100	212			A	A					
		120	248										120	248									
Nitrotoluene <chem>C6H4CH3NO2</chem>	Pure	20	68	X	X	A	A	A	C	X	C	Oil - Petroleum (Crude Oil)	20	68	B		B	A	A	A	X	A	
		40	104			A	A	A			X		40	104			A	A					
		60	140				A	A					60	140			A	A					
		80	176				A						80	176			A	A					
		100	212				A						100	212			A	A					
		120	248				A						120	248			A	A					
Nitrous Acid <chem>HNO2</chem>	10	20	68			C	A	A	A	B	X	Oleic Acid <chem>CH(CH2)7CH3 CH(CH2)7COOH</chem>	20	68	A	B	A	A	A	A	X	X	
		40	104			X	A	A					40	104	A	B	A	A	A	A			
		60	140				A	A					60	140	A	B	A	A	A	A			
		80	176				A	A					80	176			A	A	A	A			
		100	212										100	212			A	A	A	A			
		120	248										120	248			B	A	B				
Nitrous Oxide <chem>N2O</chem>		20	68	A		A	A	A	A	A	A	Oleum (fuming sulphuric acid) <chem>H2SO4+SO3</chem>	20	68	X	X	X	X	A	X	X	X	
		40	104	A		A	A	A	A	A	A		40	104									
		60	140	A		A	A	A	A	A	A		60	140									
		80	176			A	A	A	A	B			80	176									
		100	212			A	A	B					100	212									
		120	248			B	A	B					120	248									
Octane <chem>C8H18</chem>		20	68				A	A	A	X	A	Olive Oil	20	68	A	A	A	A	A	A	B	A	
		40	104				A	A					40	104	A	A	A	A	A	A			
		60	140				A	A					60	140	A	A	A	A	A	A			
		80	176				A	A					80	176	A	A	A	A	A	A			
		100	212				A	A					100	212			A	A					
		120	248				A	A					120	248			A	A					
Octene <chem>CH3(CH2)5CH=CH3</chem>	Pure	20	68				A	A	A	X	A	Organic Phosphorus Series Insecticide (Sumition®)	20	68	X	X	A	A	A	A	A	C	
		40	104				A	A					40	104			A	A	A	A	A		
		60	140				A	A					60	140	B	A	A	A	A	A			
		80	176				A	A					80	176			A	A					
		100	212				A	A					100	212			B	A					
		120	248				A	A					120	248			B	A					
Oil - Heavy		20	68	B	B	X	A	A	B	X	B	Oxalic Acid <chem>HOOCCOOH</chem>	20	68	A	A	A	A	A	A	B	A	
		40	104				A	A	B				40	104			A	A	A	A			
		60	140				A	A					60	140	A	A	A	A	A	A			
		80	176				A						80	176	A	A	B	A					
		100	212				A						100	212			C	A					
		120	248				A						120	248			A						
Oil - Light (Incl. Diesel Fuels)		20	68	A		A	A	A	A	X	A	Oxalic Acid <chem>HOOCCOOH</chem>	20	68	A	A	A	A	A	A	B	A	
		40	104				A	A	A				40	104	A	A	A	A	A	A			
		60	140				A	A	A				60	140	A	A	A	B	A				
		80	176				A	A					80	176	A	A	C	A					
		100	212				A	A					100	212			A						
		120	248				A						120	248			A						
Oil - Lubricating (ASTM 1)		20	68	A		B	A	A	A	X	A	Oxygen Gas <chem>O2</chem>	20	68	A	A	A	A	A	A	A	B	
		40	104	A		C	A	A	A				40	104	A		A	A	A	A			
		60	140	A		X	A	A	A				60	140	A		A	A	A	A			
		80	176			A	A	A					80	176			A	A	A	A			
		100	212			A	A	A					100	212			A						
		120	248			A	A						120	248			A						

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE
		°C	°F												°C	°F							
Ozone Gas O ₃	7000 ppm	20	68	X	X	X	B	A		B		Phenylhydrazine Hydrochloride C ₆ H ₈ N ₂ ·HCl		20	68	X	X	A	A	A	A	A	X
		40	104					A						40	104			A	A	A	A		
		60	140					A						60	140			A	A				
		80	176											80	176								
		100	212											100	212								
		120	248											120	248								
Ozone Solution (Aqueous) O ₃	10 ppm	20	68	A	A	B	A	A	A	A	A	Phosgene Gas COCl ₂		20	68	X	X	X			X	X	
		40	104	A	B	B	A	A	A	A	A			40	104								
		60	140	B	B			A	A	B	B			60	140								
		80	176					A	A					80	176								
		100	212											100	212								
		120	248											120	248								
Ozone Solution (Aqueous) O ₃	0.5 mg/l	20	68	A	B	X	A	A	A	A	A	Phosphoric Acid H ₃ PO ₄		20	68	A	A	A	A	A	A	A	A
		40	104	A	B			A	A	A	A			40	104	A	A	A	A	A	A	A	A
		60	140	B				A	A	B	B			60	140	A	A	A	A	A	A	B	
		80	176					A	A					80	176	B	A	A	A	A	A	C	
		100	212											100	212			A	A	A			
		120	248											120	248			A	A				
Palmitic Acid C ₁₅ H ₃₁ COOH	Pure	20	68	A			A	A	A	A	B	Phosphoric Acid H ₃ PO ₄		20	68	A	A	A	A	A	A	A	A
		40	104				A	A	A					40	104	A	A	A	A	A	A	B	
		60	140				A	A	A					60	140	A	B	A	A	A	A	C	
		80	176				B	A	A					80	176	C	C	A	A	A	A	X	
		100	212					A	A					100	212			A	A	A			
		120	248					A	A					120	248			A	A				
Paraffin Oil		20	68	A	A	A	A	A	A	X	A	Phosphoric Acid H ₃ PO ₄		20	68	A	A	A	A	A	A	A	A
		40	104	A	A	A	A	A	A		A			40	104	A	B	A	A	A	A	B	
		60	140				A	A	A					60	140	B	B	A	A	A	A	X	
		80	176				A	A						80	176	C	B	A	A	A	A		
		100	212				A	A						100	212			A	A	A			
		120	248				A	A						120	248			A	A				
Peanut Oil		20	68	A	A	A	A	A				Phosphorus Oxychloride (Phosphoryl chloride) POCl ₃		20	68	X	X	X	X	B	X	X	X
		40	104				A	A						40	104						C		
		60	140				A	A						60	140								
		80	176				A	A						80	176								
		100	212				A	A						100	212								
		120	248				A	A						120	248								
Perchloro-ethylene Cl ₂ C=CCl ₂	Pure	20	68	X	X	B	A	A	A	X	X	Phosphorus Pentoxide P ₂ O ₅		20	68	A	A	A	A	A	A	A	A
		40	104			C	A	A	A					40	104			A	A	A	A	A	
		60	140			X	A	A	B					60	140			A	A	A	A	A	
		80	176			A	A							80	176			A	A				
		100	212				A	A						100	212			A	A				
		120	248											120	248			A	A				
Perchloric Acid HClO ₄	10	20	68	A			A	A	A	A	A	Phosphorus Red P ₄		20	68	A	A	A	A	A	A	A	A
		40	104	A			A	A	A	A	A			40	104			A	A				
		60	140	B			B	A	A	A	A			60	140			A	A				
		80	176				A	A						80	176			A	A				
		100	212				A	A						100	212			A	A				
		120	248				A							120	248			A	A				
Perchloric Acid HClO ₄	70	20	68	B		C	A	A	A	A	A	Phosphorus Trichloride PCl ₃		20	68	X	X	X	A	A	B	X	X
		40	104				A	A	A	A	A			40	104			A	A				
		60	140				A	A	A	A	A			60	140			A	A				
		80	176				A	A						80	176			A	A				
		100	212					A						100	212			A	A				
		120	248											120	248			A	A				
Phenol C ₆ H ₅ OH	Pure	20	68	A			A	A	A	A	A	Phosphorus Yellow P ₄		20	68	A	A	A	A	A	A	A	A
		40	104	B			A	A	A					40	104			A	A				
		60	140				B	B	A					60	140			A	A				
		80	176				X	B	A					80	176			A	A				
		100	212					A						100	212			A	A				
		120	248					A						120	248			A	A				
Phenylhydrazine C ₆ H ₅ NHNH ₂		20	68	X		C	A	A	X	B	X	Photographic Solutions (Sodium Thiosulfate) Na ₂ S ₂ O ₃		20	68	A	A	A	A	A	A	A	A
		40	104				A	A						40	104	A	A	A	A	A	A	A	
		60	140				A	A						60	140	A	A	A	A	A	A	A	
		80	176				B	A						80	176			A	A				
		100	212				C	A						100	212			A	A				
		120	248				X	A						120	248			A	A				

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Phthalic Acid <chem>C6H4(COOH)2</chem>		20	68	A		A	A	A	A	A	A	Plating Solutions (Zinc)		20	68					A	A	A		
		40	104			A	A							40	104					A				
		60	140			A	A							60	140					A				
		80	176			A	A							80	176					A				
		100	212			B	A							100	212					A				
		120	248				A							120	248					A				
Picric Acid <chem>C6H2(OH)(NO2)3</chem>	10	20	68	A	A	A	A	A	A	A	B	Polyethylene Glycol <chem>H(OCH2CH2)nOH</chem>		20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	B			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	C			60	140	A	A	A	A	A	A	A	A	
		80	176		B	A	A	A	A	B	B			80	176	B	B	A	A	A	A	A	A	
		100	212				A	A	C					100	212			A	A	A				
		120	248				A							120	248			A	A					
Plating Solutions (Brass)		20	68	A	A	A	A	A	A	A	A	Poly Aluminium Chloride <chem>[Al2(OH)nCl6-n]m</chem>		20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176		B	A	A	A	A					80	176			A						
		100	212				A	A						100	212									
		120	248				B	A						120	248									
Plating Solutions (Cadmium)		20	68	A	A	X	A	A	A	A	A	Polyvinyl Acetate <chem>[CH3COOCH2=CH2]n</chem>		20	68			A	A	A	A	A	A	A
		40	104	A	A		A	A	A	A	A			40	104			A	A					
		60	140	A	A		A	A	A	A	A			60	140			A	A					
		80	176		B		A	A	A	A	A			80	176			A	A					
		100	212				A	A						100	212			A	A					
		120	248				A	A						120	248			A	A					
Plating Solutions (Chrome)		20	68	A	A	X	A	A	A	A	A	Polyvinyl Alcohol <chem>[-CH2-CH(OH)-]n</chem>		20	68	A	A	A	A	A	A	A	A	
		40	104	A	A		A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	B	A		A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176		B		A	A	A	A	A			80	176			A	A	A	A	A	A	
		100	212				A	A						100	212			A	A					
		120	248				B	A						120	248			A	A					
Plating Solutions (Copper)		20	68	A	A	A	A	A	A	A	A	Potash (Potassium Carbonate) <chem>K2CO3</chem>		20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176		A	A	A	A	A					80	176			A	A	A	A	A	A	
		100	212				A	A						100	212			A	A					
		120	248				A	A						120	248			A	A					
Plating Solutions (Gold)		20	68	A	A	X	A	A	A	A	A	Potassium Acetate <chem>CH3COOK</chem>	Satu	20	68	A	A	A	A	A	A	A	A	
		40	104	A	A		A	A	A	A	A			40	104			A	A					
		60	140	A	A		A	A	A	A	A			60	140			A	A					
		80	176				A	A	A	A	A			80	176			A	A					
		100	212				A	A						100	212			A	A					
		120	248				A	A						120	248			A	A					
Plating Solutions (Lead)		20	68	A	A	A	A	A	A	A	A	Potassium Alum <chem>K2SO4Al2(SO4)3</chem>	Satu	20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176				A	A	A	A	A			80	176	A	A	A	A	A	A	B	B	
		100	212				A	A						100	212			A	A	A				
		120	248				A	A						120	248			A	A					
Plating Solutions (Rhodium)		20	68	A	A	A	A	A	A	A	A	Potassium Aluminum Silicate <chem>Al2O3·K2O·6SiO2</chem>		20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A		A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176				A	A	A	A	A			80	176	A	A	A	A	A	A	A	A	
		100	212				A	A						100	212			A	A	A				
		120	248				A	A						120	248			A	A					
Plating Solutions (Silver)		20	68				A	A	A	A	A	Potassium Bicarbonate <chem>KHCO3</chem>	Satu	20	68	A	A	A	A	A	A	A	A	
		40	104				A	A						40	104	A	A	A	A	A	A	A	A	
		60	140				A	A						60	140	A	A	A	A	A	A	A	A	
		80	176				A							80	176	A	A	A	A	A	A	A	A	
		100	212				A							100	212			A	A	A				
		120	248				A							120	248			A	A					
Plating Solutions (Tin)		20	68	A	A	A	A	A	A	A	A	Potassium Bichromate <chem>K2Cr2O7</chem>	Satu	20	68	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	B	B	B	A	A	A	A	B			60	140	A	A	A	A	A	A	A	A	
		80	176				A	A	B					80	176	B	B	A	A	A	A	B	B	
		100	212				A	A						100	212			A	A	A				
		120	248				B	A						120	248			A	A					

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Potassium Bisulfate KHSO ₄		20	68	A	A	A	A	A	A	A	A	Potassium Hydroxide (Caustic Potash) KOH	25	20	68	A	B	A	A	A	X	A	B	
		40	104	A	A	A	A	A	A	A	A			40	104	A	B	A	A	A	A	A	B	
		60	140	A	A	A	A	A	A	A	A			60	140	A	B	A	B	A	A	A	C	
		80	176	B	A	A	A	A	A	A	B			80	176	B	A	C	A	A	A	A	X	
		100	212					A	A	A				100	212			X	A					
		120	248					A	A					120	248									
Potassium Borate		20	68	A	A	A	A	A	A	A	A	Potassium Hypochlorite KClO	20	68	A	A	A	A	A	A	A	A	B	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A		A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	A	A			80	176									
		100	212					A	A					100	212									
		120	248					A	A					120	248									
Potassium Bromate KBrO ₃		20	68	A	A	A	A	A	A	A	A	Potassium Iodide KI	20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176	B	B	A	A							80	176	A	A	A	A	A	A	A	B	
		100	212					A	A					100	212									
		120	248					A	A					120	248									
Potassium Bromide KBr		20	68	A	A	A	A	A	A	A	A	Potassium Nitrate KNO ₃	20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	A	A			80	176	A	A	A	A	A	A	A	B	
		100	212					A	A					100	212									
		120	248					B	A					120	248									
Potassium Chlorate (Aqueous) KClO ₃		20	68	A	A	A	A	A	A	A	C	Potassium Perborate KBO ₃	20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	B	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176	B	B	A	A							80	176	A	A	A	A	A	A	A	A	
		100	212					A	A					100	212			A	A					
		120	248					A	A					120	248			A	A					
Potassium Chloride KCl		20	68	A	A	A	A	A	A	A	A	Potassium Perchlorate KClO ₄	20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	A	A			80	176	B	B	A	A	A	A	A	A	
		100	212					A	A	A				100	212			A	A					
		120	248					A	A					120	248			A	A					
Potassium Chromate K ₂ CrO ₄		20	68	A	A	A	A	A	A	A	A	Potassium Permanganate KMnO ₄	20	68	A	A	A	A	A	A	A	A	C	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	B	B	A	A	A	A	A	A			60	140	B	A	A	A	A	A	A	A	
		80	176	B	B	A	A	A	A	A	B			80	176	A	B	A	A	A	A	A	A	
		100	212					A	A	A				100	212			A	A					
		120	248					B	A					120	248			A	A					
Potassium Cyanide KCN		20	68	A	A	A	A	A	A	A	A	Potassium Permanganate KMnO ₄	20	68	A	A	A	A	A	A	A	A	X	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	B	A	A	A	A	A	A	A	
		80	176	B	B	A	A	A	A	A	B			80	176	B	B	A	A	A	A	A	A	
		100	212					A	A	B				100	212			A	A					
		120	248					A	A					120	248			A	A					
Potassium Ferricyanide K ₃ [Fe(CN) ₆]		20	68	A	A	A	A	A	A	A	A	Potassium Persulfate K ₂ S ₂ O ₈	20	68	A	A	A	A	A	A	A	A	X	
		40	104	A		A	A	A	A	A	A			40	104	A		A	A	A	A	A	A	
		60	140	A		A	A	A	A	A	A			60	140	A		A	A	A	A	A	A	
		80	176			A	A	A						80	176			A	A					
		100	212					A	A					100	212			A	A					
		120	248					A	A					120	248			A	A					
Potassium Ferrocyanide K ₄ [Fe(CN) ₆]		20	68	A	A	A	A	A	A	A	A	Potassium Phosphate K ₃ PO ₄	20	68	A	A	A	A	A	A	A	A	A	
		40	104	A		A	A	A	A	A	A			40	104	A		A	A	A	A	A	C	
		60	140	A		A	A	A	A	A	A			60	140	C		A	A	A	A	A	X	
		80	176			A	A	A						80	176			A	A	A	A	A	A	
		100	212					A	A					100	212			A	A	A	A	A	A	
		120	248					A	A					120	248			A	A					
Potassium Fluoride KF		20	68	A	A	A	A	A	A	A	A	Potassium Sulfate K ₂ SO ₄	20	68	A	A	A	A	A	A	A	A	A	
		40	104	A		A	A	A	A	A	A			40	104	A		A	A	A	A	A	A	
		60	140	A		A	A	A	A	A	A			60	140	A		A	A	A	A	A	A	
		80	176			A	A	A						80	176	A		A	A	A	A	A	B	
		100	212					A	A	A				100	212			A	A	A	A	A	A	
		120	248					A	A					120	248			A	A	B				

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE		
		°C	°F											°C	°F										
Potassium Sulfide K ₂ S		20	68	A	A	A	A	A	A	A	A	Radium Chloride RaCl ₂		20	68	A	A	A	A	A	A	A	X		
		40	104	A	A	A	A	A	A	A	A			40	104		A	A	A	A	A	A	A		
		60	140	A	A	A	A	A	A	A	A			60	140		A	A	A	A	A	A	A		
		80	176			A	A	A	A	A	A			80	176		A	A							
		100	212				A	A	A					100	212		A	A							
		120	248					A	A					120	248										
Potassium Sulfite K ₂ SO ₃		20	68	A	A	A	A	A	A	A	A	Rhodium Chloride RhCl ₃		20	68	A	A	A	A	A	A	A	A		
		40	104	A	A	A	A	A	A	A	A			40	104		A	A	A	A	A	A	A		
		60	140	A	A	A	A	A	A	A	A			60	140		A	A	A	A	A	A	A		
		80	176				A	A	A					80	176		A	A							
		100	212					A	A					100	212										
		120	248						A	A				120	248										
Potassium Thiocyanate KSCN		20	68	A	A	A	A	A	A	A	C	Salicylaldehyde C ₆ H ₄ OHCHO		20	68			A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A				40	104			A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A				60	140		B	A							
		80	176				A	A	A					80	176		C	A							
		100	212					A	A					100	212		X	A							
		120	248						A	A				120	248										
Propane CH ₃ CH ₂ CH ₃		20	68	A	A	A	A	A	A	A	X	Salicylic Acid C ₆ H ₄ OHCO ₂ H		20	68	A		A	A	A	A	A	A	A	
		40	104			A	A	A						40	104		A	A	A	A	A	A	A	A	
		60	140			B	A	A						60	140		A	A	A	A	A	A	A	A	
		80	176				A	A						80	176		A	A	A	A	A	A	A	A	
		100	212					A						100	212		B	A							
		120	248						A	A				120	248										
Propionic Acid CH ₃ CH ₂ COOH	50	20	68	A			A	A	A	X	B	Seleneous Acid		20	68			A	A						
		40	104	A			A	A	A					40	104										
		60	140				A	A	A					60	140										
		80	176					A						80	176										
		100	212						A					100	212										
		120	248											120	248										
Propyl Acetate CH ₃ CO ₂ C ₃ H ₇	Pure	20	68				A	A	X	B	X	Silicic Acid SiO ₃ ·nH ₂ O		20	68	A	A	A	A	A	A	A	A	A	A
		40	104				B	A						40	104	A	A	A	A	A	A	A	A	A	A
		60	140				C	A						60	140	A	A	A	A	A	A	A	A	A	A
		80	176				X	A						80	176	A	A	A	A	A	A	A	A	A	A
		100	212											100	212										
		120	248											120	248										
Propyl Alcohol C ₃ H ₇ OH	Pure	20	68	A	A	A	A	A	A	A	B	Silicone Oil		20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	B			40	104	A	A	A	A	A	A	A	A	A	
		60	140	B	A	A	A	A	A	A	C			60	140	A	A	A	A	A	A	A	A	A	
		80	176	B	B	B	A	A	A	A	A			80	176		A	A	A	A	A	A	A	A	
		100	212			C	A	A						100	212		A	A							
		120	248					A						120	248										
Propyl Nitrate C ₃ H ₇ NO ₃		20	68				A	A	X	B		Silver Acetate CH ₃ COOAg		20	68	A		A	A	A	A	A	A	A	
		40	104					A						40	104			A	A	A					
		60	140						A					60	140			A	A	A					
		80	176						A					80	176			A	A	A					
		100	212											100	212			A	A	A					
		120	248											120	248			A	A	A					
Propylene Dichloride CH ₃ CHClCH ₂ Cl	Pure	20	68	X	X	X	A	A	B	X	X	Silver Chloride AgCl		20	68	A	A	A	A	A	A	A	A	A	
		40	104					X	A					40	104	A	A	A	A	A	A	A	A	A	
		60	140						A					60	140	A	A	A	A	A	A	A	A	A	
		80	176											80	176			A	A	A	A	A	A	A	
		100	212											100	212			A	A	A	A	A	A	A	
		120	248											120	248			A	A	A	A	A	A	A	
Propylene Oxide CH ₃ CH(O)CH ₂		20	68	X	X		C	A	X	X	X	Silver Cyanide AgCN		20	68	A	A	A	A	A	A	A	A	A	
		40	104				X	A						40	104	A	A	A	A	A	A	A	A	A	
		60	140					A						60	140	A	A	A	A	A	A	A	A	A	
		80	176											80	176			A	A	A	A	A	A	A	
		100	212											100	212			A	A	A	A	A	A	A	
		120	248											120	248			A	A	A	A	A	A	A	
Pyridine C ₅ H ₅ N		20	68	X	X	A	C	A	X	B	X	Silver Nitrate AgNO ₃		20	68	A	A	A	A	A	A	A	A	A	
		40	104			A	C	A		C				40	104	A	A	A	A	A	A	A	A	A	
		60	140			B	X	A		X				60	140	A	A	A	A	A	A	A	A	A	
		80	176				A							80	176			A	A	A	A	A	A	B	
		100	212											100	212			A	A						
		120	248											120	248			A	A						

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM		Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	Nitrile		
		°C	°F											°C	°F										
Sodium Hydroxide (Caustic Soda) NaOH	50	20	68	A	B	A	A	A	X	A		CPE	Sodium Perborate NaBO ₃ ·4H ₂ O	20	68			A	A	A	A	A	A	A	
		40	104	A	B	A	B	A		A				40	104			A	A	A	A	A	A	A	
		60	140	A	C	A	C	A		A				60	140			A	A	A	A	A	A	A	
		80	176	X	A	X	A			A				80	176			A	A	A	A	A	A	A	
		100	212											100	212			A	A						
		120	248											120	248			A	A						
Sodium Hypochlorite (Bleach) NaOCl	3	20	68	A	A	B	A*	A	A	B	A	Sodium Perchlorate NaClO ₄	Sodium Peroxide Na ₂ O ₂	20	68			A	A	A	A	A	A	A	
		40	104	A	A	B	A*	A	B	B	A			40	104			A	A	A	A	A	A	A	
		60	140	B	B	B	A*	A	C	C	A			60	140	B	B	A	A	A	A	A	A	A	
		80	176								B			80	176	B	B	A	A	A	A	A	A	A	
		100	212											100	212			A	A						
		120	248											120	248			A	A						
Sodium Hypochlorite (Bleach) NaOCl	5	20	68	A	A	B	A*	A	A	B	A	Sodium Peroxide Na ₂ O ₂	Sodium Persulfate Na ₂ S ₂ O ₈	20	68			A	A	A	A	A	A	A	B
		40	104	A	A	B	A*	A	B	B	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140	B	B	C	B*	A	C	C	A			60	140	B	B	A	A	A	A	A	A	A	
		80	176								B			80	176	B	B	A	A	A	A	A	A	A	
		100	212											100	212			A	A						
		120	248											120	248			A	A						
Sodium Hypochlorite (Bleach) NaOCl	7	20	68	A	A	B	A*	A	A	B	A	Sodium Persulfate Na ₂ S ₂ O ₈	Sodium Phosphate (Acidic) Na ₃ PO ₄	20	68			A	A	A	A	A	A	A	X
		40	104	A	A	C	A*	A	B	C	A			40	104	A		A	A	A	A	A	A	A	
		60	140	B	B	C	B*	A	C	C	B			60	140	B		A	A	A	A	A	A	A	
		80	176								C			80	176			A	A	A	A	A	A	A	
		100	212								X			100	212			A	A						
		120	248											120	248			A	A						
Sodium Hypochlorite (Bleach) NaOCl	10	20	68	A	A	B	A*	A	A	X	A	Sodium Phosphate (Alkaline) Na ₃ PO ₄	Sodium Silicofluoride Na ₂ SiF ₆	20	68			A	A	A	A	A	A	A	A
		40	104	A	A	C	A*	A		B				40	104	A	A	A	A	A	A	A	A	A	
		60	140	B	B	C	B*	A		C				60	140	A	A	A	A	A	A	A	A	A	
		80	176								X			80	176	B	B	A	A	A	A	A	A	A	
		100	212											100	212			A	A	A	A	A	A	A	
		120	248											120	248			A	A						
Sodium Iodide NaI		20	68	A		A	A	A	A	A	A	Nitrile	Sodium Phosphate (Neutral) Na ₃ PO ₄	20	68			A	A	A	A	A	A	A	
		40	104	A		A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140				B	A	A	A	A			60	140	A	A	A	A	A	A	A	A	A	
		80	176				A							80	176	B	B	A	A	A	A	A	A	A	
		100	212											100	212			A	A	A	A	A	A	A	
		120	248											120	248			A	A						
Sodium Metasilicate Na ₂ SiO ₃		20	68	A	A	A	A	A	A	A	A	Sodium Sulfide Na ₂ S	Sodium Sulfite Na ₂ SO ₃	20	68			A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	B	A	A	A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	A	A			80	176			A	A	A	A	A	A	A	
		100	212				A	A	A					100	212			A	A	A	A	A	B	B	
		120	248				A	A						120	248			A	A						
Sodium Nitrate NaNO ₃	Satu	20	68	A	A	A	A	A	A	A	A	Sodium Sulfite Na ₂ SO ₃	Sodium Silicofluoride Na ₂ SiF ₆	20	68			A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	A	A			80	176	A	A	A	A	A	A	A	A	B	
		100	212				A	A	A					100	212			A	A	A	A	A			
		120	248				A	A						120	248			A	A						
Sodium Nitrite NaNO ₂	Satu	20	68	A	A	A	A	A	A	A	A	Sodium Sulfide Na ₂ S	Sodium Silicofluoride Na ₂ SiF ₆	20	68			A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140	B	B	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	A	
		80	176	B	A	A	A	A	A	A	B			80	176	A	A	A	A	A	A	A	B	B	
		100	212				A	A	A					100	212			A	A	A	A	A	B	B	
		120	248				A	A						120	248			A	A						
Sodium Palmitate Na(C ₁₅ H ₃₁ COO)	5	20	68			A	A	A				Sodium Sulfite Na ₂ SO ₃	Sodium Silicofluoride Na ₂ SiF ₆	20	68			A	A	A	A	A	A	A	
		40	104				A	A						40	104	A	A	A	A	A	A	A	A	A	
		60	140				A	A						60	140	A	A	A	A	A	A	A	A	A	
		80	176				A	A						80	176	A	A	A	A	A	A	A	B	B	
		100	212				A	A						100	212			A	A						
		120	248				A	A						120	248			A	A						

* Moulded PVDF material is suitable for Sodium Hypochlorite; however, fusion welded joints may fail prematurely.

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE		
		°C	°F												°C	°F									
Sodium Thiocyanate NaSCN		20	68	A	A	A	A	A	A	A	A	Sulfur Chloride S ₂ Cl ₂	20	68		C	A	A	A	X	X	X	X		
		40	104	A	A	A	A	A	A	A	A		40	104		X	A	A							
		60	140	A	A	A	A	A	A	A	A		60	140			A								
		80	176					A	A	A			80	176			A								
		100	212					A	A				100	212			A								
		120	248					B	A				120	248			A								
Sodium Thiosulfate (Photographic Solutions)		20	68	A	A	A	A	A	A	A	A	Sulfur Dichloride S ₂ Cl ₂	20	68		C	A	A	A	X	X	X	X	X	
		40	104	A	A	A	A	A	A	A	A		40	104		X	A	A							
		60	140	A	A	A	A	A	A	A	A		60	140			A								
		80	176		B	A	A	A	A	A	B		80	176			A								
		100	212					A	A	B	C		100	212											
		120	248					A	A				120	248											
Soybean Oil		20	68	A	A	A	A	A	A	A	A	Sulfur Dioxide Gas SO ₂	20	68	A	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A		40	104	A	A	A	A	A	A	A	A	A		
		60	140	A	A	A	A	A	A	A	A		60	140	A	A	A	A	A	A	A	A	A		
		80	176	B	B	A	A	A	A				80	176	A	A	A	A	A	A	B				
		100	212					A	A				100	212			A	A							
		120	248					A	A				120	248			A	A							
Stannic Chloride (Tin (IV) Chloride) SnCl ₄		20	68	A	A	A	A	A	A	A	A	Sulfur Dioxide Gas SO ₂	20	68	A	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A		40	104	A	A	A	A	A	A	A	A	A		
		60	140	A	A	A	A	A	A	A	A		60	140	B	A	A	A	A	A	A	A	A		
		80	176	B	B	A	A	A	A				80	176	B	B	A	A	A	A	A	A	A		
		100	212					A	A				100	212			A	A							
		120	248					A	A				120	248			A	A							
Stannous Chloride (Tin (II) Chloride) SnCl ₂		20	68	A	A	A	A	A	A	A	A	Sulfur Trioxide SO ₃	20	68	X	X	X	X	B	X	X	X	X	X	
		40	104	A	A	A	A	A	A	A	A		40	104											
		60	140	A	A	A	A	A	A	A	A		60	140											
		80	176	B	B	A	A	A	A				80	176											
		100	212					A	A				100	212											
		120	248					A	A				120	248											
Stearic Acid CH ₃ (CH ₂) ₁₆ COOH		20	68	A	A	A	A	A	A	B	A	Sulfuric Acid H ₂ SO ₄	20	68	A	A	A	A	A	A	A	A	A	A	
		40	104	A	A	B	A	A	A	A	A		40	104	A	A	A	A	A	A	A	A	A		
		60	140	A	A	B	A	A	B		B		60	140	A	A	A	A	A	A	A	A	A		
		80	176	B		A	A	C					80	176	A	A	A	A	A	A	A	B			
		100	212					A	A				100	212			A	A	A	A					
		120	248					A	A				120	248			A	A	A	A					
Styrene C ₆ H ₅ CH=CH ₂		20	68					A	A	A	X	C	Sulfuric Acid H ₂ SO ₄	20	68	A	A	A	A	A	A	A	A	A	A
		40	104					A						40	104	A	A	A	A	A	A	A	A	A	
		60	140					A						60	140	A	A	A	A	A	A	A	A	A	
		80	176					A						80	176	A	A	A	A	A	A	B	B		
		100	212					A						100	212			A	A	A	A				
		120	248					A						120	248			A	A	A	A				
Succinic Acid HOOC(CH ₂) ₂ COOH		20	68	A	A	A	A	A	A	A	A	Sulfuric Acid H ₂ SO ₄	20	68	A	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A		40	104	A	A	A	A	A	A	A	A	B		
		60	140	A	A	A	A	A	A	A	A		60	140	A	A	A	A	A	A	A	B			
		80	176	B	B	A	A	A	A				80	176	A	A	A	A	A	A	B	C			
		100	212					A	A				100	212			A	A	A	A					
		120	248					B	A				120	248			A	A	B						
Sugar Liquors		20	68	A	A	A	A	A	A	A	A	Sulfuric Acid H ₂ SO ₄	20	68	A	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A		40	104	A	A	A	A	A	A	A	A	B		
		60	140	A	A	A	A	A	A	A	A		60	140	A	A	A	A	A	A	A	A	B		
		80	176	A	A	A	A	A	A				80	176	B	A	A	A	A	A	C	C			
		100	212					A	A				100	212			A	A	B						
		120	248					A	A				120	248			C	A	C						
Sulfamic Acid HOSO ₂ NH ₂	20	20	68	A	A	A	A	A	A			Sulfuric Acid H ₂ SO ₄	20	68	A	A	A	A	A	A	A	A	B		
		40	104	A	A	A	A	A	A				40	104	A	A	A	A	A	A	A	A	B		
		60	140					A	A				60	140	A	A	A	A	A	A	B	B			
		80	176					A	A				80	176	B	B	A	A	A	A	X	X			
		100	212					A					100	212			A	A	B						
		120	248					A					120	248			C	B	C						
Sulfur S	Pure	20	68	A	A			A	A	A	C	X	Sulfuric Acid H ₂ SO ₄	20	68	A	A	A	A	A	A	A	A	B	
		40	104	A	A			A	A					40	104	A	A	A	A	A	A	A	B		
		60	140	B	B			A						60	140	B	B	A	A	A	B	C			
		80	176	B				A						80	176	C	B	A	A	B	X	X			
		100	212					A						100	212			B	A	C					
		120	248					A						120	248			X	B						

Sulfuric Acid at 90°C: up to 50% – PP rated "A", EPDM rated "B"; 51-93% – PP rated "C".

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE		
		°C	°F												°C	°F									
Sulfuric Acid H_2SO_4	90	20	68	A	A	A	A	A	A	B	C	Tartaric Acid (Dioxysuccinic Acid) CH(OH) COOH CH(OH) COOH	20	68	A	A	A	A	A	A	A	A	A		
		40	104	B	A	A	A	A	A	B	C		40	104	A	A	A	A	A	A	A	A	A		
		60	140	B	B	B	A	A	A	C	C		60	140	A	A	A	A	A	B	A	B	A		
		80	176	C	B	A	A	A	B	X	X		80	176		B	A	A	A		A	A	B		
		100	212			B	A	C					100	212			A	A							
		120	248			X	B	X					120	248			A	A							
Sulfuric Acid H_2SO_4	93	20	68	A	A	A	A	A	A	B	C	Tertiary Butyl Alcohol ($CH_3)_3C(OH)$	20	68	A	A	A	A	A	A	B	X			
		40	104	B	B	A	A	A	A	B	X		40	104			A	A							
		60	140	B	B	B	A	A	B	C			60	140			A	A							
		80	176	C	B	A	A	B	X				80	176			A	A							
		100	212			C	B	A	X				100	212					A						
		120	248			X	B						120	248			A								
Sulfuric Acid H_2SO_4	94	20	68	A	A	B	A	A	A	C	X	Tetrachloroethane $Cl_2CHCHCl_2$	20	68	X		B	A	A	A	X	X			
		40	104	B	B	B	A	A	B	X			40	104			A	A							
		60	140	B	C	B	A	A	C				60	140			A	A							
		80	176		C	B	A	C					80	176			A	A							
		100	212			C	A						100	212					A						
		120	248			X	B						120	248			A								
Sulfuric Acid H_2SO_4	95	20	68	A	A	C	A	A	A	X	X	Tetraethyl Lead $Pb(C_2H_5)_4$	20	68	A		A	A	A	A	X	B			
		40	104	B	B		A	A	C				40	104			A	A	A						
		60	140	C	C		A	A	C				60	140			A	A	A						
		80	176			B	A						80	176			A	A	B						
		100	212			C	A						100	212			A	A							
		120	248			X	B						120	248			A	A							
Sulfuric Acid H_2SO_4	* 96	20	68	A	B	X	A	A	B	X	X	Tetrahydrofuran $CH_2 - CH_2 - O - CH_2 - CH_2$	20	68	X	X	B	C	A	B	X	X			
		40	104	C	C		A	A	C				40	104			C	X	A						
		60	140	C	X		A	A	X				60	140			X	A							
		80	176			B	A						80	176				B							
		100	212			C	A						100	212				B							
		120	248			X	B						120	248											
Sulfuric Acid H_2SO_4	98	20	68	B	B	X	A	A	X	X	X	Tetralin (Tetrahydro-naphthalene) $C_{10}H_{12}$	20	68	X		X	A	A	A	X	X			
		40	104	C	C		A	A					40	104			A	A							
		60	140	X	X		B	A					60	140			B	A							
		80	176			C	A						80	176			B								
		100	212			X	B						100	212											
		120	248			B							120	248											
Sulfuric Acid H_2SO_4	100	20	68	X	X	X	X	A	X	X	X	Tetramethyl Ammonium Hydroxide $(CH_3)_4NOH$	20	68					A	A					
		40	104				A						40	104			A	A							
		60	140										60	140			B	A							
		80	176										80	176			B	A							
		100	212										100	212			C	A							
		120	248										120	248			A								
Sulfurous Acid H_2SO_3		20	68	A	A	A	A	A	A	A	C	Titanic Sulfate $Ti(SO_4)_2$	20	68	A	A	A	A	A	A	A	A	A		
		40	104	A	A	A	A	A	A	A	A		40	104	A	A	A	A	A	A	A	A	A		
		60	140	A	A	A	A	A	A	B			60	140	A	A	A	A	A	A					
		80	176	B	A	A	A	B	C				80	176	A	A	A	A	A	A	A				
		100	212			A	A	C					100	212			A	A							
		120	248			A							120	248			A								
Sulfuryl Chloride SO_2Cl_2	Pure	20	68	X	X		B	A	A	X	X	Titanium Dioxide TiO_2	20	68	A	A	A	A	A	A	A	A	A		
		40	104				C	A					40	104	A	A	A	A	A	A	A	A	A		
		60	140				A						60	140	A	A	A	A	A	A	A	A	A		
		80	176										80	176	A	A	A	A	A	A	A	A	A		
		100	212										100	212			A	A	A						
		120	248										120	248			A	A							
Tall Oil		20	68	A				A	A	A	B	A	Titanoous Sulfate $Ti_2(SO_4)_3$	20	68	A	A	A	A	A	A	A	A	A	
		40	104	A				A	A	A		A		40	104	A	A	A	A	A	A	A	A	A	
		60	140	B				A	A	A		A		60	140	A	A	A	A	A	A	A	A	A	
		80	176					A	A					80	176	A	A	A	A	A	A	A	A	A	
		100	212					A	A					100	212			A	A						
		120	248					A	A					120	248			A	A						
Tannic Acid (Tannin) $C_76H_{52}O_{46}$		20	68	A	A	A	A	A	A	B	A	Titanium Tetrachloride $TiCl_4$	20	68	X		A		A	A	C	B			
		40	104	A	A	A	A	A	A				40	104							A	A			
		60	140	A	A	A	A	A	A				60	140											
		80	176			A	A	A					80	176											
		100	212			A	A	A					100	212											
		120	248			A	A						120	248											

Sulfuric Acid at 90°C: up to 50% – PP rated "A", EPDM rated "B"; 51-93% – PP rated "C".

*66 Baumé Sulphuric Acid = 96% concentration.

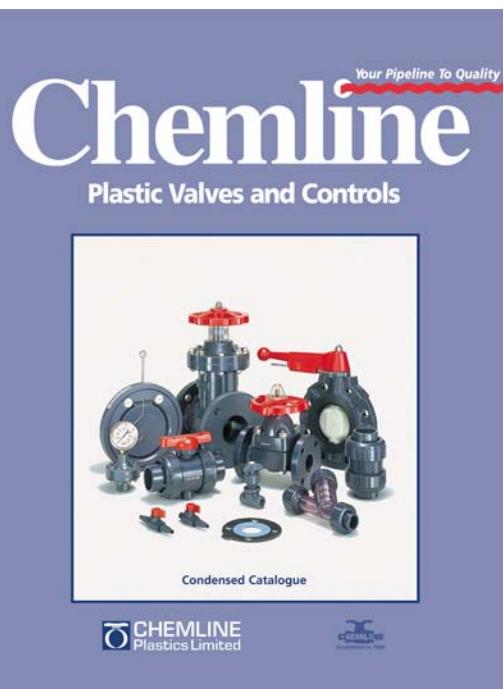
Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE		
		°C	°F											°C	°F										
Toluene (Toluol) <chem>C6H5CH3</chem>		20	68	X	X	A	A	A	A	X	X	Urea <chem>CO(NH2)2</chem>	50	20	68	A	A	A	A	A	A	A	A	A	
		40	104			C	A	A						40	104	A	A	A	A	A	A	A	A	A	
		60	140			X	B	A						60	140	A	A	A	A	A	A	A	A	A	
		80	176			B	A							80	176	A	A	A	A						
		100	212			C	B							100	212			A	A						
		120	248				C							120	248			A	A						
Triacetin <chem>C3H5O3(COCH3)3</chem>	Pure	20	68				A	B	A	B	B	Urine		20	68	A	A	A	A	A	A	A	A	A	
		40	104				A							40	104	A	A	A	A	A	A	A	A	A	
		60	140				A							60	140	A	A	A	A	A	A	A	A	A	
		80	176				A							80	176	A	A	A	A						
		100	212				A							100	212			A	A						
		120	248											120	248			A	A						
Tributyl Phosphate <chem>(C4H9O)3PO</chem>		20	68	X		A	A	A	X	B	X	Varsol		20	68			A	A	A	A	X	A		
		40	104			B	A	A						40	104										
		60	140			C	C	A						60	140										
		80	176			X	A							80	176										
		100	212											100	212										
		120	248											120	248										
Trichloroacetic Acid <chem>Cl3C.COOH</chem>		20	68	C		A	A	A	X	X	X	Vaseline (Petrolatum)		20	68	A		A	A	A	A	X	A		
		40	104			A	B	A						40	104	A		A	A	A	A				
		60	140			B	C	A						60	140	A		A	A	A					
		80	176			X								80	176	C		A	A						
		100	212											100	212			A	A						
		120	248											120	248			A	A						
Trichloroethylene <chem>ClHC=CCl2</chem>		20	68	X	X	B	A	A	A	A	X	Vinegar		20	68	A	A	A	A	A	A	A	C		
		40	104			C	A	A	A	A				40	104	A	A	A	A	A	A	A			
		60	140			X	A	A	A	A				60	140	A	A	A	A	A	A	A			
		80	176			A	A	A	A	A				80	176	B	A	A	A						
		100	212				A	A						100	212			B	A						
		120	248											120	248			B	A						
Tricresyl Phosphate <chem>(CH3C6H4O)3PO</chem>	Pure	20	68	X	X	C	A	A	A	A	X	Vinyl Acetate <chem>CH3COOCH=CH2</chem>		20	68	X	X			A	A	X	B	X	
		40	104				A							40	104			A	A			X			
		60	140				A							60	140			A	A						
		80	176											80	176			A	A						
		100	212											100	212			A	A						
		120	248											120	248			A	A						
Triethanolamine <chem>(HOCH2CH2)3N</chem>		20	68			A	A	A	B	A	A	Water - Deionized, Distilled or Potable		20	68	A	A	A	A	A	A	A	A	A	
		40	104				A							40	104	A	A	A	A	A	A	A	A		
		60	140				A							60	140	A	A	A	A	A	A	A	A		
		80	176				A							80	176	A	A	A	A	A	A	A	A		
		100	212											100	212			A	A						
		120	248											120	248			A	A						
Triethylamine <chem>(C2H5)3N</chem>		20	68			B	A	A			X	Water - Sea		20	68	A	A	A	A	A	A	A	A	A	
		40	104			B	A							40	104	A	A	A	A	A	A	A	A	B	
		60	140			X	A							60	140	A	A	A	A	A	A	A	A	B	
		80	176			A								80	176	A	A	A	A	A	A	A	A	A	
		100	212											100	212			A	A						
		120	248											120	248			A	A						
Trimethyl-propane <chem>C6H14</chem>		20	68	A	A	A	A	A	A	A	A	Water - Waste (Domestic Sewage)		20	68	A	A	A	A	A	A	A	A	A	
		40	104	A	A	A	A	A	A	A	A			40	104	A	A	A	A	A	A	A	A	A	
		60	140	A	A	A	A	A	A	A	A			60	140	A	A	A	A	A	A	A	A	A	
		80	176	A	A	A	A	A	A	A	A			80	176	A	A	A	A	A	A				
		100	212			A	A							100	212			A	A						
		120	248											120	248			A	A						
Turpentine		20	68	A	A	B	A	A	A	A	B	Wine (Red and White)		20	68	A	A	A	A	A	A	A	A	A	
		40	104	A		C	A	A	A	A				40	104	A	A	A	A	A	A	A	A	A	
		60	140	A		X	A	A	A	A				60	140	B	B	A	A	A	A				
		80	176			A	A	A						80	176			A	A						
		100	212			A	A							100	212			A	A						
		120	248			A	A							120	248			A	A						
Uranium Oxide <chem>UO2</chem>		20	68			A	A	A	A	A	A	Xylene <chem>C6H4(CH3)2</chem>		20	68	X	X	X	A	A	B	X	C		
		40	104			A	A	A	A	A	A			40	104			A	A						
		60	140				A	A						60	140			A	A						
		80	176			A	A							80	176			A	A						
		100	212				A							100	212			A	A						
		120	248											120	248			A	A						

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE
		°C	°F												°C	°F							
Zinc Acetate $(\text{CH}_3\text{COO})_2\text{Zn}\cdot 2\text{H}_2\text{O}$	20 40 60 80 100 120	68	A	A	A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	25	68	A	A	A	A	A	A	A	A	
		104	A	A	A	A	A	A	A	A	A	Ferric Chloride	28	104	A	A	A	A	A	A	A	A	
		140	A	A	A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	20	140	A	A	A	A	A	A	A	A	
		176		A	A	A	A	A	A	A	B	Ferrous Chloride	28	176		A	A	A	A	B	B	B	
		212				A	A	A				Hydrochloric Acid (1:1)	20	212	B	B	A	A	C				
		248				A	A					Ferrous Chloride	28	248	B	A							
Zinc Bromide ZnBr_2	Satu	68	A	A	A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	20	68					A	A	A	A	
		104	A	A	A	A	A	A	A	A	A	Ferrous Chloride	28	104					A	A	A	A	
		140	A	A	A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	20	140					A	A	A	A	
		176				A	A					Ferrous Chloride	28	176					A	A	B	B	
		212										Hydrochloric Acid (1:1)	20	212					A	A	C		
		248										Ferrous Chloride	28	248					A	A			
Zinc Chloride ZnCl_2	20 40 60 80 100 120	68	A	A	A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	25	68					A	A		A	
		104	A	A	A	A	A	A	A	A	A	Ferrous Chloride	28	104					A	A		A	
		140	A	A	A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	20	140					A	A		A	
		176		A	A	A	A	A	A	A	A	Ferrous Chloride	28	176					A	A		B	
		212				A	A	A				Hydrochloric Acid (1:1)	20	212					A	A			
		248				A	A					Ferrous Chloride	28	248					A	A			
Zinc Cyanide $\text{Zn}(\text{CN})_2$	20 40 60 80 100 120	68	A		A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	10	68	A	A			A	A			
		104			A	A						Hydrofluoric Acid	15	104	B	B			A	A			
		140			A	A						Hydrochloric Acid (1:1)	10	140	B	B			A	A			
		176			A	A						Hydrofluoric Acid	15	176	X	X			A	A			
		212										Hydrochloric Acid (1:1)	10	212					A	A			
		248										Hydrofluoric Acid	15	248					A	A			
Zinc Nitrate $\text{Zn}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$	20 40 60 80 100 120	68	A	A	A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	18	68	A	A			A	A			
		104	A	A	A	A	A	A	A	A	A	Hydrofluoric Acid	20	104	B	B			A	A			
		140	A	A	A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	18	140	B	B			A	A			
		176		A	A	A	A	A	A	A	B	Hydrofluoric Acid	20	176	B				A	A			
		212			A	A	A	A				Hydrochloric Acid (1:1)	18	212					A	A			
		248				A	A					Hydrofluoric Acid	20	248					B	A			
Zinc Sulfate ZnSO_4	20 40 60 80 100 120	68	A	A	A	A	A	A	A	A	A	Hydrochloric Acid (1:1)	20	68	A	A	B	A	A	A	B	B	
		104	A	A	A	A	A	A	A	A	A	Nitric Acid	50 5g	104	A	A	C	A	A	B	A	B	
		140	A	A	A	A	A	A	A	A	A	Hydrochloric Acid	20 100g	140	B	B	X	A	A				
		176		A	A	A	A	A	A	A	B	Nitric Acid	50 5g	176	C			A	A				
		212			A	A	A	A				Hydrochloric Acid	36 %	212				B	A				
		248			A	A						Hydrochloric Acid (1:1)	36 %	248				B	A				
Mixed Chemicals												Ortho-chlorophenol	170 PPM	68	B	B	B	A	A	B	B	B	
												Hydrochloric Acid	36 %	104	B	B	B	A	A	B	B	B	
												Sulfuric Acid	98	140	B	B	B	A	A	B	C	C	
												Hydrochloric Acid	36 (1:1)	176	B			A	A	B			
												Sulfuric Acid	98 13g	212	C			B	A	C			
												Hydrochloric Acid	36 144g	248	X			A	A	X	X	X	
												Sulfuric Acid	98 13g	28	A			A	A	B			
												Chromic Acid	250	68	A	A	X	A	A	X	X	X	
												Ammonium Fluoride	8 g/l	104	A	A	A	A	A	A	A	A	
														140	B	B	A	A					
														176	C		A	A					
														212	A	A	A	A					
														248	A	A	A	A					

Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	Chemical	Concentration (%)	Temp.		PVC	CPVC	PP	PVDF	TEFLON	VITON	EPDM	NITRILE	
		°C	°F												°C	°F								
Chromic Acid	220	20	68	A	A	X	A	A	X	X		Sulfuric Acid	4	20	68	B	B	X	A	A	X	X		
		40	104	B	B			A	A						40	104	B	B	A	A				
Chromium Sulfate	1	60	140	B	B			A	A						60	140		B	A	A				
		80	176	B				A	A						80	176	C		A	A				
Sodium Silicofluoroide	12 g/l	100	212					A	A				Chromic Acid	400 g/l	100	212			A	A				
		120	248					A	A						120	248			B	A				
Chromic Acid	350	20	68	A	A	X	A	A	X	X		Sulfuric Acid	15	20	68	A	A	X	A	A	A	B		
		40	104	B	B			A	A						40	104	A	A	A	A	A	B		
Sodium Silicofluoroide	17	60	140	C	C			A	A				Chromic Acid	5	60	140	B	B		A	A	B	C	
		80	176					A	A						80	176			A	A	C	X		
Oxalic Acid	1 g/l	100	212					A	B				Phosphoric Acid	80 parts	100	212				A	A	X		
		120	248					A	B						120	248			A	A				
Nitric Acid	15	20	68	A	A	A	A	A	A			Sulfuric Acid	2	20	68	A	A	X	A	A	A	X		
	(1:1)	40	104	A	A	A	A	A	A						40	104	A	A	A	A	A	B		
		60	140	B	B	B	A	A				Chromic Acid	10	60	140	B	B		A	A	C			
Hydrofluoric Acid	3	80	176	X	X			A	A						80	176	B		A	A	X			
		100	212					A	A				Water	80 parts	100	212			A	A				
		120	248					A	A						120	248			A	A				
Nitric Acid	15	20	68	A	A	A	A	A	A	A		Sulfuric Acid	0.7	20	68	A	A	X	A	A	X	X		
	(1:1)	40	104	A	A	A	A	A	A	B					40	104	A	A		A	A			
		60	140	B	C	X	A	A	B			Chromic Acid	250	60	140	B	B		A	A				
Hydrofluoric Acid	5	80	176	X	X			A	A	B			Sodium Silicofluoride	1 g/l	80	176	B		A	A				
		100	212					A	A	C					100	212			A	A				
		120	248					B	A	X					120	248			A	A				
Nitric Acid	15	20	68	A	B	B	A	A				Sulfuric Acid	20	20	68	A	A	X	A	A	A	A		
	(1:1)	40	104	B	C	B	A	A							40	104	B	B	A	A	B	B		
		60	140	B	C		A	A				Chromic Acid	250	60	140	B	B		A	A	C	C		
Hydrofluoric Acid	10	80	176	X	X			A	A				Hydrofluoric Acid	10	80	176	C		A	A				
		100	212					B	A						100	212			A	A				
		120	248					B	A						120	248			B	A				
Nitric Acid	15	20	68	A	B	B	A	A				Sulfuric Acid	25	20	68	A	A	X	A	A				
	(1:1)	40	104	B	C	B	A	A							40	104	B	B	A	A				
		60	140	B	C		A	A				Hydrofluoric Acid	15	60	140	B	B		A	A				
Hydrofluoric Acid	15	80	176	X	X			A	A						80	176	X	X	A	A				
		100	212					B	A						100	212			B	A				
		120	248					B	A						120	248			B	A				
Nitric Acid	5	20	68	A	A	A	A	A				Sulfuric Acid	75	20	68	A	A	B	A	A				
	(1:1)	40	104	B	B	B	A	A							40	104	A	A	B	A	A			
		60	140	B	B	B	A	A				Nitric Acid	5	60	140	B	B	C	A	A				
Hydrofluoric Acid	20	80	176	X	B	C	A	A							80	176	B		A	A				
		100	212					B	A				Chlorine Gas	Trace	100	212			A					
		120	248					B	A						120	248			A					
Nitric Acid	50	20	68	B	B	B	A	A				Sulfuric Acid	75	20	68	A	A	A	A	A	A	A		
	100g	40	104	X	X	X	A	A							40	104	A	A	B	A	B	A		
		60	140					A	A				Sulfurous Acid	4	60	140	A	A	B	A	A	C	B	
Sulfuric Acid	50	80	176					A	A						80	176	B	B	A	A	X	C		
	100g	100	212					A	A						100	212			A	A				
		120	248					A	A						120	248			A	A				
Sulfuric Acid	2	20	68	A	A	X	A	A	A	B		Sulfuric Acid	150	20	68	A	A	A	A	A	A	A		
	(1:1)	40	104	A	A			A	A	B					40	104	A	A	A	A	A	A		
		60	140	B	B			A	A	C			Spelter	80	60	140	A	A	A	A	A	A	A	
Chromic Acid	1	80	176	B				A	A	X			Manganese Sulfate	2 g/l	80	176	B	B	A	A	B	B	B	
		100	212	C				A	A						100	212			A	A				
		120	248					A	A						120	248			A	A				
Sulfuric Acid	10	20	68	A	B	X	A	A	A	B		Sodium Sulfide	225	20	68	A	A	A	A	A	A	A		
	(1:1)	40	104	B	B			A	A	B					40	104	A	A	A	A	A	A		
		60	140	C	X			A	A	C			Sulfuric Acid	225	60	140	A	A	A	A	A	A	A	
Chromic Acid	10	80	176					A	A						80	176	B	B	B	B	A			
		100	212					A	A				Formaldehyde	50 g/l	80	176	B	B	B	B	B	A		
		120	248					A	A						100	212			B	B	A			
Sulfuric Acid	10	20	68	A	B	X	A	A	B	C		Sulfuric Acid	98	20	68									
	(1:1)	40	104	B	B			A	A	C					40	104								
		60	140	C	X			A	A	X					60	140								
Chromic Acid	25	80	176					A	A				Phosphoric Acid	80	20	68								
		100	212					A	A						40	104								
		120	248					B	A						60	140								

Advantages of Chemline Solid Thermoplastic Valves and Controls

Light Weight – Chemline plastic valves are the soundest design choice for a plastic piping system. No special supporting is required. Installation and maintenance is fast and easy. For an overview of our product line, please request a copy of our English or French Condensed Catalogue.



The image shows the front cover of the Chemline Condensed Catalogue. The title "Chemline" is prominently displayed in large white letters, with "Plastic Valves and Controls" underneath. A sub-headline "Your Pipeline To Quality" is at the top right. Below the title is a photograph of various Chemline valves and fittings, including ball valves, butterfly valves, and pressure gauges. At the bottom left is the text "Condensed Catalogue". At the bottom right are two small logos: "CHEMLINE Plastics Limited" and "CHEMLINE Continuous In Motion".

High Strength – All Chemline valves are of heavy-duty construction. Due to the plastics' elasticity, high stresses will not develop when the valve bodies are strained.

High Product Purity – PVC and CPVC resins for Chemline valves meet requirements for toxicity as detailed in CSA Standard B137.0. The PP and PVDF compounds meet

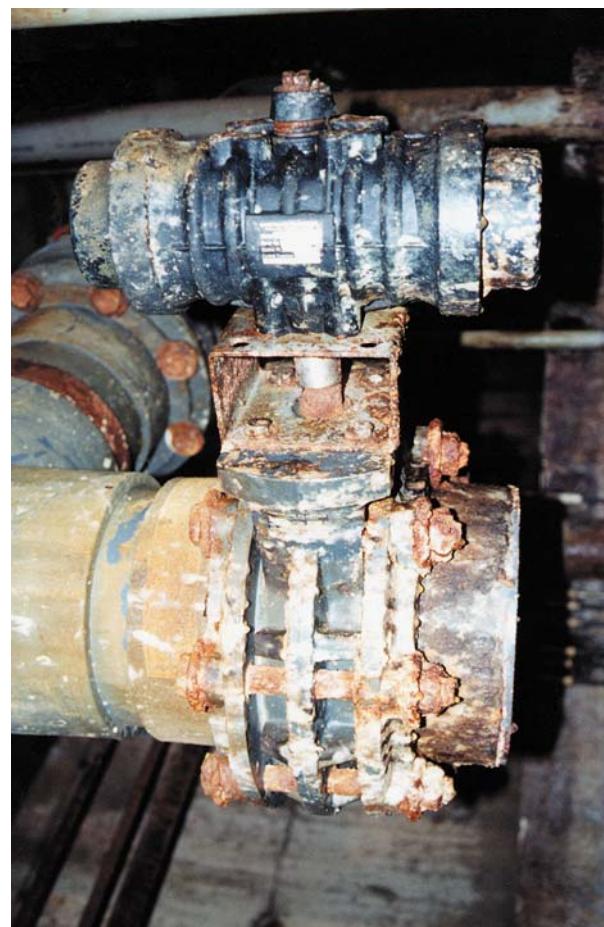
FDA requirements for contact with food.

High Corrosion Resistance – Inside and Out

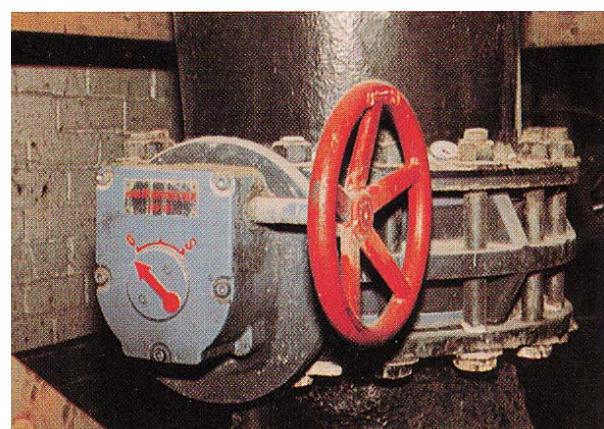
Chemline valves will stand up to many aggressive chemical services where expensive alloy metals fail. They are designed to withstand corrosive atmosphere.

No Lining Problems – Bodies and discs are solid plastic. There is no coating or lining which may peel, crack, perforate or abrade away.

Good Abrasion Resistance – Plastics have lower friction factors than metal and can better absorb the energy of impacting particles. Chemline valves outperform metal valves on abrasion.



This Chemline butterfly valve complete with P Series pneumatic actuator has been in service since 1985. It is on a wastewater line at an Ontario rendering plant. External corrosion is severe due to an ammonia atmosphere.



This 6" polypropylene butterfly valve is on wet sulphur dioxide gas up to 140°F in a paper mill in Ontario. It was installed in July 1979 to replace a much higher priced special alloy butterfly valve.

 **CHEMLINE**
Plastics Limited

*Your Pipeline To Quality Valves,
Piping, Flow Meters and Controls*

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