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GENERAL CHEMICAL RESISTANCE GUIDE

Provided Compliments
of
TRU-TECH Valve

TRU-TECH VALVE
SIMPLIFY YOUR WORLD.

GENERAL CHEMICAL RESISTANCE GUIDE

This General Chemical Resistance Guide is provided compliments of TRU-TECH Valve. It is intended to be a guide only and is not to be construed in any way as recommendations from TRU-TECH Valve. Careful consideration must be given to chemical concentrations, temperature, and pressure. Anything that flows through the valve must be taken into consideration to ensure proper selection. The information is to be used as a guide only. TRU-TECH Valve does not make any recommendations to compatibility, and it is stressed that the customer is solely responsible for the selection and final determination of materials.

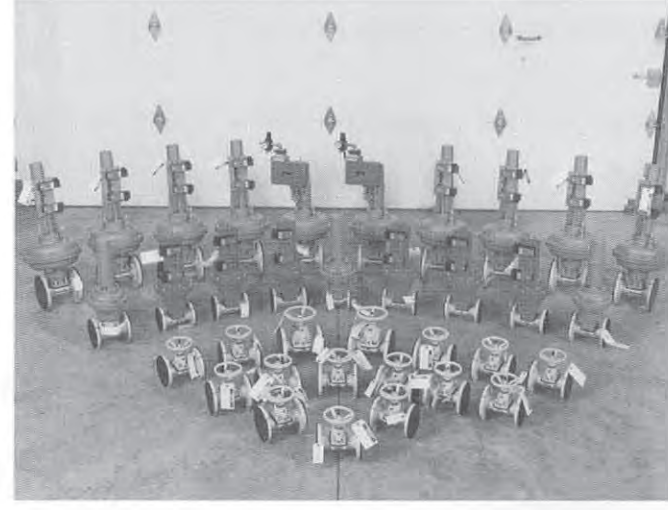
To the best of TRU-TECH Valve's knowledge, the information included in the publication is accurate. However, TRU-TECH Valve does not assume any liability whatsoever to the accuracy of the information. The manner of that use and whether there is any infringement of patents is the sole responsibility of the user.

Material Rating for Elastomers and Thermoplastics

Temperature in F	=	"A rating, maximum temperature which the material is excellent, resistant under normal conditions.
B to Temperature in F	=	Conditional resistance.
X	=	Not recommended.
Blank	=	No data available.

Material Rating for Metals

A	=	Excellent resistance under normal conditions.
B	=	Conditional resistance.
X	=	Not recommended.
Blank	=	No data available.



THERMOPLASTICS & ELASTOMERS

POLYPROPYLENE (PP) - A general purpose plastic lining with good chemical and temperature resistance. Utilized for water treatment, chemical processing, most plating fluids, steel mill pickling lines, food stuff, and drinking water.

PVDF (KYNAR) Polyvinylidene Fluoride - Offers very low permeability. A strong tough abrasion resistant fluorocarbon material resistant to most acids, bases, and organic solvents. It is ideally suited to handling wet or dry chlorine, bromine, and other halogens.

TEFZEL (ETFE) - Outstanding resistance to chemicals and strong acids. Also has high abrasion resistance for tough services. Below 350 degrees F has no known solvent.

TEFLON - TFE is simply the most chemical resistant of all elastomers and thermoplastic materials. It is excellent for handling strong acids, alkalies (Caustics), and solvents.

ETHYLENE PROPYLENE (EPDM) - The most popular general purpose material. Excellent chemical resistance to a wide variety of corrosive elements including acids, caustics, and hot water. It is abrasion resistant and good for high temperature service. EPDM has poor oil resistance. It is also satisfactory for intermittent steam sterilization.

BUNA-N (NBR) - Is a general purpose oil resistant polymer known as nitrile rubber. It is a copolymer of butadiene and acrylonitrile. Buna-N has a good solvent, oil, water, and hydraulic fluid resistance. It displays good compression set, abrasion resistance, and tensile strength. Nitrile should not be used in highly polar solvents such as acetone and methyl ethyl ketone, nor should it be used in chlorinated hydrocarbons, ozone, or nitro hydrocarbons. In most cases it is interchangable with Neoprene.

HYPALON (CSM) - Has good resistance to strong oxidizing agents including sulfuric acid. General resistance is similar to neoprene but with only moderate oil resistance. Also good in certain chlorine service, for alkalies, and is abrasion resistant.

NEOPRENE (CR) - Widely used in wastewater applications. A good choice for general purpose chemical resistance where the media contains entrained oils. It also resists aldehydes, certain alcohols, fertilizers, explosives, petroleum, air, acids, alkalies, and is abrasive resistant. Finally, in most cases is interchangable with Buna-N (Nitrile) Rubber.

VITON (FKM) - Offers exceptional resistance to oils, most chemicals and many solvents at elevated temperatures. It can be used in most applications involving mineral acids, salt solutions, and chlorinated hydrocarbons. Viton is not recommended for ammonia, its derivatives or polar solvents, E.G. Acetone. Very costly, but sometimes works where others fail.

Note: Tefzel, Hypalon, Viton, and Teflon are registered trademarks of E.I. DuPont Company.

METALS & ALLOYS

BRONZE: Has a higher strength than pure copper, is easily cast, has improved machinability, and is very easily joined by soldering or brazing. It is generally accepted as an industry standard for pressure rated bronze valves and fittings. It is very resistant to pitting corrosion, with general resistance to most chemicals less than that of pure copper.

SILICONE BRONZE: Possesses a equal or greater corrosion resistance to that of copper. It has the ductility of copper with more strength. Silicone bronze has higher resistance to stress corrosion cracking than common brasses.

ALUMINUM BRONZE: Heat treatable and the strength of steel. The formation of an aluminum oxide layer on exposed surfaces makes this metal very corrosion resistant. However, it is not suitable for pH wet systems.

CAST IRON (ASTM A-126 Class B): A general purpose material suitable for water, air, petroleum products, most solvents, dry powders, and a wide variety of chemicals when used in the unlined state. Can be lined with a wide variety of rubbers and plastics to handle almost any process media.

DUCTILE IRON (ASTM A-536-GR 65-45-12): A general purpose material with usage similar to cast iron. Ductile iron, however, is much stronger and more capable where there may be high pipeline stresses, danger from impact, or concern from leakage upon line or valve fracture. Normally, ductile iron can be used as a direct replacement for steel valves. Can be lined with a wide variety of rubbers or plastics to handle almost any process media.

CAST STEEL (ASTM A-126, GR WCB): Another general purpose material somewhat less resistant to corrosion than cast iron, especially where water is the media. Steel is much stronger and like ductile iron much more capable where there may be high pipeline stresses, danger from impact, or concern from leakage upon line or valve fracture. Steel valves are expensive and normally only used where specified by the end user. Can be lined with rubbers or plastics to handle almost any process media.

3% NICKEL IRON: Improved corrosion resistance over cast and ductile iron. Higher temperature corrosion resistance and mechanical properties. Very resistant to oxidizing atmospheres.

NICKEL-PLATED DUCTILE IRON: Nickels plating have received wide acceptance for use in chemical processing. These coatings have very high tensile strength. To some extent, the hardness of a material is indicative of its resistance to abrasion and wear characteristics.

400 SERIES STAINLESS STEEL: An alloy of chromium, iron, and carbon. It is normally magnetic because of its martensitic structure and iron content. This material is resistant to high temperature oxidation and has improved physical and mechanical properties over cast steel. Most 400 series stainless steels are heat-treatable.

316 STAINLESS STEEL (ASTM A-351 GR CF8M): An alloy of iron, carbon, nickel, and chromium A nonmagnetic stainless steel with more ductility than 400SS. 316 Stainless Steel has very good corrosion resistance to a wide variety of environments, is not susceptible to stress corrosion cracking and is not affected by heat treatment.

17-4 PH STAINLESS STEEL: Offers high strength and hardness. 17-4 PH withstands corrosive attack better than any of the 400 series stainless steels and in most conditions its corrosion resistance closely approaches that of 300 series stainless steel.

ALLOY 20 ST.ST. (ASTM A-351 GRADE CN-7M): Has higher amounts of nickel and chromium than 300 series stainless steels. It is more resistant to sulfuric acid and is used widely in chemical processing and water treatment.

HASTELLOY C: It is a high nickel-chromium molybdenum alloy which has outstanding resistance to a wide variety of chemical process environments including strong oxidizers such as ferric chloride, wet chlorine, and chlorine gas. It is also resistant to nitric, hydrochloric, and sulfuric acids at moderate temperatures.

ALUMINUM: A non-ferrous metal, very light weight, about 1/3 the weight of steel. It exhibits excellent atmospheric corrosion resistance, but can be very reactive with other metals.

Note: 17-4 PH is a registered trademark of Armco Steel Company.
Alloy 20 is a registered trademark of Carpenter Technology.
Hastelloy C is a registered trademark of Cabot Corporation.

Chemical Resistance Guide for Valves

CHEMICALS AND FORMULA	CONCENTRATION	PLASTIC BODY LININGS				DIAPHRAGMS & BODY MATERIALS/LININGS						METALS												
		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Acetamide CH_3CONH_2			75	300	300	300	X	X	X	X	B	A		A	A	A			A	A	A	A	A	A	B
Acetic Acid CH_3COOH	25%	180	73	200	250	300	180	X	150	X	X	X	X	X	X	X	X	X	X	A	A	A	A	A	X
Acetic Acid CH_3COOH	50%	140	73	200	250	300	140	X	73	X	X	X	X	X	X	X	X	X	X	A	A	A	A	A	X
Acetic Acid CH_3COOH	85%	100	73	150	250	250	100	X	73	X	X	X	X	X	X	X	X	X	X	A	A	A	A	A	X
Acetic Acid CH_3COO	Glacial	100	X	100	230	300	B to 100	X	X	X	X	X	X	X	X	X	X	X	X	X	A	B	A	A	X
Acetic Anhydride $(CH_3CO)_2O$			X	X	300	300	X	70	200	B to 70	X	X	X	X	X	X	X	X	X	X	B	B	B	A	B
Acetone CH_3COCH_3		73	X	X	150	300	130	X	B to 70	X	X	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Acetonitrile CH_3CN			X	150	150	300	X	X		70	X										A		A	A	
Acetophenone $C_6H_5COCH_3$		120		X	300	350	140	X		X	X	X	X	X	X	X	X	X	X	X	X				X
Acetyl Chloride CH_3COCl				125	150	200	X	X	X	X	185	A	A	A	X	X	A		X		A	A	A		X
Acetylene $HC = CH$	Gas 100%	73	140	250	250	250	200	140	70	70	200	X	X	X	A	A	A	A	A		A	A	A		A
Acrylic Acid $H_2C:CHCOOH$	97%		X	150	200	200																			
Acrylonitrile $H_2C:CHCN$			X	73	150	300	X	X	140	X	X	A	A	A	A	A	A	A	A	A	A	A	A	B	
Adipic Acid $COOH(CH_2)_4COOH$	Sat'd.		140	150	250	300	200	180	140	160	250				X	X	B		X		B to 200		B	A	B
Allyl Alcohol CH_2=CHCH2OH	96%	140	X	125	250	250	70	160	70	B to 70	100	A	A	A	A	A	A	A	A	A	A	A	A	A	
Allyl Chloride CH2CHCH2Cl			X	212	200	300	X	X			70						X								X
Aluminum Acetate $Al(C_2H_4O_2)_3$	Sat'd.			275	300	300	200	B to 70	X	X	X	X		X		X					A		A		X
Aluminum Ammonium Sulfate (Alum) $AlNH_4(SO_4)_2 12H_2O$	Sat'd.	150	140	275	250	250	200	140			200	B	B	B			X			B	A		A		A
Aluminum Chloride Aqueous $AlCl_3$	Sat'd.	180	140	280	250	250	210	70	200	160	250	X	X	X	X	X	X	X	X	X	A	X	A		A
Aluminum Fluoride Anhydrous AlF_3	Sat'd.		73	280	250	250	210	180	200	160	250	X	X	X	X	X	X		X	X	B	X	B		
Aluminum Hydroxide $AlO_3{}^{\bullet}{}_3H_2O$	Sat'd.	140	140	280	250	250	210	180		100	200	X	X	X	B	B	X		B	B	A	A	A		
Aluminum Nitrate $Al(NO_3)_3{}^{\bullet}{}_9H_2O$	Sat'd.	180	140	280	250	250	210	180	100	100	100	X	X	X	X	X	X	X	X		A	A	A		X
Aluminum Oxychloride			140	275	300	300					X														

* NOTE: Standard Teflon Diaphragms are EPDM backed for flexibility. Therefore, maximum temperatures of Teflon do not exceed 300° F in this guide.

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CHEMICALS AND FORMULA	CONCENTRATION	PLASTIC BODY LININGS				DIAPHRAGMS & BODY MATERIALS/LININGS						METALS												
		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Aluminum Potassium Sulfate (Alum) $AlK(SO_4)•12H_2O$	Sat'd.	150	140	280	300	300	200	180	200	160	200	B	B	B			X			B	A		A		A
Aluminum Sulfate (Alum) $Al_2(SO_3)_3$	Sat'd.	180	140	280	250	250	210	200	160	140	185	X	X	X	X	X	X		X	X		B		A	X
Ammonia, Aqueous		See Ammonium Hydroxide																							
Ammonia Gas NH_3	100%	150	140	X	300	300	140	140	140	140	X	B			A		A				A	A	A	A	B
Ammonia Liquid NH_3	100%	73	X	X	300	300	140	B to 70	70	70	X	X	X	X			A			A	A	A	A	A	A
Ammonium Acetate $NH_4(C_2H_3O_2)$	Sat'd.	73	140	175	300	300	140		140	140		X	X	X							B				
Ammonium Bifluoride NH_4HF_2	Sat'd.		140	150	300	300	200	180			200	X			X	X	X	X	X	X	B	B	B		
Ammonium Bisulfide $(NH_4)HS$			140	280	300	300		180																	
Ammonium Carbonate $CH_2O_3•2H_3N$	Sat'd.	180	140	280	300	300	210		140	140	250	X					A to 140	X		B	B	B	B	A	B to 212
Ammonium Chloride NH_4Cl	Sat'd.	180	140	280	300	300	210	180	200	160	250	X			X	X	X	X	X	X	B	X	B	B	B
Ammonium Dichromate $(NH_4)_2Cr_2O_7$			73	250	270	300	70	100	100	100															
Ammonium Fluoride NH_4F	10%		140	280	300	300	210	100	200	100		X					X				X				X
Ammonium Fluoride NH_4F	25%		73	280	300	300	140					X					X				X				X
Ammonium Hydroxide NH_4OH	10%	180	140	225	300	300	210	B to 70	200	150	70	X	X				X			B	A	A	A	A	B
Ammonium Hydroxide NH_4OH	Sat'd.	180	100	225	300	300	175	X	200	150	X	X	X				X			B to 70	A to 140			B	B to 120
Ammonium Nitrate NH_4NO_3	Sat'd.	180	140	280	300	300	250	180	200	160	100	X	X									A	A	A	
Ammonium Persulphate $(NH_4)_2S_2O_8$		150	140	73	200	200	210		70	70		X	X	X	X	X	X	X	X	B	A		A	A	X
Ammonium Phosphate (Monobasic) $NH_3H_3PO_4$	ALL		140	280	300	300	210	100	140	140	185	X	X	X	B	B	X		B	A	A	A	A	A	B
Ammonium Sulfate $(NH_4)_2SO_4$		180	140	280	300	300	210	180	200	160	200	X	X	X	B	B	X	B	B	B	B	B	A	A	X
Ammonium Sulfide $(NH_4)_2S$	Dilute			125	300	300	210	140	200	160		X	X	X	X	X	X		X		B		B		A
Ammonium Thiocyanate NH_4SCN	50-60%		140	275				70	70	70	185	X	X	X	X	X	X		X		A	A	A	A	B
Amyl Acetate $CH_3COOC_5H_{11}$		X	X	125	100	100	B to 70	X	X	X	X	B	B	B	B	B	B	A	B	A	A	A	A	A	A
Amyl Alcohol $C_5H_{11}OH$		180	100	280	300	300	210	B to 140	200	140	185	A	A	A	B	B	B		B	A	A	A	A		
n-Amyl Chloride $C_5H_{11}Cl$		X	X	280	300	300	X	X	X	X	200	A	A	A	A	A	A	A	A	A	A	A	A	A	X

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Aniline $C_6H_5NH_2$		180	X	120	200	200	140	X	70	X	X	X	X	X	B	B	X	B	B	A	A	A	A	A	X
Aniline Chlorohydrate			X																					A	
Aniline Hydrocloride $C_6H_5NH_2 \cdot HCl$	Sat'd.		X	75					X	X	185	X	X	X	X	X	X	X	X	X	X	X			
Anthraquinone $C_{14}H_8O_2$			140								200				X	X	X								
Anthraquinone Sulfonic Acid $C_{14}H_7O_2 \cdot SO_3H \cdot 3H_2O$			140								200														
Antimony Trichloride $SbCl_3$	Sat'd.	180	140	73			140	140	140	140	185	X	X	X	X	X	X	X	X	X	X	X	A		X
Aqua Regia (Nitrohydrochloric Acid) $ClHHNO_3$		X	X	73	200	200	X	X	B to 70	X	100	X	X	X	X	X	X	X	X		B		B	B	X
Argon Ar	Dry				300	300	200			100	200	A		A	A		A				A	A			
Arsenic Acid $H_3ASO_4 \cdot 1/2H_2O$	80%		140	280	300	300	185	160	200	180	200	X	X	X	X	X	X		X	B	A	B	A	A	X
Aryl Sulfonic Acid $C_6H_5SO_3H$			140				140				185														
Asphalt			X	250	300	300	X	B to 70	X	X	180	A	A	A	A	A	A	A	A	A	A	A	A	A	X
Barium Carbonate $BaCO_3$	Sat'd.		140	280	300	300	250	180	200	160	250	A	A	A	B	B	B	B	B	A	A	A	A		
Barium Chloride $BaC_{12} \cdot 2H_2O$	Sat'd.	180	140	280	300	300	250	180	200	160	300	A	A	A	B	B	X	B	B	B	A		A		
Barium Hydroxide $Ba(OH)_2$	Sat'd.	180	140	280	300	300	180	140	150	150	250	X	X	X	B	B	X		B	A	A	A	A	A	
Barium Nitrate $Ba(NO_3)_2$	Sat'd.	70	73	275	250	250	200	180	200	160	300	X	X	X	A	A	A		A		A		A		
Barium Sulfate $BaSO_4$	Sat'd.	X	140	280	300	300	200	100	200	160	300	B	B	B	B	B	A		B	A	A	A	A		
Barium Sulfide BaS	Sat'd.	180	140	280	300	300	140	X	200	160	300	X	X	X	B	B	X		B	A	A	A	A		
Beer		180	140	200	300	300	200	70	200	140	200	A	A	A	X	X	X		X	A	A	A	A		A
Beet Sugar Liquors		180	140	225			210	100	200	160	185			A	B	B	B				A	A	A		A
Benzaldehyde C_6H_5CHO	10%	73	73	70			140	X	X	X	X	A	A	A	X	X	B		X	A	A	A	A	A	
Benzene C_6H_6		X	X	170	250	250	X	X	X	X	150	A	A	A	A	A	A	A	A	A	A	A	A	A	
Benzene Sulfonic Acid C_6HSO_3H	10%	180	140	125			X	X	180	100	185	B	B	B	X	X	X		X	B	B	B	A		
Benzoic Acid C_6H_5COOH	All	140	140	230	300	300	X	X	160	200	250	X	X	X	X	X		X	A	A	A	A	A		
Benzyl Alcohol $C_6H_5CH_2OH$		120	X	250	300	300	X	X	X	X	140	A	A	A	B	B	B		B	A	A	A	A		
Bismuth Carbonate $(BiO)_2CO_3$			140					70	100	70															

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Black Liquor	Sat'd.		140	175	225	225	180	180	70	70	200	X	X	X	B	B	B		B	B	A	B	A		
Bleach		See Sodium Hypochlorite or Calcium Hypochlorite																							
Blood					200	200		70	70	70	70	B		B	X	X			B		A	A	A	A	
Borax $NaB_2O_7 \cdot_{10} H_2O$	Sat'd.	180	140	280			210	140	200	140	185	A	A	A	A	A	B	A	A	A	A	A	A	A	
Boric Acid H_3BO_3	Sat'd.	180	140	280			210	140	200	140	185	B	B	B	X	X	B		X	B	A	B	A	A	
Brake Fluid					300	300	140	X			X	B			B	B	A		B	A	A	A	A		
Brine	Sat'd.	180	140	280	300	300	250	180	180	160	300	A	A	A	X	X	X	B	X	B	A	B	A	A	
Bromic Acid $HBrO_3$			140	200			70				70	X	X	X											X
Bromine Br_2	Liquid	X	X	150	300	300	X	X	70	X	70	X	X	X	X	X	X	X	X	X	X	X	X	A	X
Bromine Br_2	Gas	X	X	150	200	200	X	X	70	X	70	X	X	X	X	X	X	X	X	X	X	X	A	A	X
Bromine Water	Cold Sat'd	X	70	212	300	300	X	X	70	X	185	X	X	X	X	X	X		X						X
Bromobenzene C_6H_7Br		X	X	150	120	120	X	X	X	X	150														
Bromotoluene C_7H_7Br		X	X	175	70	70	X	X	X	X	X														
Butadiene $H_2C:CHHC:CH_2$	50%	X	140	250	X	X	X	X	B to 140	140	185	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Butane C_4H_{10}	50%	73	140	250	300	300	X	70	200	70	185	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Butyl Acetate $CH_3COOCH(CH_3)C_2H_5$		X	X	73	175	175	140	X	X	X	X	B	B	B	B	B	B		B	A	A	A	A	A	
Butyl Alcohol $CH_3(CH_2)_2CH_2OH$		100	100	225	300	300	200	B to 140	140	140	75	B	B	B		B			A	A	A	A	A		
Butyl Cellosolve $HOCH_2CH_2OC_4H_9$			73		200	200	140	X	100		X	A	A	A	A	A			A	A	A	A	A		
n-Butyl Chloride C_4H_9Cl				280	300	300	X	X	X	X	100	B	B	B	B	B	B		B	B	B	B	B		
Butylene (C) $CH_3CH:CHCH_3$	Liquid		140	280	300	300	X	70	B to 100	X	100	A	A	A			A			A	A	A	A	A	
Butyl Phenol $C_4H_9C_6H_4OH$			73	230					B to 70	X															
Butyl Phthalate		180									70														
Butyl Stearate $CH_3(CH_2)_{16}CO_2(CH_2)_3CH_3$			73	100	250	250	X	100		X	185	A	A	A	B	B			B	A	A	A	A		
Butynediol $HOCH_2C:CCH_2OH$			73						100	B to 70															
Butyric Acid $CH_3CH_2CH_2COOH$		180	73	230	300	300	140		X	X	70	A	A	A	X	X	X	X	X	B	A	A	A		
Cadmium Cyanide $Cd(CN)_2$			140							70															
Calcium Bisulfide $Ca(HS)_2 \cdot_6 H_2O$			X	280	200	200		100	X		185										X		X		

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Chemical Resistance Guide for Valves

CHEMICALS AND FORMULA	CONCENTRATION	PLASTIC BODY LININGS				DIAPHRAGMS & BODY MATERIALS/LININGS						METALS												
		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Calcium Bisulfite $Ca(HSO_3)_2$		180	140	280	300	300	X	70	200	70	185	X	X	X	X	X	X		X	B	A		A	A	
Calcium Carbonate $CaCO_3$		180	140	280	300	300	210	100	70	70	300	X	X	X	B	B	B		B	A	A	A	A	A	
Calcium Chlorate $Ca(ClO_3)_2 \cdot H_2O$			140	280	300	300	140	70	70	70	185	B	B	B	B	B	B	B	B	B	A		A		
Calcium Chloride $CaCl_2$		180	140	280	300	300	210	100	200	160	250	B	B	B	A	A	X		X	B	A	B	A	A	
Calcium Hydroxide $Ca(OH)_2$		180	140	280	250	250	210	140	200	70	250	X	X	X	X	X	X		X	A	A	A	A	A	X
Calcium Hypochlorite $Ca(OCl)_2$	30%	150	140	200	200	200	70	X	140		185	X	X	X	X	X	X		X	B	B	B	B	B	X
Calcium Nitrate $Ca(NO_3)_2$		180	140	280	200	200	210	180	100	100	200	B	B	B	B	B			B		A		A		
Calcium Oxide CaO			140	250			210	180	200	160					A	A	B				A	A	A		
Calcium Sulfate $CaSO_4$			140	280	200	200	210	180	200	160	200	A	B	B	A	A	B	A	A	A	A	A	A	A	
Camphor $C_{10}H_{16}O$			73		300	300	210	100	70	X	250	B	B	B	B	B	B		B	A	A	A	A		
Cane Sugar $C_{12}H_{22}O_{11}$		73	140	275	300	300	250	180	100	160	200	A	A	A	A	A	A	A	A	A	A	A	A	A	
Caprylic Acid $CH_3(CH_2)COOH$				175	300	300									A	A	B		A		A		A		
Carbitol			73		200	200	70	70	70	70	100	B	B	B	B	B	B		B		B		B		
Carbon Dioxide CO_2	Dry 100%	150	140	20	300	300	200	180	200	160	200	A	A	A	A	A	A	A	A	A	A	A	A		A
Carbon Dioxide CO_2	Wet	150	140	280	300	300	210	180	200	160	200	A	A	A	B	B	B	B	B	A	A	A	A	A	A
Carbon Disulfide CS_2		X	X	73	200	200	X	B to 70	X	X	70	B	B	B	A	A	A		A	A	A		A	A	
Carbon Monoxide CO	Gas		140	275	300	300	250	70	200	70	250	A	A	A	A	A	B		A	A	A	A	A	A	A
Carbon Tetrachloride Cl_4		X	73	280	300	300	X	X	X	X	185	A	A	A	X	X	A		X	A	A	A	A	A	
Carbonic Acid H_2CO_3	Sat'd.		140	280	300	300	210	180	70	70	200	X	X	X	B	B	B	B	B	A	A	A	A		
Castor Oil			140	280	300	300	140	140	150	100		A	A	A	A	A	A	A	A	A	A	A	A	A	A
Caustic Potash		See Potassium Hydroxide																							
Caustic Soda		See Sodium Hydroxide																							
Cellosolve $C_4H_{10}O_2$			73	280	200	200	140	X	70		X	A	A	A	A	A	A		A		A		A		
Cellosolve Acetate $CH_3COOCH_2CH_2OC_2H_5$			73		300	300	140	X	X	X	X	B		B		B					B		B	A	B
Chloral Hydrate $CCl_3CH(OH)_2$	All		140	75					70	B to 70	X														
Chloramine NH_2Cl	Dilute		73						70	70		B	B	B	X	X	X				B		B		

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Chemical Resistance Guide for Valves

CHEMICALS AND FORMULA	CONCENTRATION	PLASTIC BODY LININGS				DIAPHRAGMS & BODY MATERIALS/LININGS						METALS												
		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Chloric Acid $HClO_3 \cdot H_2O$	10%		140		140	140			200	140	140	X	X	X	X	X	X	X	X	X	B	X	A		
Chloric Acid $HClO_3 \cdot H_2O$	20%		140		140	140					100	X	X	X	X	X	X	X	X	X	X	X	A		
Chlorine Gas (Dry) (Moisture Content)	<150 PPM	X	B#* to 120	200	300	300	X	X	X	X	185	X	X	X	B	A*	A*	B	B	B	A		A	A	X
Chlorine Gas (Wet) (Moisture Content)	>150 PPM	X	B#* to 120	200	300	300	X	X		X	185	X	X	X	X	X	X	X	X	X	X	X	X	A	X
Chlorine (>101 psi@77°F)	Liquid	X	X	200			X		B to 70	X	B to 100	B	B		X	X	X		X	X	X	X			
Chlorinated Water	<3500 PPM		140	210	300	300	B to 100	X	B to 70	X	185	B	B	X			X		X	B	A	A	A	A	X
Chlorinated Water	>3500 PPM	X	X	210	300	300	X	X	B to 70	X	185	X	X	X			X			X	A	B	A	A	X
Chloroacetic Acid $CH_2ClCOOH$	50%		140	X	200	200	70	X	200	X	X	X	X	X	X	X	X		X	X	X	X	B		X
Chloroacetyl Chloride $ClCH_2COCl$			73	125																					
Chlorobenzene C_6H_5Cl	Dry	73	X	170	200	200	X	X	X	X	70	A	A	A	X	X	B		X	A	A	A	A	A	
Chlorobenzyl Chloride $ClC_6H_4CH_2Cl$			X	125																A		A			
Chloroform $CHCl_3$	Dry	X	X	125	200	200	X	X	X	X	70	A	A	A	X	X	X		X	A	A	A	A		
Chloropicrin CCl_3NO_2			X	150																					
Chlorosulfonic Acid $ClSO_2OH$		X	73	X	200	200	X	X	X	X	X	X	X	X	B	B	X	X	B	X	X	X	B	A	X
Chromic Acid H_2CrO_4	10%	150	140	175	300	300	70	X	140	X	140	X	X	X	X	X	X	X	X	B to 212	A to 70		A to 125	A	X
Chromic Acid H_2CrO_4	30%	150	140	175	300	300	X	X	140	X	140	X	X	X	X	X	X	X	X	B to 212	B to 70		A to 125	A	X
Chromic Acid H_2CrO_4	40%	150	140	175	300	300	X	X	140	X	140	X	X	X	X	X	X	X	X	X	B to 70			A	X
Chromic Acid H_2CrO_4	50%	X	75	125	200	200	X	X	140	X	140	X	X	X	X	X	X	X		X	B to 70		B to 212	B	X
Chromium Potassium Sulfate $CrK(SO_4)_2 \cdot 12H_2O$		140	73	200			140	180	200	160	200					X					B	B	A		
Citric Acid $C_6H_8O_7$	Sat'd.	180	140	275	200	200	210	70	140	140	200	X	X	X	X	X	X		X	B	A	A	A	A	
Coconut Oil		73	140	280	300	300	X	70	B to 140	100	185	B	B	B	X	X	B		X	B	A		A		
Coffee							140	100			200	A	A	A	X	X	X			A	A	A	A		
Coke Oven Gas		73	140	230	300	300	70	B to 70	140		185	B	B	B	A	A	A	A	A	A	A	A			
Copper Acetate $Cu(C_2H_3O_2)_2 \cdot H_2O$	Sat'd.	73	73	250	300	300	100	180	X	160	140	X	X	X	X	X	X		X	B	A		A	A	

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Vacuum service only. Pressure service (greater than 7 psi) causes severe chemical attack. * Ratings are for body material only.

Chemical Resistance Guide for Valves

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		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Copper Carbonate $CuCO_3$	Sat'd.		140	280	300	300	210				185									B	A		A		
Copper Chloride CuC_{12}	Sat'd.		140	280	300	300	210	180	200	160	200	X	X	X	X	X	X	X	X	B	A		A	A	X
Copper Cyanide $Cu(CN)_2$			140	275	300	300	210	180		160	185	X	X	X	X	X	X	A	X	B	A		A		
Copper Fluoride $CuF_2{}_2H_2O$	2%		140	280			210	B to 70	140	140	185														
Copper Nitrate $Cu(NO_3)_2{}_3H_2O$	30%		140	280			210	B to 70	200	160	200	X	X	X	X	X	X		X	B	A		A		X
Copper Sulfate $CuSO_4{}_5H_2O$	Sat'd.	120	140	280			210	180	200	160	200	X	X	X	X	X	X		X	A	A	A	A	A	X
Corn Oil		73	73	275	300	300	X	180	X	X	300	B	B	B	B	B	B	B	B	A	A	A	A		
Corn Syrup		150	140	250				100	200	100	185														
Cottonseed Oil		150	140	280	300	300	X	180	200		185	B	B	B	B	B	B		B	A	A	A	A		A
Creosote			73		300	300	X	73	73	X	73	B	B	B	A	A	A	A	A	A	A	A	A	A	
Cresol $CH_3C_5H_4OH$	90%	73	X	150	200	200	X	X	B to 140	X	100										B				
Cresylic Acid C_7H_8O	50%		140	150	200	200	X	X	X	X	185	A	A	A	A	A	B	A	A	A	A	A	A		
Croton Aldehyde $CH_3CH:CHCHO$			X	125	200	200		X		70	X														
Crude Oil			140	280	300	300	X	70			200	X	X	X	X	X	B			A	A	A	A		
Cumene $C_6H_5CH(CH_3)_2$				100	300	300	X	X	X	X	200						B				B		B	A	
Cupric Fluoride CuF_2			140	280			210																		
Cuproc Sulfate $CuSO_4{}_5H_2O$	Sat'd.	73	140	280	250	250	210	180	140	160	200														
Cuprous Chloride CuCl	Sat'd.		140	250	300	300	200	180	70	70	200	X													
Cyclohexane C_6H_{12}		X	X	280	300	300	X	X	X	X	185	A	A	A	B	B	A		B	A	A	A	A	A	
Cyclohexanol $C_6H_{11}OH$		120	X	150	250	250	X	X	X	X	185				A	A			A	A	A	A	A		
Cyclohexanone $C_6H_{10}O$		X	X	73	200	200	70	X	X	X	X	B	B	B	B	B	B		B	B	A		A	A	
Decahydronaphthalene $C_{10}H_{18}$					300	300	X	X	X	X	200														
Detergents (Heavy Duty)		150	X				250	180	200	160	210	A	A	A	A	A	A	A	A	A	A	A	A		
Dextrin (Starch Gum)	Sat'd.		140	250	200	200	X	180			200	A	A	A	B	B	B				A		A		
Dextrose $C_6H_{12}O_6$			140	275	300	300	140	180	140	160	200	A	A		A						A		A		
Diacetone Alcohol $CH_3COCH_2C(CH)OH$		120	X	70	300	300	70	X		X	X	A	A	A	A	A	A	A	A	A	A	A	A	A	

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		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Dibutoxyethyl Phthalate $C_2OH_8OO_5$			X				B to 70	X	140	X	200	A	A	A	A	A	A		A		A		A		
n-Dibutyl Ether $C_4H_5OC_4H_9$				100	300	300	X	X	X	X	X														
Dibutyl Phthalate $C_6H_4(COOC_4H_9)_2$		120	X	X	300	300	70	X	X	X	X	A	A	A	A	A	A				A		A		
Dibutyl Sebacate $C_4H_9OCO(CH_2)_8OCOC_4H_9$			73	X	300	300	70	X	X	X	X														
Dichlorobenzene $C_6H_4C_{12}$			X	150			X	X	X	X	150				A	A			A		A		A		
Dichloroethylene $C_2H_2C_{12}$		X	X	225	300	300	X	X	X	X	185			B		B					B				
Diesel Fuels			140	280	300	300	X	70	X	X	185	A	A	A	A	A	A	A	A	A	A	A	A		
Diethylamine $C_4H_{10}NH$			X	73	200	200	70	70			X	X	X	X	A	A	X			A	A	A	A		
Diethyl Cellosolve $C_6H_{14}O_2$				280			X	140		100	200				A	A			A		A		A		
Diethyl Ether $C_4H_{10}O$		73	73	73			X				X														
Diglycolic Acid $O(CH_2COOH)_2$	Sat'd.		140	73	250	250	70	70			70														
Dimethylamine $(CH_3)_2NH$		120	140	75			140	X	X	X	X				X						A		A		
Dimethyl Formamide $HCON(CH_3)_2$		120	X	X	250	250	X	100	100	X	X	B	B	B	B	B	B				A		A		
Dimethylhydrazine $(CH_3)_2NNH_2$			X	X							X														
Dioctyl Phthalate $C_6H_4(COOC_8H_{14})_2$		X	X	75	200	200	70		X	X	70	A	A	A	X	X	X								
Dioxane $O:(CH_2)_4:O$		73	X	X			70	X	X	X	X	A	A	A	A	A	A					A			
Diphenyl Oxide $(C_6H_5)_2O$	Sat'd.			125			X	X		X	300	A	A	A	A										
Disodium Phosphate Na_2HPO_4			140	200	300	300	210	100	140			B	B	B	B	B					A		A		
Dow Therm A $C_{12}H_{10}•C_{12}H_{10}O$			X		212	212	X	X	X	X	X	A	A	A	B	A	A		A	A	A	A	A		
Ether $C_4H_{10}O$		73	X	125				X	X	X	X	A	A	A	B	B	B	A	A	A	A	A	A		
Ethyl Acetate $CH_3COOC_2H_5$		120	X	X	200	200	70	X	X	X	X	A	A	B	A	A	A			A	A	A	A	A	
Ethyl Acetoacetate $CH_3COCH_2COOC_2H_5$			X	73	200	200	100	X			X														
Ethyl Acrylate $CH_2:CHCOOC_2H_5$			X	73	300	300	70	X	X	X	X	A	A		A	A	A		A	A	A	A	A	A	
Ethyl Alcohol (Ethenol) C_2H_5OH		180	140	280	300	300	170	180	200	70		A	A	A	A	A	A	A	A	A	A	A	A	A	

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Ethyl Benzyne $C_6H_5C_2H_5$		X	X	125	300	300	X	X	X	X	70	B	B		B	B	B		B		A		A	A	
Ethyl Chloride C_2H_5Cl	Dry	73	X	280	300	300	B to 70	X	70	B to 70	140	A	A	B	A	A	A	A	A	A	A	A	A	A	
Ethyl Chlororacetate $CH_2ClOCO_2CH_5$			X	75																					
Ethylene Bromide $BrCH_2CH_2Br$	Dry	X	X	280	300	300	X	X		X	B to 70	A				A	A				A		A	A	
Ethylene Chloride $ClCH_2CH_2Cl$	Dry	73	X	280	300	300		X	X		70										A		A		
Ethylene Chlorohydrin $ClCH_2CH_2OH$		73	X	73	200	200	70	X	70	70	X							A							
Ethylene Diamine $NH_2CH_2CH_2NH_2$		120	X	225			70	100	100	100		A	X		A	B				A		A	B		
Ethylene Dichloride $C_2H_4Cl_2$	Dry	73	X	280	300	300	X	X	X	X	120	A	A		A	A	A		A		A	A	A		
Ethylene Glycol CH_2OHCH_2OC		120	140	280	300	300	210	180	200	160	250	A	A	A	A	A	A		A	A	A	A	A	A	
Ethylene Oxide CH_2CH2O		X	X	X	300	300	X	X	X	X	X	A	A		B	A	A		A		A		A	A	
Ethyl Ether $(C_2H_5)_2O$		X	X	125	250	250	X	X	X	X	X														
Ethyl Formate $HCOOC_2H_5$				73				X		70	X	A	A		A	A			A		A		A		
2-Ethythexanol $CH_3(CH_2)CHC_2H_5CH_2OH$				250					70	X															
Ethyl Mercaptan C_2H_5SH				75					X							A	A				A		A		
Ethyl Oxalate $(COOC_2H_5)_2$							140	X		X															
Fatty Acids R-COOH		120	140	280	300	300	X	140	X	140	185	X	X	X	X	X	X		X		A		A	A	X
Ferric Chloride (Aqueous) $FeCl_3$	Sat'd.	180	140	280	300	300	225	180	200	160	200	X	X	X	X	X	X	X		X	X	X	X	A to 175	X
Ferric Hydroxide $Fe(OH)_3$	Sat'd.	180	140	250	300	300	180	100	100	100	180				X	X			X		A		A		X
Ferric Nitrate $Fe(NO_3)_3 \cdot H_2O$	Sat'd.	180	140	280	300	300	210	180	140	160	200	X	X	X	X	X	X		X	B	A	A	A	A	
Ferric Sulfate $Fe_2(SO_4)_3$		180	140	280	200	200	210	140	140	140	185	X	X	X	X	X	X		X	B	A	A	A		
Ferrous Chloride $FeCl_2$	Sat'd.	180	140	280	300	300	200	180			200	X	X	X	X	X	X	X	X	X	X	X	X	B	X
Ferrous Hydroxide $Fe(OH)_2$	Sat'd.	180	73	250	300	300	180	180			180				X						A				X
Ferrous Nitrate $Fe(NO_3)_2$		140	73	280	300	300	180	180	140	160	200										A	A	A		
Ferrous Sulfate $FeSO_4$		180	140	280	300	300	200	180	140	160	200	X	X	B	X	X	X	X	X	A	A	A	A	A	
Fish Oil			140		300	300	X	70	X		70	A	A	X	B	A	A		A	A	A	A	A		

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Chemical Resistance Guide for Valves

CHEMICALS AND FORMULA	CONCENTRATION	PLASTIC BODY LININGS				DIAPHRAGMS & BODY MATERIALS/LININGS						METALS												
		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Flue Gas							X	180			300	A	A		A	A	A		A	A	A	A	A		
Fluoboric Acid HBF_4		73	140	275	300	300	140	160	140	160	140	B	B		X	X			X		A		A		X
Fluorine Gas (Dry) F_2	100%	X	73	73	X	X	X	X	140	X	X	B	B		X	X	A				A	A	A	A	
Fluorine Gas (Wet) F_2		X	73	73	X	X	X				100	X	X		X	X	X				A	A	A		
Fluosilicic Acid H_2SiF_6		See Hydrofluosilicic Acid																							
Formaldehyde HCHO	Dilute	X	140	125	300	300	140	X	200	140	X	A	A	B	X	X	B			A	A	A	A	A	
Formaldehyde HCHO	35%	X	140	125	300	300	140	X	150	140	X	A	A	B	X		B			A	A	A	A	A	
Formaldehyde HCHO	37%	X	140	125	300	300	140	X	X	100	X	A	A	B	X		B			A	A	A	A	A	
Formaldehyde HCHO	50%	X	140		300	300	140	X	X	140	X	B	B	B	X		B			B	A	A	A	A	
Formic Acid HCOOH		73	73	250	300	300	200	X	70	140	X	X	X	B	X	X	X	B	X	A	A	A	A	A	
Formic Acid Anhydrous HCOOH		180						X	160	100	X										A		A		
Freon 11 CCl_3F	100%		140	200	300	300	X	70	130	X	70	A	A	A	B	B	B		B	A	A	A	A		
Freon 12 CCl_2F_2	100%	73	140	200	X	X	X		130	130	X	A	A	A	B	B	B		B	A	A	A	A		
Freon 21 $CHCl_2F$	100%		X	200	300	300	X	X		X	X	A	A	A	B	B	B		B	A	A	A	A		
Freon 22 $CHClF_2$	100%	73	X	200	X	X	X	X	130	130	X	A	A	A	B	B	B		B	A	A	A	A		
Freon 113 $C_2Cl_2F_3$	100%		140	200	300	300	X	130	130	130	130	A	A	A	B	B	B		B	A	A	A	A		
Freon 114 $C_2Cl_3F_4$	100%		140	200	300	300	X	130	70	70	X	A	A	A	B	B	B		B	A	A	A	A		
Fructose $C_6H_{12}O_6$			140	280	300	300	175	140	140	160	225				A	A			A	A	A	A	A		
Furfural C_4H_3OCHO		X	X	75	300	300	140	X	70	70	X	A	A	A	A	A	A		A	A	A	A	A	A	
Gallic Acid $C_6H_2(OH)_3CO_2H$			140	75	300	300	70	X	70	70	185	B	B	X	X	X	X		X	A	A	A	A	A	
Gasoline, Leaded		X	X	275	200	200	X	70	70	70	100	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Gasoline, Unleaded		X	X	275	200	200	X	70	70		100	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Gasohol		X	X	280	200	200	X	70			100	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Gasoline, Sour		X	X	280	200	200	X	70			100	B	B		A	A	A		A	B	A	A	A	A	
Gelatin		180	140	250	300	300	200	180	200	160	250	X	X	B	X	X	X		X	X	X	A	A		
Glauber's Salt $Na_2SO_4 \cdot 10H_2O$					200	200	70	X	100	160	200	A	A		A	A			A	A	A	A	A		
Glucose $C_6H_{12}O_6 \cdot H_2O$		180	140	280	300	300	250	180	200	160	300	A	A	A	A	A	A	A	A	A	A	A	A	A	A

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		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Glue				250	300	300	100	140	200	160	250	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Glycerin $C_3H_5(OH)_3$		180	140	280	300	300	200	70	200	160	300	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Glycol		See Ethylene and Propylene Glycol																							
Glycol Amine												X	X	X	A	A	A		A		A		A		
Glycolic Acid $OHCH_2COOH$	Sat'd.	73	140	73	200	200		X	X	70	X	B	B		X	X	X		X		A		A		
Glyoxal CHOCHO								X	X	70		B	B	B	X	X	X		X		A	A	A		
Grape Sugar $C_6H_{12}O_6$			140				250	180	200	160	185														
Grease							X	150	X	100	200	X	X	X	A	A	A		A		A	A	A	A	
Green Liquor							150	150	70	70		X	X	X	A	A		A	A		A	A	A		
Gypsum $CaSO_4*H_2O$	Slurry			275	300	300	210	180	200	160	200	A	A	B	A	A	B	A	A	A	A	A	A	A	
Heptane C_7H_{16}		X	140	280	300	300	X	70	70	70	185	A	A	A	A	A	A	A	A	A	A	A	A	A	
n-Hexane C_6H_{14}		73	73	280	300	300	X	70	70	70	70	A	A	A	A	A	A	A	A	A	A	A	A	A	
Hexanol $CH_3(CH_2)_4CH_2OH$			100	175	300	300	X	70	70	B to 70	160	A	A	A	A	A	A		A	A	A	A	A	A	
Hydraulic Oil (Petroleum)			73		300	300	X	X	70	70	250	A	A	B	A	A	A		A	A	A		A		
Hydrazine H_2NNH_2			X	200	250	250	70	70	70		X	X	X	X	X	X	X		X		A		A		
Hydrobromic Acid HBr	20%	120	140	280	250	250	140	X	100	B to 70	185	X	X	X	X	X	X	X	X	X	X	X	X		X
Hydrobromic Acid HBr	50%	140	140	280	250	250	140	X	100	B to 70	185	X	X	X	X	X	X	X	X	X	X	X	X		X
Hydrochloric Acid HCl	<25%	150	140	280	250	250	150	X	100		100	X	X	X	X	X	X	X	X	X	B	X	B		X
Hydrochloric Acid HCl (Muriatic Acid)	37%	150	140	280	250	250	150	X	100		100	X	X	X	X	X	X	X	X	X	B	X	B		X
Hydrocyanic Acid HCN	10%	73	140	280	250	250	200	70	200		185	X	X	X	X	X	X	X	X	X	A	B	A	A	X
Hydrofluoric Acid HF	<3%	180	73	250	300	300	X	X	150	70	150	X	X	X	X	X	X	X	X	X	X	X	B	A	X
Hydrofluoric Acid HF	30%	140	73	250	300	300	X	X	150	70	150	X	X	X	X	X	X	X	X	X	X	X	B	A	X
Hydrofluoric Acid HF	40%	140	73	250	300	300	X	X	140	X	100	X	X	X	X	X	X	X	X	X	X	A	B	A	X
Hydrofluoric Acid HF	50%	100	73	200	300	300	X	X	140	X	75	X	X	X	X	X	X	X	X	X	X	X	B	A	X
Hydrofluosilicic Acid H_2SiF_6	50%	140	140	280	300	300	140	170	150		200	B	B		X	X	X		X	B	B	B	A		X
Hydrogen H_2	Gas	73	140	280	300	300	250	180	200	160	300	A	A	A	A	A	A	A	A	A	A	A	A	A	A

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Hydrogen Cyanide HCN			140	280				70	100	70													A		
Hydrogen Fluoride Anhydrous HF		73	X	200	250	250	70	X			X										A	A	A	A	
Hydrogen Peroxide H_2O_2	50%	150	140	150	300	300	100	X	200	X	185	X	X	X	X	X	B	X	X	A	A	A	A		X
Hydrogen Peroxide H_2O_2	90%		140	73	150	300	X	X	200	X	100	X	X	X	X	X	B	X	X	A	A	A	A	B	X
Hydrogen Phosphide PH_3			140	150																					
Hydrogen Sulfide H_2S	Dry	150	140	280			100	X	140	X	140	B			B		B				A	B	A	A	B
Hydrogen Sulfide H_2S	Wet		140	225			100	X	70	X	140	X	X	X	X	X	X		X	X	A	X	A	B	X
Hydrogen Sulfite H_2SO_3							70	X	70		100	X	X	X	X	X	X		X	X	A		A		
Hydroquinone $C_6H_4(OH)_2$	Sat'd.		140	250	300	300	X	70		X	185						A				A		A		
Hydroxylamine Sulfate $(NH_2OH)_2 \cdot H_2SO_4$			140				70			70															
Hypochlorous Acid HOCl	10%	73	140	70	300	300	70	X			70														
Inks					300	300		70		70	70	A	A	A	X	X	X		X		A		A		
Iodine I_2	10%	150		150	200	200	70	70	70	X	70	X	X	X	X	X	X		X	X	X	X	B	A	
Iron Phosphate FeH_3PO_4											180	X	X	X					B	A	A	A	A		
Isobutane $(CH_3)_2CHCH_3$					140	140	X	70	X	X	B to 70	A	A	A	A	A	A	A	A	A	A	A	A	A	
Isobutyl Alcohol $(CH_3)_2CHCH_2OH$				250	300	300	140	70	70	70	140										A		A		
Isooctane $(CH_3)_3CCH_2CH(CH_3)_2$		73		250	300	300	X	70	200	70	185	A	A	A	A	A	A	A	A	A	A	A	A	A	
Isophorone $C(O)CHC(CH_3)CH_2(CH_3)_2CH_2$				175			X	X			X														
Isopropyl Acetate $CH_3COCOCH(CH_3)_2$					200	200	70	X	X	X	X	A			A	A	A		A	A	A	A	A		
Isopropyl Alcohol $(CH_3)_2CHOH$		180	140	140	300	300	140	70	200	70	160	A	A	A	A	A	A	A	A	A	A	A	A		
Isopropyl Chloride $CH_3CHClCH_3$				100	200	200	X	X		X	70														
Isopropyl Ether $(CH_3)_2CHOCH(CH_3)_2$			X	125	140	140	X	70	X	X	X	A	A		A	A	A	A	A	A	A	A	A	A	
JP-3 Fuel			X		200	200	X	70	X	X	185	A	A	A	A	A	A	A	A	A	A	A	A	A	
JP-4 Fuel			X	200	300	300	X	70	X	X	300	A	A	A	A	A	A	A	A	A	A	A	A	A	
JP-5 Fuel			X	200	300	300	X	70	X	X	300	A	A	A	A	A	A	A	A	A	A	A	A	A	
JP-6 Fuel			X		200	200	X	100	X	X	100	A	A	A	A	A	A	A	A	A	A	A	A	A	
JP-8 Fuel			X		X	X	X	X	X	X	150														

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Kelp Slurry							X	70	X		100	B	B	B	B	B	B		B	A	A	A	A		
Kerosene		73	140	280	250	250	X	140	X	70	300	A	A	A	A	A	A	A	A		A	A	A	A	70
Ketchup			73		250	250	210	140	B to 70		200	X	X	X	X	X	X		X	B	A	A	A		X
Ketones			X	X	200	200	X	X	X	X	X	A	A	A	A	A	A		A	A	A	A	A		
Kraft Liquors			140		250	250		70	70	70	100	X	X	X	X	X	X		X		A		A		
Lactic Acid $CH_3CHOHCOOH$	25%	150	140	125	300	300	70		140	140	70	X	X	X	X	B	X		B	A	A	A	A		
Lactic Acid $CH_3CHOHCOOH$	80%	150	73	125	300	300	70	X	140		70	X	X	X	X	B	X		B	A	A	A	A	A	
Lard Oil		73	140	280	300	300	X	140	X	70	185	X	X	X	B	B	B		B		A		A		
Latex $(C_2H_6OSi)x$					200	200	70	70		100	70	A	A		A	A			A		A		A		
Lauric Acid $CH_3(CH_2)_{10}COOH$			140	225	300	300		70			100				X	X			X		A		A		
Lauryl Chloride $C_{12}H_{25}Cl$					300	300	140	70			200				X	X			X		A		A		
Lead Acetate $Pb(C_2H_3O_2)_2 \cdot 3H_2O$	Sat'd.	180	140	280	300	300	210	70	100	160	X	X	X		X	X	X		X		A		A		
Lead Chloride $PbCl_2$		73	140	250	300	300	X	100	100	70	140														
Lead Nitrate $Pb(NO_3)_2$	Sat'd.	180	140	250	300	300	175	180		140	225						A				A		A		
Lead Sulfate $PbSO_4$		150	140	250	300	300	210	180	200	140	225	B	B		X	X	X		X		B		B		
Lemon Oil		X		250	300	300			140	100	200				X	X			X	B	A	A	A		
Ligroin								100	X	70	100														
Lime Slurry CaO							100	100	160	100		A	A				A				A		A		
Lime Sulfur (CaS)x		73	140				210	X	160	100	185	X	X	X	A	A	A		A		A		A		
Linoleic Acid $CH_3(CH_2)_4HC{:}CHCH_2CH{:}CH(CH_2)_4COOH$			140	250	300	300	X	B to 70	X		140	X	X	X	X	X	X		X	X	B	B	A	A	
Linoleic Oil			140	230	300	300					70														
Linseed Oil		150	140	280	300	300	B to 70	180	200	70	250	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Liqueurs			140						70	70															
Lithium Bromide LiBr			140	225	300	300		140			200														
Lithium Chloride LiCl				250			100	70			140	B	B	B	B	B	X		B		A		A		
Lithium Hydroxide LiOH							100	70			140	X	X	X	A	A			A		A		A		
Lubricating Oil (ASTM #1)		X	140	280	300	300	X	180	X	70	150	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Lubricating Oil (ASTM #2)		X	140	280	300	300	X	180	X	70	150	A	A	A	A	A	A	A	A	A	A	A	A	A	A

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Lubricating Oil (ASTM #3)		X	140	280	300	300	X	180	X	70	150	A	A	A	A	A	A	A	A	A	A	A	A		A
Ludox SiO_2												X	X	X	A	A	A		A		A		A		
Magnesium Carbonate $MgCO_2$			140	280	225	225	170	140	140	140	210	B	B		B	B	B		B	A	A	A	A		
Magnesium Chloride $MgCl_2$	Sat'd.	180	140	280	300	300	170	180	200	160	170	A	A	B	X	X	X		X	X	X	X	B	A	
Magnesium Citrate $MgHC_6H_5O_7{\cdot}5H_2O$			140	250	300	300	175	180			225														
Magnesium Fluoride MgF_2							140				200					X			X		B				
Magnesium Oxide MgO							140	140		160		A	A			A			A						
Magnesium Sulfate $MgSO_4{\cdot}7H_2O$		180	140	280	300	300	175	180	140	160	200	A	A	A	A	A	A	A	A	A	A	A	A	A	
Maleic Acid HOOCCH:CHCOOH	Sat'd.	180	140	250	250	250	70	X		X	200	X	X	B	X	X	X		X	B	A	B	A	A	
Maleic Acid COOCHCHCH(OH)COOH		150	140	250	250	250	X	100	70	70	200	B	B		X	X	X		X	A	A	A	A		
Manganese Sulfate $MnSO_4{\cdot}4H_2O$		150	140	250	300	300	175	140	180	160	225	A	A	A	X	X	B		X		A		A		
Mercuric Chloride $HgCl_2$		180	140	250	300	300	210	140	140	140	185	X	X	X	X	X	X	X	X	X	X	X	B	A	X
Mercuric Cyanide $Hg(CN)_2$	Sat'd.		140	250	300	300	70	70	140	70	70	X	X	X	X	X	X		X		A		A		
Mercuric Sulfate $HgSO_4$	Sat'd.		140	230	300	300	70	70			70	X	X	X											
Mercurous Nitrate $HgNO_3{\cdot}2H_2O$	Sat'd.		140	230	300	300	70	X		X	70	X	X	X	X	X	X		X	A	A	A	A		
Mercury Hg		150	140	275	300	300	210	140	140	140	185	X	X	X	A	A	A		A	A	A	A	A	A	
Methane CH_4			140	275	300	300	X	180	70	70	185	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Methanol (Methyl Alcohol) CH_3OH		180	140	280	300	300	140	140	140	140	X	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Methoxyethyl Oleate $CH_3OCH_2CH_2(OOCC_{17}H_{33})$			73																						
Methyl Acetate $CH_3CO_2CH_3$				100	300	300	B to 70	X	X	X	X	B	B		B	B	B		B	B	A		A	A	
Methyl Acetone C_4H_8O				X			70		X	X		A	A	A	A	A	A	A	A	A	A	A	A		
Methyl Acrylate $CHCO_2C_2H_5$	Tech. Pure			100	300	300	B to 70	X	X	X	X				X						A		A		
Methyl Amine CH_3NH_2		X	X	X	300	300	70			70	100	X	X		A	A	B		A		A		A		
Methyl Bromide CH_3Br			X	280	300	300	X	70	X	X	185	X	X	B	X	X	B				B		B		

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Methyl Cellosolve $HOCH_2CH_2OCH_3$			X	280			70	X	70	70	X	A	A	B	B	B	B			A	A	A	A		
Methyl Chloride CH_3Cl	Dry		X	280	250	250	X	X	X	X	70	A	A	X	A	A	A	A	A	A	A	A	A	A	X
Methyl Chloroform CH_3CCl				125	200	200	X	X	X	X	70				A	A			A		A		A		
Methyl Ethyl Ketone (MEK) $CH_3COC_2H_5$		X	X	X	200	200	70	X	X	X	X	A	A	A	A	A	A		A	A	A	A	A	A	
Methyl Formate $HCOOCH_3$							100	X	X	70	X	A	A	A	A	A	X		A	A	A	A	A	A	
Methyl Isobutyl Carbinol $(CH_3)_2CHCH_2CH(CH_3)OH$					200	200	70	70	70	70	70														
Methyl Isobutyl Ketone $(CH_3)_2CHCH_2COCH_3$		X	X	X	200	200	70	X	X	X	X				A						A	A	A		
Methyl Isopropyl Ketone $CH_3COCH(CH_3)_2$				X	150	150	X	X	X	X	X														
Methyl Methacrylate $C_5H_8O_2$			73	125	150	150	X	X	70	X	X						X								
Methyl Sulfate $(CH_3)_2SO_4$			73	280	70	70																			
Methylene Bromide CH_2Br_2			X	175	250	250	X	X	X	X	70														
Methylene Chloride CH_2Cl_2			X	X	250	250	X	X	X	X	70	B	B	B	B	B	B				A	A	A	A	
Methylene Chlorobromide CH_2ClBr			X				X	X	X	X	X				A	A					A		A		
Methylene Iodine CH_2I_2				X	200	200	250																		
Methylsulfuric Acid CH_3HSO_4			140	125																					
Milk		170		225	300	300	250	180	200	160	300	B	B	B	X	X	X		X	X	A	A	A		X
Mineral Oil		120	140	280	300	300	X	140	B to 70	70	300	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Molasses		73	140	150	300	300	100	150	150	150	185	A	A	A	A	A	A		A	A	A	A	A	A	
Monochloroacetic Acid $CH_2ClCOOH$	50%	73	140	150	200	200	X	70	X	X	70	X	X	X	X	X	X		X	X	X	X	B		
Monochlorobenzene C_6H_5Cl	Tech. Pure	73		170	200	200	X	X	X	X	70	A	A		A	A	A	A	A	A	A	A	A		
Monoethanolamine $HOCH_2CH_2NH_2$			X	X	100	100	70	70	X	X	185			X	B	B	B		B		A		A		
Morpholine C_4H_8ONH				75	200	200	70	X	X	X	X	B	B		B	B	B		B	B	B	B	B		
Motor Oil		73	140		300	300	X	180			250	A	A	A	A	A	A	A	A	A	A	A	A		A
Muriatic Acid	37%	150	140	280	250	250	150	X	100		100	X	X	X	X	X	X	X	X	X	B	X	B		X
Naphtha		73	140	280	200	200	X	140	X	X	150	A	A	B	A	A	A	A	A	A	A	A	A	A	A
Naphthalene $C_{10}H_8$			X	200	250	250	X	X	X	X	170	A	A	B	A	A	A	A		A	A	A	A	A	A
Natural Gas		73	140	280	300	300	X	140	140	140	185	A	A	A	A	A	A	A		A	A	A	A	A	A

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Nickel Acetate $Ni(OOC_2H_3)_2 \cdot 4H_2O$			73	250	300	300	70	70	X		X														X
Nickel Ammonium Sulfate $NiSO_4 \cdot (NH_4)2SO_4 \cdot H_2O$					250	250		140	200	160		X	X	X	X	X	X				A		A		X
Nickel Chloride $NiCl_2$	Sat'd.	180	140	280	300	300	210	180	200	160	210	X	X	B	X	X	X				A		A	A	
Nickel Nitrate $Ni(NO_3)_2 \cdot 6H_2O$	Sat'd.		140	280	300	300	210	180			250	X	X		X	X	X			A	A	A	A		X
Nickel Sulfate $NiSO_4$	Sat'd.	180	140	280	300	300	210		200	160	300	X	X	B	X	X	X							A	
Nicotine $C_{10}H_{14}N_2$			140	70				X	70	X										B	A		A		
Nicotine Acid CsH_4NCOOH			140	250			70			140		B	B		X	X	X			B	B	B	B		
Nitric Acid HNO_3	<10%	140	140	175	250	250	70	X	100	X	185	X	X	X	X	X	X	X		B	A	A	A		X
Nitric Acid HNO_3	30%	73	140	125	250	250	70	X	100	X	160	X	X	X	X	X	X		B	A		A			X
Nitric Acid HNO_3	40%	X	100	125	250	250	X	X	70	X	140	X	X	X	X	X	X		B	A		A			X
Nitric Acid HNO_3	50%	X	100	125	250	250	X	X	70	X	120	X	X	X	X	X	X	X		B	A		A		X
Nitric Acid HNO_3	70%	X	73	125	250	250	X	X	X	X	100	X	X	X	X	X	X	X		X	A		A		B
Nitric Acid $HNO_3 \cdot NOx$	Fuming	X	X	X	70	70	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A		A		B
Nitrobenzene $C_6H_5NO_2$		73	X	73	300	300	X		X	X	70	B	B		A	A	A				A		A	A	
Nitroethane $CH_3CH_2NO_2$	Tech. Pure			70				X		X	X					A									
Nitrogen Gas N_2				275	300	300		140	100	140	185	A	A	A	A	A	A	A	A	A	A	A	A		A
Nitroglycerin $CH_2NO_3CHNO_3CH_2NO_3$			X	125	70	70						B	B			B	B				A		A		
Nitroglycol $C_2H_4N_2O_6$			X						70	70															
Nitromethane CH_3NO_2	Tech. Pure			120			70	X		X											A				
Nitrous Acid HNO	10%		73	230	300	300		X			100	X	X	X	X	X	X			B	B	B	B		X
Nitrous Oxide N_2O		73	73	X	300	300		X	B to 140	X	70	B	B		X	B	B				A		A	A	
n-Octane CH_8H_{18}				275	300	300	X	B to 70			70	A	A	A	A	A	A	A		A	A	A	A	A	A
Oleic Acid $CH_3(CH_2)_7CH(CH_2)_7COOH$		150	140	250	250	250	B to 70	100	70	B to 70	185	B	B	A	B	B	X			B	A	A	A	A	
Oleum		See Sulfuric Acid, Fuming																							
Olive Oil				250	300	300		140	B to 100	140	150	A	A	A	A	A	A	A	A		A	A	A	A	

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		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Oxalic Acid HOOCCOOH	50%	180	140	125	300	300	150	X		100	100	X	X	X	X	X	X	X	X	B	A	A	A	A	X
Oxygen Gas O_2		150	140	280	300	300	210	B to 70	140	140	185	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Ozone O_3			140	225	300	300	210	X	140	X	185	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Palm Oil				200	200	200	X	140	X		70	X	X		X	X	X		X		A		A		
Palmitic Acid $CH_3(CH_2)_{14}COOH$	10%	180	140	250	300	300	70	100	70	X	185	B	B	B	B	B	B		B	B	A	A	A		
Palmitic Acid $CH_3(CH_2)_{14}COOH$	70%	180	73	250	300	300		100	X	X	185	B	B	B	B	B	B		B	B	A	A	A		A
Parafin $C_{36}H_{74}$			140	250	250	250	X	100		140	300	A	A	A	B	A	A	B	B	A	A	A	A	A	
Peanut Oil			X	250	250	250	X	100			150	A	A		A	A			A		A		A		
Pentachlorophenol C_6Cl_5OH			X		70	70	X	X	X	X	250														
n-Pentane $CH_3(CH_2)_3CH_3$					100	100	X	100		70	100	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Peracetic Acid CH_3COOOH	40%		73																						
Perchloric Acid $HClO_4$	10%	73	73	200	250	250	70	X	70	70	70				X						A		A		
Perchloric Acid $HClO_4$	70%	73		125			70	X	X	X	185				X						B		B		
Perchloroethylene $Cl_2C:CCl_2$				275	200	200	X	X	X	X	200	B	B		B	B	B		B	A	A	A	A	A	
Perphosphate		170	140		250	250	70	70			70														
Phenol C_6H_5OH		73	73	125			70	X	X	X	200	A	A	X	X	X	X		X	A	A	A	A	A	
Phenylhydrazine $C_6H_5NHNH_2$			X	125	B to 70	B to 70	X	X	X		X														
Phospate Esters								X		X	100	X	X		X	X			X		A		A		
Phosphoric Acid H_3PO_4	10%	180	140	275	300	300	140	70	200	140	200	X	X	X	X	X	X	X	X	B	A	A	A		X
Phosphoric Acid H_3PO_4	50%	180	140	275	300	300	70	X	200	70	200	X	X	X	X	X	X	X	X	B	A	A	A		X
Phosphoric Acid H_3PO_4	85%	180	140	275	300	300	70	X	200	X	200	X	X	X	X	X	X	X	X	B	A	B	A		X
Phosphoric Anhydride P_2O_5		73	73	200													X				A		A		B
Phosphorus (Red)			70	75	300	300															A		A		
Phosphorus (Yellow)			73		300	300																			
Phosphorus Pentoxide P_2O_5		73	73	200			140							X			B				A		A		X
Phosphorus Trichloride PCl_3			X	200	300	300		X	X	X											A		A		X
Photographic Solutions		150	140						100	100	185					X					A		A		

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Phthalic Acid $C_6H_4(COOH)_2$			73	200				X	140	X	140	A	A		B	B	X		B		A	A	A	A	
Picric Acid $C_6H_2(NO_2)_3OH$	10%	170	170	73			140	X	70	70	140	X	X	X	X	X	X	X	X	B	A		A	A	X
Pine Oil								70		X	70	X	X	B	B	B	B		B	A	A	A	A		
Plating Solutions (Brass)		180	140	200	300	300	70			100	70														
Plating Solutions (Cadmium)		180	140	200	300	300	70			100	70														
Plating Solutions (Chrome)		180	140	200	300	300				160											A		A		
Plating Solutions (Copper)		180	140	200	300	300	70			160	70														
Plating Solutions (Gold)		180	140		300	300	70			125	70														
Plating Solutions (Lead)		180	140	200	300	300	70	70		70	70														
Plating Solutions (Nickel)		180	140	200	300	300	70				70		X								A		A		
Plating Solutions (Rhodium)		180	140	200	300	300					70														
Plating Solutions (Silver)		180	140	200	300	300	70			70	70										A		A		A
Plating Solutions (Tin)		180	140	200	300	300	100				140												A		
Plating Solutions (Zinc)		180	140	200	300	300	70				70						B								
Polysulfide Liquor					300	300	70	70	70	70	100	X	X	X	B	B			B		B		B		
Polyvinyl Acetate $(C_2H_6O_2)$				275	300	300	70	70	70	70	70	B	B	B	A	A	X		A	B	B	B	B		
Potash		See Potassium Carbonate																							
Potassium Alum $ALK(SO_4)_2 \cdot 12H_2O$			140	280	300	300	210	180	200	160	200														
Potassium Aluminum Sulphate $AlK(H_2SO_4)_2$			140	280	300	300	210	180	200	160	200		B				X			B	A		A		B
Potassium Amyl Xanthate $C_6H_{11}OS_2K$			73																						
Potassium Bicarbonate KH_2CO_3	Sat'd.	170	140	200	300	300	170	70	200	160	200						A				A		A		A
Potassium Bichromate $K_2Cr_2O_7$	Sat'd.		140	230	300	300	170	180			300		A				B			B	A		A		A
Potassium Bisulfate $KHSO_4$			140	275	300	300	170	180	140	140	200	B	B	B	X	X	X	X	X		A		A		
Potassium Bromate $KBrO_3$		180	140	275	300	300		180	140	140	250				X	A	A		A		A		A		

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Potassium Bromide KBr		180	140	280	300	300	170	180	200	160	200	B	B	B	X	X	X				A		A		
Potassium Carbonate K_2CO_3		180	140	280	300	300	170	180	200	160	200	B	B	B	A	A	A	A	A	A	A	A	A		
Potassium Chlorate $KClO_3$ (Aqueous)		180	140	200	300	300	140	B to 70	140	100	140	B	B		A	A	A	A		A	A	A	A		
Potassium Chloride KCl		180	140	280	300	300	210	180	200	160	200		B	A	B	B	B	B	X	B	B	B	A	A	
Potassium Chromate K_2CrO_4			140	280	300	300	170	140	70	70	200	A	A	B	B	B	B		B		A	A	A		
Potassium Cyanide KCN			140	280	300	300	140	180	200	160	185	X	X	X	B	B	B	B		A	A	A	A	A	X
Potassium Dichromate $K_2Cr_2O_7$	Sat'd.		140	280	300	300	170	180	200		300	B	B	X	B	B	X			A	A	A	A		
Potassium Ethyl Xanthate $KS_2COC_2H_5$			73																						
Potassium Ferricyanide $K_3Fe(CN)_6$			140	280	300	300	140	70	200	150	140	X	X		B	B	X				A		A		X
Potassium Ferrocyananide $K_4Fe(CN)_6 \cdot 3H_2O$			140	280	300	300	140	70	200	150	140	B	B	X	X	X	X			B	A		A		X
Potassium Fluoride KF			140	275	300	300	140	180			250										A		A		
Potassium Hydroxide KOH	25%	180	140	X	300	300	140	B	140	160	X	X	X	X	B	B	B	B		A	A	A	A		X
Potassium Hypochlorite KClO		X	140	200	300	300	X	B	70		70	X	X				X				A		A		
Potassium Iodide KI		73		250	300	300	140	100	140	160	180	B	B				B	B			A		A		
Potassium Nitrate KNO_3			140	280	300	300	210	180	140	140	250	A	A	B	B	B	B	B		A	A	A	A	A	
Potassium Perborate		170	140	275	300	300		70		70															
Potassium Perchlorate $KClO_4$			140	200	200	200	140	X	150		150														
Potassium Permanganate $KMnO_4$	10%	150	140	250	300	300	210	X	100	100	140	B	B		A	A	A			A	A	A	A		
Potassium Permanganate $KMnO_4$	25%	150	73	250	300	300	140	X	100	100	140	B	B		A	A	A			A	A	A	A		
Potassium Persulfate $K_2S_2O_8$			140	125	300	300	210	X	200	140	200														
Potassium Sulfate K_2SO_4		180	140	280	200	200	210	140	140	140	250	A	A	B	A	A	A	A	B	A	A	A	A	A	
Potassium Sulfide K_2S				275	300	300		100		70	100	X	X	X	X	X	X	B		B	B	B	B	A	
Potassium Sulfite $K_2SO_3 \cdot 2H_2O$					300	300	140	70		70	200	B	B	B	X	X	X				A		A		
Potassium Tetraborate $K_2B_4O_7 \cdot 8H_2O$			140	275	300	300	170	180	140	140	200					A	A		A		A		A		

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Potassium Tripolyphosphate $K_5P_3O_{10}$					300	300		70		70	100			B	A		A	A			A		A		X
Propane C_3H_8			140	280	300	300	X	70	B to 70	70	70	A	A	A	A	A	A	A		A	A	A	A	A	A
Propargyl Alcohol $HC{:}CCH_2OH$		140	100	140			140		140	X	140													
Propionic Acid $CH_3CH_2CO_2H$								140	70	X											A		A	
Propyl Acetate $C_3H_7OOCCH_3$				100	140	140	B to 70	X	X	X	X						A			A	A	A	A		A
Propyl Alcohol $CH_3CH_2CH_2OH$		140		140	300	300	140	140	140	140		A	A	A	A	A	A	A		A	A	A	A	A	A
n-Propyl Bromide $CH_3CH_2CH_2Br$					300	300	B to 70			70	70	B	B	B	B	B	B				A		A		
Propylene Dichloride $CH_3CCICHCl$			X	200			X	X		X	B to 70						A								
Propylene Glycol $CH_3CHOHCH_2OH$	<25%	140	140	150	300	300	70	180	70	100	140	A	A	A	A	A	A	A	A	A	A	A	A	A	X
Propylene Glycol $CH_3CHOHCH_2OH$	>25%	140	X	150	300	300	70	180	70	100	140	A	A	A	A	A	A	A	A	A	A	A	A	A	X
Propylene Oxide CH_3CHCH_2O			X	X	150	150	70	X	X	X	X						A				A		A		
n-Propyl Nitrate $C_3H_7NO_3$					200	200	70	X	X	X	X				A	A			A		A		A		
Pyridine $N(CH)_5CH$		73	X	X			B to 70	X	X	X	X	B	B		B	B	B		B	X	B		A		
Pyrogallic Acid $C_6H_3(OH)_3$			73	150	150	150		70		70		A	A		A	A	A		A	A	A	A	A	A	
Pyrrole $CHNH(CH)_2CH$							X	X	X	X	X	B	B		B	B	B		B		B		B		
Quinone $C_6H_4O_2$							100		X		X				A	A			A		A		A		
Rosin					200	200		70	70	70	100	X	X		X	X	X		X	A	A	A	A		
Salicylaldehyde C_6H_4OHCHO			X	125	200	200	70	70			70														
Salicylic Acid $C_6H_4(OH)(COOH)$			140	200	300	300	210	X	70	X	185	B	B		X	X	X		X		A		A		
Selenic Acid H_2SeO_4			140	150				70	70	70															
Silicic Acid $SiO_2 \cdot nH_2O$			140		300	300	140	100	140	140	200														
Silicone Oil		150	73	250	300	300	140	140	140	70	185	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Silver Chloride AgCl												X	X	X	X	X	X		X	X	X	X	A to 70		
Silver Cyanide AgCN			140	280	300	300	140	X		70	140	X	X	X	X	X	X		X		A to 100		A to 70		
Silver Nitrate $AgNO_3$		180	140	280	300	300	210	140	200	160	250	X	X	X	X	X	X		X	B	A		A		

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CHEMICALS AND FORMULA	CONCENTRATION	PLASTIC BODY LININGS				DIAPHRAGMS & BODY MATERIALS/LININGS						METALS												
		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Silver Sulfate Ag_2SO_4			140	250	300	300	170	140			200														
Soaps		73	140		300	300	210	180	140	140	250	B	B	A	B	B	B		B	A	A	A	A	A	
Sodium Acetate $NaC_2H_3O_2$	Sat'd.	180	140	280	300	300	170	X	70		X	A	A	B	B	B	X		B	B	A		A	A	
Sodium Alum $AlNa(SO_4)_2 \cdot 12H_2O$			140	280			170	180	140	140	210						X								X
Sodium Aluminate $NaAlO_2$	Sat'd.				300	300	200	180	140	140	200	X	X	B	B	B	A		B		A		A	A	
Sodium Benzoate C_6H_5COONa		170	140	280	300	300	210	140			200														
Sodium Bicarbonate $NaHCO_3$		180	140	280	300	300	250	180	200	160	300	A	A	B	A	A	X		A	A	A	A	A	A	
Sodium Bichromate $Na_2Cr_2O_7 \cdot 2H_2O$	Sat'd.	140	140	250	300	300	140	140	70	70	200	X	X							A	A	A	A		
Sodium Bisulfate $NaHSO_4$		180	140	280			200	180	100	140	250	X	X	X	X	X	X		X	B	A		A		
Sodium Bisulfite $NaHSO_3$		180	140	280	300	300	200	180	200	140	250	B	B		X	X	X		X		A		A	A	
Sodium Borate (Borax) $Na_2B_4O_7 \cdot 10H_2O$	Sat'd.	73			300	300	140	70	100	100	140	A	A		B	B			B	A	A	A	A		
Sodium Bromide NaBr	Sat'd.	180	140	280	300	300	210	70		70	250	B	B		X	X	X		X		A		A		
Sodium Carbonate Na_2CO_3		180	140	280	300	300	140	140	140	140	300	A	A	B	A	A	A	A	A		A	A	A	A	
Sodium Chlorate $NaClO_3$	Sat'd.	180	73	250	300	300	B to 140	B to 70		B to 140	100	A	A	X	B	B	B		B	B	A	A	A		
Sodium Chloride NaCl		180	140	280	300	300	140	140	100	160	200	B	A	A	B	B	B	B	X	A	B	B	B	A	A
Sodium Chlorite $NaClO_2$	25%		X	250	200	200	X	X	140		X														
Sodium Chromate $Na_2CrO_4 \cdot 10H_2O$				200			70	70		70	70	A	A		B	B	B		B	A	A	A	A		
Sodium Cyanide NaCN		180	140	280	300	300	140	140	140	140	140	275	X	X	X	A	A	A	A		A	A	A		
Sodium Dichromate $Na_2Cr_2O_7 \cdot 2H_2O$	20%	180	140	200	300	300	140	X	200	X	200	X	X	X	B	B	B				A		A		
Sodium Ferricyanide $Na_3Fe(CN)_6 \cdot H_2O$	Sat'd.	140	100	275	300	300	140	70			140	X	X		X	X					A		A		
Sodium Ferrocyanide $Na_4Fe(CN)_6 \cdot 10H_2O$	Sat'd.		140	275	300	300	140	70			140										A		A		
Sodium Fluoride NaF		185	140	280	300	300	140	70	140	70	140	A	A	B	X	X	X				A		A		
Sodium Hydroxide NaOH	<10%	180	140	X	300	300	180	140	200	160	X	A		A		A	A		B	A	A	A	A	A	X
Sodium Hydroxide NaOH (Caustic Soda)	30%	180	140	X	300	300	140	100	140	160	X	A		B		B	B		B	A	A	A	A		X
Sodium Hydroxide NaOH	50%	180	140	X	300	300	140	X	140	160	X	B	X	X	B	B	B	B	B	A	A	A	A		X

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Sodium Hydroxide NaOH	70%	180	140	X	300	300	70	X	100	100	X	X	X	X	B	B	B	B	B	A	A	A	A		X
Sodium Hypochlorite $NaOCl•5H_2O$	5%	B to 100	140	X	300	300	70	X	150	X	185	X	X	X	X	X	X	X	X	X	X	X	X	A	X
Sodium Hypochlorite $NaOCl•5H_2O$	Sat'd.	X	140	X	300	300	X	X	150	X	140	X	X	X	X	X	X	X	X	X	X	X	X	A	X
Sodium Iodide NaI				275					140	160															
Sodium Metaphosphate $(NaPO_3)n$		73		280			70	70	70		70	X	X	X	X	X	X				A		A		
Sodium Nitrate $NaNO_3$	Sat'd.	180	140	280	300	300	210	140	140	140	225	A	A	B	A	A	A	A	A	A	A	A	A	A	
Sodium Nitrite $NaNO_2$			140	280	300	300	170	X	140	140	200	A	A		B	B	B				A		A		
Sodium Palmitate $CH_3(CH_2)_{14}COONa$	5%			250	300	300																			
Sodium Perborate $NaBO_2•H_2O_2•3H_2O$		73	140		300	300	70	70	70	70	70	X	X		B	B	B			A	A	A	A	A	
Sodium Perchlorate $NaClO_4$			140	250	300	300		B to 70																	
Sodium Peroxide Na_2O_2			140	200	250	250	140	B to 70	200	70	185	X	X	X	X	X	X			A	A	A	A	B	
Sodium Phosphate NaH_2PO_4	Acid	180		280	300	300	170	140	200	140	200	B	B	B	B	B	B	A	B	A	A	A	A	A	
Sodium Phosphate NaH_2PO_4	Alkaline	180		280	300	300	170	140	200	140	200	B	B	B	B	B	B	A	B	A	A	A	A	A	
Sodium Phosphate NaH_2PO_4	Neutral	180		280	300	300	170	140	200	140	200	B	B	B	B	B	B	A	B	A	A	A	A	A	
Sodium Silicate $Na2SiO_3$		180		280			200	140	200	140	200	X	X	B	A	A	A		A	A	A	A	A	A	
Sodium Sulfate Na_2SO_4	Sat'd.	150	140	280	300	300	140	140	140	140	200	A	A	B	A	A	A	A	A	A	A	A	A	A	
Sodium Sulfide Na_2S		150	140	280	300	300	140	180	200	140	200	X	X	X	B	B	X	B	B	A	A	A	A		
Sodium Sulfite Na_2SO_3		180	140	280	300	300	140	140	140	140	200	A	A	X	B	B	B		B	B	A	A	A	A	
Sodium Thiosulphate $NaS_2O_3•5H_2O$		150	140	280	300	300	200	140	200	160	200	B	B	X	X	X	X		X		A		A		A
Sour Crude Oil			140	280			X	X	70	X	200	X			A	A	A		B	A	A	A	A	A	
Soybean Oil				250	300	300	X	140	200	70	250	A	A	B	A	A	B	A	A	A	A	A	A		
Stannic Chloride $SnCl_4$			140	280	300	300	100	140	70	X	200	C	C	C	C	C	C	C	C	C	C	C	A		
Stannous Chloride $SnCl_2$	15%		140	280	300	300	70	140	200	160	200	C	C	C	C	C	C	C	C		A		A		
Starch			140	200	300	300	170	180	200	160	250	B	B	B	B	B	B		B	A	A	A	A		
Steam (Low Pressure)				280	300	300	X	X	X	X	X	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Steam (Med. Pressure)					300	300	X	X	X	X	X	A	A	A	A	A	A	A	A	A	A	A	A	A	B
Steam (High Pressure)					X	X	X	X	X	X	X	X	X	X	X	B	A	X	B	A	A	A	A	A	X

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		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Stearic Acid $CH(CH_2)_{15}COOH$		73	140	75	300	300	X	140	70	70	100	A	A	X	X	X	X	B	X	A	A	A	A	A	
Stoddard's Solvent				280			X	140	X	X	185	A	A		A	A	A		A		A	A	A	A	A
Styrene $(C_6H_5CHCH_2)n$				180	300	300	X	X	X	X	100	B	B	B	B	B	B		B		A		A	A	
Succinic Acid $CO_2H(CH_2)_2CO_2H$		150	140	150	200	200	70	70			70	A	A		A	A	A		A	A	A	A	A	A	
Sugar $C_6H_{12}O_6$				275	300	300	140	100	140	140	200	X	X			B	X		B	A	A	A	A		
Sulfamic Acid HSO_3NH_2	20%	180	140	X			X	X	70	70	X	B	B	B	X	X	X		X		A		A		
Sulfate Liquors (Oil)		73			200	200	70	70			70	X	X	X	B	A			A		A		A		
Sulfite Liquors	6%		140		300	300	140	70	70	70	140						X	B			A		A		
Sulfur S		X	140	250	300	300		X	70	70	250	X	X	X	B	B	X	B	B	B	A		A	A	X
Sulfur Chloride S_2Cl_2		X		73	300	300	X	X	70	X	70	X	X	X	X	X	X	X	X	X	X	X	B		X
Sulfur Dioxide SO_2	Dry	73	140	175	300	300	70	X	200	X	100	A	B	A	A	A	A		A	A	A	A	A	A	A
Sulfur Dioxide SO_2	Wet	73	73	150			140	X	200		140	X	B	B						X	A	X	A	A	B
Sulfur Trioxide SO_3			140	X			70	X	X	X	140	X								X	B	B	A	A	
Sulfuric Acid H_2SO_4	Up to 30%	180	140	250	250	250	140	X	100	100	250	X	X	X	X	X	X	X	X	X	A	B	A	A	
Sulfuric Acid H_5SO_4	50%	150	140	250	250	250	70	140	150	X	250	X	X	X	X	X	X	X	X	X	A	B	A	A	
Sulfuric Acid H_2SO_4	60%	150	140	250	250	250	X	X	150	X	250	X	X	X	X	X	X	X	X	X	B	B	A	A	X
Sulfuric Acid H_2SO_4	70%	120	140	200	200	200	X	X	150	X	200	X	X	X	X	X	X	X	X	X	B	X	A	A	X
Sulfuric Acid H_2SO_4	80%	73	140	200	200	200	X	X	150	X	180	X	X	X	X	X	X	X	X	X	X	X	A	A	X
Sulfuric Acid H_2SO_4	90%	X	100	200	200	200	X	X	70	X	160	X	X	X	X	X	X	X	X	X	X	X	A	A	X
Sulfuric Acid H_2SO_4	93%	X	100	200	200	200	X	X	70	X	160	X	X	X	X	X	X	X	X	X	X	X	B	A	X
Sulfuric Acid H_2SO_4	94%	X	100	150	200	200	X	X	X	X	160	X	X	X	X	X	X	X	X	X	X	X	B	A	X
Sulfuric Acid H_2SO_4	95%	X	100	150	200	200	X	X	X	X	160	X	X	X	X	X	X	X	X	X	X	X	B	A	X
Sulfuric Acid H_2SO_4	96%	X	100	150	200	200	X	X	X	X	160	X	X	X	X	X	X	X	X	X	X	X	B	B	X
Sulfuric Acid H_2SO_4	98%	X	X	150	200	200	X	X	X	X	160	X	X	X	X	X	X	X	X	X	X	X	B	B	X
Sulfuric Acid $H_2SO_4 \cdot ySO_3$	Fuming	X	X	X	200	200	X	X	X	X	X	X	X	X	X	X	X	X	X	X	B	X	B		X

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		PP	PVC	PVDF	TEFZEL	TEFLON*	EPDM	BUNA-N	HYPALON	NEOPRENE	VITON	BRONZE (85% Cu)	SILICON BRONZE	ALUMINUM BRONZE	CAST IRON	DUCTILE IRON	CAST STEEL	3% NI/IRON	NI PLATED DUCTILE	400 SERIES S.S.	316 S.S.	17-4 PH	ALLOY 20	HASTELLOY C	ALUMINUM
Sulfurous Acid H_2SO_3	Sat'd.	140	140	210	300	300	75		150	X	100	X	X	X	X	X	X	X	X	B	A	A	A	A	
Surfactants Non-Ionic		100	X								B to 125													
Tall Oil			140	280	250	250	X	140	X	B to 70	70	B	B	B	B	B	B		B	A	A	A	A	A	
Tannic Acid $C_{76}H_{52}O_{46}$	10%	180	140	225	250	250	70	100	100	100	100	A	A		B	B	X	B	B	B	A	A	A	A	
Tanning Liquors			140					70	70	70	200	A	A		B						A		A		A
Tar				250	250	250	X	X	70	70	185	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Tartaric Acid $HOOC(CHOH)_2COOH$		150	140	250	250	250	X	70	200	70	70	A	A	X	X	X	X	X	X	A	A	A	A	A	
Terpineol $C_{10}H_{17}OH$			X				X	70	X	X															
Tetrachloroethane $CHCl_2CHCl_2$				250	300	300	X	X	X	X	70										A		A		
Tetrachloroethylene $C_{12}C:CCl_2$				275	300	300	X	X	X	X	70														
Tetraethyl Lead $Pb(C_2H_5)_4$			73	280	300	300	X	70	X		70	A	A			B	B		A				A		
Tetrahydrofuran C_4H_8O		X	X	X			X	X	X	X	X														
Tetralin $C_{10}H_{12}$					200	200	X	X		X	X														
Tetra Sodium Pyrophosphate $NaP_2O_7 \cdot 10H_2O$			140																						
Thionyl Chloride $SOCl_2$			X					X		X															
Thread Cutting Oils			73	200	300	300	X	70			70	A			A	A	A			A	A	A	A	A	A
Titanium Tetrachloride $TiCl_4$			X	150			X		X	X	185	X	X				X				B		B		
Toluene (Toluol) $Ch_3C_6H_5$		X	X	175	200	200	X		X	X	70	A	A	A	A	A	A	A		A	A	A	A	A	A
Tomato Juice		180		200	300	300	200	X	X	70	200	B			X	X	B				A	A	A		A
Transformer Oil		120	140		300	300	X	140		X	140	A				A	A				A	A	A	A	A
Transformer Oil DTE/30					300	300	X	140	X	X		A				A	A				A	A	A	A	A
Tributyl Citrate $C_{18}H_{32}O_7$			73																						
Tributyl Phosphate $(C_4H_9)_3PO_4$			X	73	300	300	70	X	X	X	X	B	B	B	A	A	A			B	A		A		
Trichloroacetic Acid CCl_3COOH		150	140	125	200	200	70	B to 70	70	70	X	B	X		X	X	X			X	B		B		
Trichloroethylene $CHCl:CCl_2$		X	X	280	200	200	X	X	X	X	185	A	A	A	B	B	B			A	A	A	A	A	A
Triethanolamine $(HOCH_2CH_2)_3N$			73	125			70	70	150	70	X	X	X		X	X	X	X		X	A		A		

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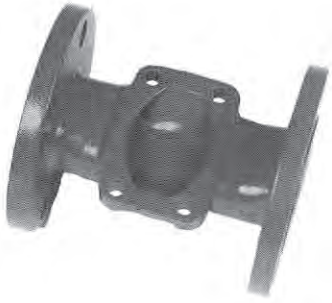
Triethylamine $(C_2H_5)_3N$			140	125				140		70	200		A	A										
Trimethylpropane $(CH_2OH)_3C_3H_5$		73					180	200	160	300														
Trisodium Phosphate $N_3PO_4 \cdot 12H_2O$		185	140	280	300	300	70	70	185	70	185	X	X		B	B		A			A	A	A	
Tung Oil							X	100	100	100	100	B	B	B	B	B	B			B	A	A	A	A	
Turpentine		X	140	280			X	70	X	X	150	A	A	A	A	A	A	A		A	A	A	A	A	A
Urea $CO(NH_2)_2$		180	140	250			210	140	140	140	185		B	B		X	X	X				A	A		
Urine		180	140		300	300	210	140	140	140	70				X	X	X			A	A	A	A		
Varnish				250	300	300	X	70		X	70	A	A	B	X	X	X			B	A	A	A	A	
Vaseline (Petroleum Jelly)		150	X		300	300	X	140	70	140	70				A	A	A			A	A	A	A	A	
Vegetable Oil		100	X	275	300	300	X	70	70	70	200	A	A			A	A			A	A	A	A		A
Vinegar		180	140	225	300	300	180	X	200	70	X	X	X	X	X	X	X			A	A	A	A	A	X
Vinyl Acetate $CH_3COOCH:CH_2$		X	X	250	300	300	70	70	X	X	X	B	B		B	B				A		A	B		
Water, Acid Mine H_2O			140	230	300	300	200	180	180	160		X	X	X	X	X	X	X	X	A	A	A	A	B	X
Water, Deionized H_2O		180	140	280	300	300	200	70		160		B	B	X	X	X	X		X	B	A	A	A	A	A
Water, Distilled H_2O		180	140	280	300	300	250	180	200	160		A	A	B	X	X	X	B	X	A	A	A	A	A	A
Water, Potable H_2O		180	140	280	300	300	250	180	200	160		A	A	A	B	B	B	A	B	A	A	A	A	A	B
Water, Salt H_2O		180	140	280	300	300	250	180	200	160		B	B	B	X	X	X	B	X	B	A	A	A	A	X
Water, Sea H_2O		73	140	280	300	300	250	180	200	160		B	B	B	X	X	X	B	X	B	B	A	A	A	X
Water, Soft H_2O				200	300	300	250	180	200	160		A	A	A	X	X	B	B	X	A	A	A	A	A	A
Water, Waste H_2O		180	140	230	300	300	200				70	B	B	B	B	B	B	B	B	B	A		A	A	B
Whiskey		150	140	200	300	300	200	140	140	140	140	X	X	B	X	X	X		X	B	A		A	A	
White Liquor			140	230				140	140	140		X	X	X	X	X	X		X		A		A		
Wine		150	140	200	300	300	170	140	140	140	140	X	X		X	X	X		X	B	A		A		
Xylene (Xylol) $C_6H_4(CH_3)_2$		X	X	200	300	300	X	X	X	X	150	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Zinc Acetate $Zn(C_2H_3O_2) \cdot 2H_2O$				250			180	70	70	160	70	X	X	X	X	X	X		X		A		A		
Zinc Carbonate $ZnCO_3$								100	100			B	B								B		A		
Zinc Chloride $ZnCl_2$		180	140	280	300	300	180	70	200	160	200	X	X	X	X	X	X		X	X	B	B	A		
Zinc Nitrate $Zn(NO_3)_2 \cdot 6H_2O$			140	280			180	140	200		200										A	A	A		
Zinc Sulfate $ZnSO_4 \cdot 7H_2O$		180	140	280	300	300	180	140	200	140	200	X	X	B	X	X	X	B	X	A	A	A	A	A	

* NOTE: Standard Teflon Diaphragms are EPDM backed for flexibility. Therefore, maximum temperatures of Teflon do not exceed 300° F in this guide.

TRU-TECH VALVE BODY MATERIAL AVAILABILITY

Straight-Thru Design



Weir Design

STRAIGHT THRU		1/2	3/4	1	1½	2	2½	3	4	6	8
ANSI FLANGE BODIES	DUCTILE IRON	A	A	✓	A	✓	A	✓	✓	✓	NA
	CAST STEEL	A	A	✓	A	✓	A	✓	SO	SO	NA
	316 SST	A	A	✓	A	✓	A	✓	SO	SO	NA
	ALLOY 20	A	A	✓	A	✓	A	✓	SO	SO	NA
	BRONZE	A	A	✓	A	✓	AA	✓	SO	SO	NA
	CAST IRON	A	A	✓	✓	✓		✓	✓	✓	NA
MSS FLANGE BODIES	CAST IRON	A	✓	✓	✓	✓	✓	✓	✓	✓	NA
	DUCTILE IRON	A	✓	✓	✓	✓	✓	✓	✓	✓	NA
SCREWED END BODIES	316 SST	A	A	A	A	A	A	A	NA	NA	NA
	CAST STEEL	A	A	A	A	A	A	A	NA	NA	NA
	ALLOY 20	A	A	A	A	A	A	A	NA	NA	NA
	BRONZE	A	A	A	A	A	A	A	NA	NA	NA
SOCKET WELD BODIES	316 SST	A	A	A	A	A	A	A	NA	NA	NA
	CAST STEEL	A	A	A	A	A	A	A	NA	NA	NA
	ALLOY 20	A	A	A	A	A	A	A	NA	NA	NA
	BRONZE	A	A	A	A	A	A	A	NA	NA	NA

A=AVAILABLE - but does not meet std. face to face SO=SPECIAL ORDER
NA=NOT AVAILABLE ✓=BODIES AVAILABLE MEETS STANDARDS

ENHANCED WEIR		1/2	3/4	1	1½	2	2½	3	4	6	8
ANSI FLANGE BODIES	DUCTILE IRON	A	A	✓	A	✓	A	✓	✓	✓	✓
	CAST STEEL	A	A	✓	A	✓	SO	SO	SO	SO	SO
	316 SST	A	A	✓	A	✓	SO	SO	SO	SO	SO
	ALLOY 20	A	A	✓	A	✓	SO	SO	SO	SO	SO
	BRONZE	A	A	✓	A	✓	SO	SO	SO	SO	SO
	CAST IRON	A	A	✓	A	✓	A	✓	✓	✓	✓
MSS FLANGE BODIES	CAST IRON	NA	✓	✓	✓	✓	A	✓	✓	✓	✓
	DUCTILE IRON	NA	✓	✓	✓	✓	A	✓	✓	✓	✓
SCREWED END BODIES	316 SST	A	A	A	A	A	SO	SO	NA	NA	NA
	CAST STEEL	A	A	A	A	A	SO	SO	NA	NA	NA
	ALLOY 20	A	A	A	A	A	SO	SO	NA	NA	NA
	BRONZE	A	A	A	A	A	SO	SO	NA	NA	NA
SOCKET WELD BODIES	316 SST	A	A	A	A	A	SO	SO	NA	NA	NA
	CAST STEEL	A	A	A	A	A	SO	SO	NA	NA	NA
	ALLOY 20	A	A	A	A	A	SO	SO	NA	NA	NA
	BRONZE	A	A	A	A	A	SO	SO	NA	NA	NA

A=AVAILABLE - but does not meet std. face to face SO=SPECIAL ORDER
NA=NOT AVAILABLE ✓=BODIES AVAILABLE MEETS STANDARDS

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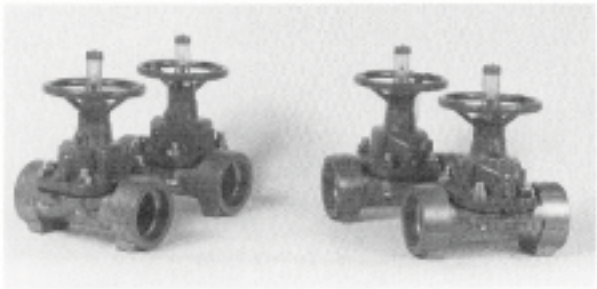
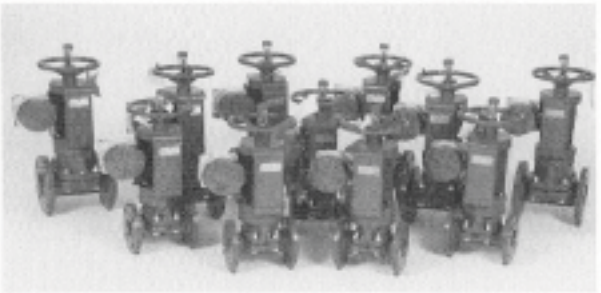
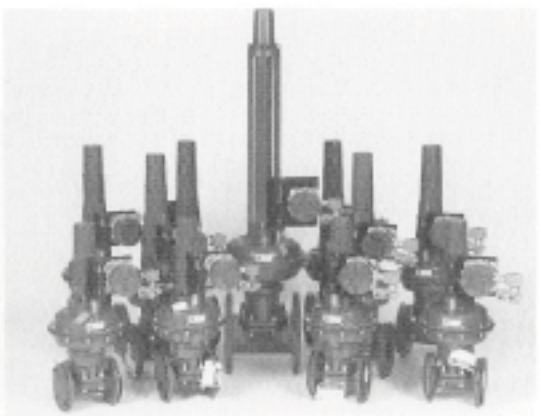
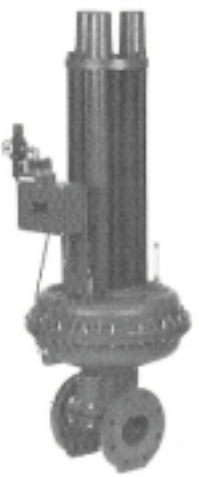
MANUAL DIAPHRAGM VALVES



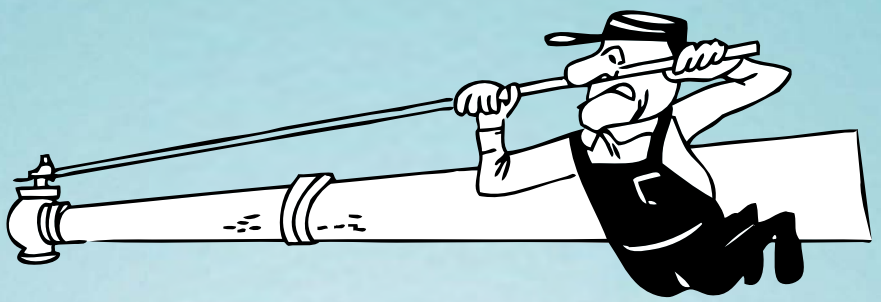


AUTOMATED DIAPHRAGM VALVES
(Pneumatic & Electric Actuated)

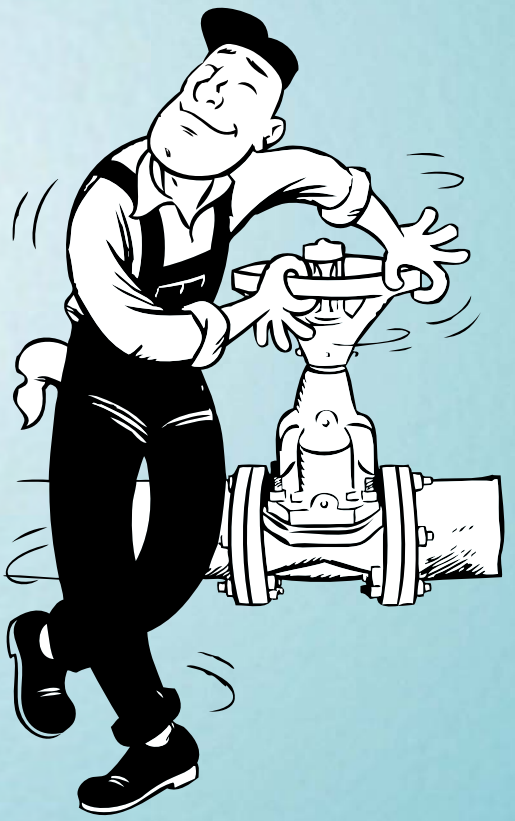




Use ***OTHER*** valves and work *this* hard!



Use
TRU-TECH Valve
Diaphragm Valves and
work *this* easy!



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