



Key:

ND = No data listed

NR = Not recommended

Numerical values listed for each material are max temperature limits in degrees Fahrenheit for that particular material versus the chemical

Notes:

1. Chemicals are considered flammable if flashpoint is 140°F or below. Only materials of construction suitable for flammables are recommended.

> Contact the factory with any questions on the safe pumping of flammable liquids.

2. If Viton & EPDM are NR, contact the factory for an alternative recommendation.

3. Consult specific pump model materials for temperature limits, pump may have a lower limitation than value shown in the chart

Warning: The information in this chart is to be used only as a guide. FTI does not warrant (neither express nor implied) that the information in this chart is accurate or complete.

Chemical Name		Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Polypropylene	Glass-Filled PVDF	Ryton PPS	ETFE	PTFE	316 Steel	Hastelloy C C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM	FEP	
Acetamide	CH ₃ CONH ₂					1.16	ND	150	75	200	250	500	140	70	ND	480	500	500	140	140	300	
Acetic Acid, 10%	HC ₂ H ₃ O ₂			10%	1.01	212	212	225	244	250	500	390	257	244	70	500	500	70	NR	300		
Acetic Acid, 20%	HC ₂ H ₃ O ₂			20%	1.03	176	212	200	244	250	500	300	257	244	70	500	500	70	NR	300		
Acetic Acid, 50%	HC ₂ H ₃ O ₂			50%	1.06	100	212	200	244	250	500	390	257	244	244	500	500	70	NR	300		
Acetic Acid, 80%	HC ₂ H ₃ O ₂			80%	1.07	NR	160	175	244	244	450	550	257	244	244	500	500	70	NR	300		
Acetic Acid, Glacial	HC ₂ H ₃ O ₂	104°F	Yes		1.05	NR	NR	122	244	244	500	212	257	244	244	500	500	200	NR	300		
Acetone	C ₃ H ₆ O	-4°F	Yes		0.79	NR	NR	NR	200	200	500	212	248	302	212	500	500	200	NR	300		
Acetonitrile (Methylcyanide)	CH ₃ CN	43°F	Yes		0.79	NR	NR	125	200	200	500	100	70	ND	400	500	500	70	NR	300		
Acetylene	C ₂ H ₂	63°F	Yes		0.91	NR	NR	250	200	250	450	140	100	ND	500	500	500	250	200	300		
Acrylic Acid (Propenoic Acid)	CH ₂	115°F	Yes		1.05	NR	NR	280		212	500	122	NR	ND	ND	500	500	200	NR	122		
Acrylonitrile	C ₃ H ₃ N	32°F	Yes		0.81	NR	NR	100	70	150	500	190	230	190	480	500	500	NR	NR	300		
Alcohol, Butyl	C ₄ H ₁₀ O	95°F	Yes		0.81	NR	NR	275	200	300	500	480	200	200	480	500	500	250	250	300		
Alcohol, Butyl, Secondary	C ₄ H ₁₀ O	79°F	Yes		0.81	NR	NR	275	200	300	500	480	200	200	480	500	500	70	70	300		
Alcohol, Ethyl	C ₂ H ₅ OH	57°F	Yes		0.79	NR	NR	280	300	300	500	200	212	200	500	500	500	70	70	300		
Alcohol, Isopropyl	C ₃ H ₈ OH	54°F	Yes		0.79	NR	NR	158	200	125	500	140	212	212	500	500	500	176	212	300		
Alcohol, Methyl	CH ₃ OH	52°F	Yes		0.791	NR	NR	257	150	300	500	212	212	200	500	500	500	176	NR	300		
Alcohol, Propyl (Isopropyl Alcohol)	C ₃ H ₈ O	53°F	Yes		0.79	NR	NR	207	200	300	500	70	200	200	500	500	500	200	212	300		
Alcohols		60°F	Yes		0.79	NR	NR	275	200	200	480	172	212	200	480	500	500	70	70	300		
Aluminum Acetate	Al(C ₂ H ₃ O ₂) ₃				1	70	100	285	ND	ND	480	160	250	70	480	500	500	176	NR	70		
Aluminum Chloride, 1%	AlCl ₃			1%	1.01	180	250	289	200	300	500	70	352	212	480	500	500	212	212	300		
Aluminum Chloride, 5%	AlCl ₃			5%	1.04	180	250	289	200	300	500	NR	352	212	480	500	500	212	212	300		
Aluminum Chloride, 20%	AlCl ₃			20%	1.2	180	250	289	200	300	500	NR	352	212	480	500	500	212	212	300		
Aluminum Chloride, 40%	AlCl ₃			40%	1.34	120	250	289	200	300	500	NR	352	ND	480	500	500	212	212	300		
Aluminum Chloride, 100%	AlCl ₃			100%		120	250	289	200	300	500	NR	340	212	480	500	500	212	212	300		
Aluminum Potassium Sulfate (Alum)	KAl(SO ₄) ₂ ·12H ₂ O					225	225	285	70	300	500	480	175	392	500	500	500	212	212	300		
Aluminum Sulfate NOTE: Pits SS on drying	Al ₂ (SO ₄) ₃ ·18H ₂ O			98-100%	1.69	180	250	280	200	300	500	214	214	214	480	500	500	140	140	300		
Aluminum Sulfate NOTE: Pits SS on drying	Al ₂ (SO ₄) ₃ ·18H ₂ O			27.80%	1.33	180	250	280	200	300	500	214	214	214	480	500	500	140	140	300		

Chemical Name		Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Polypropylene	Glass-Filled Polypropylene	PVDF	Ryton PPS	ETFE	PTFE	316 Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM	FEP
Amines							NR	120		NR	70	300	480	212	200	200	480	500	500	70	NR	200
Ammonia (Anhydrous)	NH ₃		52°F	Yes		0.68	NR	NR	275	200	300	500	600	140	212	500	500	500	140	NR	300	
Ammonia Water, 10%	NH ₃					0.9	185	200	275	ND	300	500	ND	ND	ND	250	500	500	140	NR	300	
Ammonium Bisulfide (Ammonium Sulfide)	(NH ₄) ₂ S		72°F	Yes			NR	NR	280	ND	ND	400	480	70	ND	480	500	500	70	NR	70	
Ammonium Bromide, 5%	NH ₄ Br						ND	ND	ND	ND	ND	ND	70	70	ND	500	500	500	ND	ND	70	
Ammonium Bromide	NH ₄ Br						ND	ND	ND	ND	ND	ND	480	ND	ND	500	500	500	ND	ND	70	
Ammonium Carbonate	(NH ₄) ₂ CO ₃						180	250	280	200	300	500	212	185	212	500	500	500	212	212	300	
Ammonium Chloride	NH ₄ Cl						140	225	280	100	300	500	212	212	968	500	500	500	212	212	300	
Ammonium Dichromate	(NH ₄) ₂ Cr ₂ O ₇						ND	125	250	ND	275	500	ND	ND	ND	ND	500	500	70	ND	300	
Ammonium Fluoride, 10%	NH ₄ F				10%	1.01	225	225	280	NR	300	500	70	175	70	480	500	500	140	140	70	
Ammonium Fluoride, 25%	NH ₄ F				25%	1.01	225	225	280	NR	300	500	NR	175	ND	480	500	500	140	140	70	
Ammonium Hydroxide, 10% (Ammonia Aqueous)	NH ₄ OH				10%	0.9	212	225	280	200	300	500	70	200	212	97	500	500	160	70	300	
Ammonium Nitrate	NH ₄ NO ₃						180	180	280	200	230	500	410	410	200	500	500	500	200	176	280	
Ammonium Persulfate	(NH ₄) ₂ S ₂ O ₈						225	180	260	ND	275	500	70	140	140	480	500	500	70	140	300	
Ammonium Phosphate (mono basic)	NH ₄ H ₂ PO ₄						212	225	280	200	200	450	70	70	140	140	500	500	140	140	280	
Ammonium Sulfate	(NH ₄) ₂ SO ₄						180	180	280	200	300	500	480	200	480	480	500	500	200	176	300	
Ammonium Sulfide	(NH ₄) ₂ S		72°F	Yes		1	NR	NR	280	ND	300	500	480	70	ND	480	500	500	70	NR	300	
Amyl Acetate	CH ₃ COOC ₅ H ₁₁		77°F	Yes		0.88	NR	NR	100	200	250	500	480	400	200	500	500	500	200	212	300	
Amyl Alcohol	C ₅ H ₁₂ O		66°F	Yes		0.81	NR	NR	280	200	250	500	480	200	200	500	500	500	200	212	300	
Amyl Chloride, 84-100%	C ₅ H ₁₁ Cl		-14°F	Yes			NR	NR	280	70	300	500	150	187	NR	400	500	500	NR	200	300	
Benzaldehyde	C ₆ H ₅ CHO		145°F			1.04	NR	NR	150	140	212	500	200	200	200	480	500	500	200	NR	350	
Benzene	C ₆ H ₆		12°F	Yes		0.87	NR	NR	120	100	250	500	200	176	70	500	500	500	NR	158	300	
Benzyl Alcohol (Benzal Chloride)	C ₇ H ₈ O		201°F			1.05	NR	250	280	200	300	500	150	ND	140	200	500	500	NR	70	387	
Benzyl Chloride	C ₆ H ₅ .CH ₂ Cl		153°F			1.1	NR	NR	280	200	300	500	100	NR	ND	100	500	500	ND	ND	387	
Bleach, 5.5%	NaClO				5.50%	1.08	212	NR	280	NR	300	500	ND	200	180	NR	500	500	104	130	300	
Bleach, 12.5%	NaClO				12.5%	1.17	212	NR	280	NR	300	500	ND	200	180	NR	500	500	70	130	300	
Brine, Basic	NaCr					1.3	212	200	285	200	300	500	200	245	212	70	500	500	212	248	310	
Bromine, Liquid	Br ₂						NR	NR	150	NR	135	450	NR	160	NR	NR	500	500	NR	212	450	
Butanol	C ₄ H ₁₀ O		84°F	Yes		0.81	NR	NR	275	200	300	500	200	200	200	480	500	500	250	250	300	
Butyl Acetate	C ₆ H ₁₂ O ₂		79°F	Yes		0.88	NR	NR	100	200	260	500	302	302	200	480	500	500	NR	NR	300	
Butyl Alcohol	(CH ₃) ₃ COH		100°F	Yes		0.78	NR	NR	275	200	300	500	200	200	200	480	500	500	250	250	300	
Calcium Bisulfide	Ca(HS) ₂						212	212	275	70	300	ND	480	70	140	500	500	500	NR	176	300	
Calcium Bisulfite	Ca(HSO ₃) ₂						225	180	280	200	300	500	ND	ND	ND	ND	500	500	NR	200	300	
Calcium Carbonate	CaCO3						185	248	285	ND	300	500	480	300	300	480	500	500	140	248	300	
Calcium Chloride	CaCl ₂						212	212	285	200	300	500	200	212	300	480	500	500	212	212	300	
Calcium Hydroxide	Ca(OH) ₂						212	176	280	70	300	500	200	140	300	500	500	500	212	212	300	
Carbon Disulfide	CS ₂		-22°F	Yes	90-100%	1.26	NR	NR	120	200	300	500	212	200	200	500	500	500	NR	200	300	
Carbon Tetrachloride	CCl ₄				100%	1.59	NR	NR	170	70	300	500	480	185	200	500	500	500	NR	NR	200	
Caustic Potash (See Potassium Hydroxide)	KOH					1.45	ND	180	NR	200	300	500	70	185	NR	350	500	500	212	NR	300	

Chemical Name		Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Glass-Filled Polypropylene	PVDF	Ryton PPS	ETFE	PTFE	316 Stainless Steel	Hastelloy C C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM	FEP
Caustic Soda (See Sodium Hydroxide)	NaOH				50%	1.53	150	180	ND	70	250	480	125	70	NR	275	500	500	200	NR	300
Chlorine Dioxide, 15%	ClO ₂				15%		100	NR	280	ND	250	500	NR	110	200	NR	500	500	NR	70	300
Chlorine Dioxide	ClO ₂		100°F	Yes			NR	NR	280	ND	250	500	NR	70	180	NR	500	500	NR	70	300
Chlorine, Liquid	Cl ₂					1.47	NR	NR	200	NR	250	300	NR	600	212	NR	500	500	NR	70	300
Chlorobenzene	C ₆ H ₅ Cl		84°F	Yes		1.11	NR	NR	175	200	300	500	480	266	212	500	500	500	NR	200	300
Chromic Acid, 10%	H ₂ CrO ₄				10%	1.08	180	NR	280	70	212	500	180	212	482	NR	500	500	NR	70	300
Chromic Acid, 20%	H ₂ CrO ₄				20%	1.16	180	NR	212	70	200	500	212	212	482	NR	500	500	NR	70	300
Chromic Acid, 40%	H ₂ CrO ₄				40%	1.37	180	NR	212	70	200	500	212	212	482	NR	500	500	NR	70	300
Chromic Acid, 50%	H ₂ CrO ₄				50%	1.51	180	NR	185	70	232	500	212	200	482	NR	500	500	NR	70	300
Citric Acid	C ₆ H ₈ O ₇		345°F				212	180	275	220	300	500	302	374	70	212	500	500	212	350	300
Copper Sulfate	CuSO ₄ 5H ₂ O						180	180	285	223	300	500	160	212	70	70	500	500	176	140	300
Cyclohexane	C ₆ H ₁₂		-4°F	Yes		0.78	NR	NR	212	200	300	500	480	200	300	500	500	500	NR	200	300
Diethylamine	C ₄ H ₁₁ N		-38°F	Yes		0.71	NR	NR	70	ND	230	500	140	85	NR	500	500	500	160	NR	300
Dimethyl Sulfoxide	C ₂ H ₆ OS		203°F			1.1	NR	NR	NR	200	212	500	ND	ND	ND	ND	500	500	ND	NR	ND
Dimethylamine	C ₂ H ₇ N		-0.4°F	Yes		0.68	NR	NR	70	ND	230	500	ND	ND	ND	ND	500	500	NR	NR	300
Disodium Phosphate	HNa ₂ PO ₄						180	180	280	ND	140	500	70	70	ND	70	500	500	70	70	300
Epichlorohydrin	ClCH ₂ C ₂ H ₃ O		90°F	Yes		1.18	NR	NR	NR	70	300	500	480	212	ND	500	500	500	ND	NR	300
Ethanol (Ethyl Alcohol)	C ₂ H ₅ OH		55°F	Yes		0.79	NR	NR	280	300	300	500	200	212	200	500	500	500	200	70	400
Ethyl Acetate	C ₄ H ₈ O ₂		25°F	Yes		0.9	NR	NR	122	100	170	500	302	414	212	500	500	500	130	NR	300
Ethyl Alcohol (Ethanol)	C ₂ H ₅ OH		55°F	Yes		0.79	NR	NR	280	300	300	500	200	212	200	500	500	500	200	70	400
Ethylene Glycol	C ₂ H ₆ O ₂		239°F			1.11	180	180	260	200	300	500	392	386	NR	480	500	500	212	250	300
Ferric Chloride	FeCl ₃						180	180	275	200	300	500	NR	175	200	340	500	500	225	212	300
Ferric Hydroxide	Fe(OH) ₃						212	140	250	ND	300	400	140	185	200	100	500	500	200	200	200
Ferric Sulfate	Fe ₂ (SO ₄) ₃ nH ₂ O				12%	1.55	180	180	275	200	300	500	140	200	200	500	500	500	200	212	300
Ferric Sulfide	Fe ₂ S ₃						ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	500	ND	ND	ND
Formaldehyde, 37%	CH ₂ O		133°F	Yes	37%	1.08	NR	NR	250	70	230	500	265	212	212	500	500	500	212	212	300
Formaldehyde, 50%	CH ₂ O		133°F	Yes	50%		NR	NR	104	70	200	500	600	300	200	500	500	500	120	176	300
Formic Acid	CH ₂ O ₂		156°F			1.22	70	70	214	70	275	500	212	200	140	340	500	500	200	NR	300
Fuel Oil							180	NR	285	200	300	500	480	200	200	480	500	500	NR	200	300
Furfural	C ₅ H ₄ O ₂		140°F	Yes		1.16	NR	NR	140	200	212	500	480	200	200	480	500	500	160	NR	300
Gasoline, Unleaded	CH ₃ OH		-49°F	Yes		0.74	NR	NR	285	200	300	500	200	325	200	480	500	500	NR	250	300
Heptane	C ₇ H ₁₆		25°F	Yes		0.68	NR	NR	285	200	300	500	480	200	200	500	500	500	NR	200	300
Hexane	C ₆ H ₁₄		-10°F	Yes		0.66	NR	NR	285	200	300	500	480	257	200	500	500	500	NR	200	300
Hexyl Alcohol	C ₆ H ₁₄ O		106°F	Yes		0.82	NR	NR	180	70	ND	300	140	140	140	480	500	500	200	248	200
Hydrochloric Acid, 2%	HCl				2%	1.01	225	225	285	NR	300	500	NR	140	175	480	500	500	140	230	400
Hydrochloric Acid, 10%	HCl				10%	1.05	225	225	285	NR	300	500	NR	140	160	480	500	500	140	230	400
Hydrochloric Acid, 15%	HCl				15%	1.08	225	225	285	NR	300	500	NR	140	NR	480	500	500	140	230	400
Hydrochloric Acid, 20%	HCl				20%	1.1	212	180	285	NR	300	500	NR	140	NR	480	500	500	140	230	400
Hydrochloric Acid, 25%	HCl				25%	1.13	212	175	285	NR	300	500	NR	140	NR	140	500	500	140	160	400
Hydrochloric Acid, 37%	HCl				37%	1.18	NR	176	194	NR	300	500	NR	140	NR	140	500	500	130	160	400
Hydrofluoric Acid, 30%	HF				30%	1.18	140	NR	275	140	300	500	NR	250	NR	NR	500	500	NR	212	300
Hydrofluoric Acid, 40%	HF				40%	1.16	100	NR	250	140	300	500	NR	125	NR	NR	500	500	NR	176	300

Chemical Name		Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Polypropylene	Glass-Filled	PVDF	Ryton PPS	ETFE	PTFE	316 Steel	316 Stainless C-276	Hastelloy C	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM	FEP
Hydrofluoric Acid, 48%	HF				48%	1.18	100	NR	250	140	300	500	NR	130	NR	NR	500	500	NR	176	300		
Hydrofluoric Acid, 50%	HF				50%	1.2	100	NR	250	140	300	500	NR	130	NR	NR	500	500	NR	140	300		
Hydrofluoric Acid, 70%	HF				70%	1.26	NR	NR	230	70	250	500	NR	130	NR	NR	500	500	NR	ND	300		
Hydrofluosilicic Acid, 20%	H ₂ SiF ₆				20%	1.17	212	180	280	200	300	500	145	185	NR	140	500	500	140	140	300		
Hydrofluosilicic Acid, 50%	H ₂ SiF ₆				50%		212	180	280	200	300	500	70	300	NR	ND	500	500	120	70	300		
Hydrogen Peroxide, 5%	H ₂ O ₂				5%	1.0	225	176	212	100	250	500	212	237	237	NR	500	500	NR	176	300		
Hydrogen Peroxide, 30%	H ₂ O ₂				30%	1.19	225	NR	212	100	250	500	125	200	140	NR	500	500	NR	104	300		
Hydrogen Peroxide, 50%	H ₂ O ₂				50%	1.19	185	NR	250	NR	150	500	104	200	70	NR	500	500	NR	104	300		
Hydrogen Peroxide, 90%	H ₂ O ₂				90%	1.4	NR	NR	200	NR	150	500	70	130	70	NR	500	500	NR	104	300		
Hydrogen Sulfide, Aqueous (wet gas)	H ₂ S		-116°F	Yes		1.54	212	NR	250	300	250	500	215	170	400	80	500	500	140	NR	300		
Isobutyl Alcohol	C ₄ H ₁₀ O		82°F	Yes		0.8	70	NR	275	200	275	480	480	140	140	70	500	500	160	75	200		
Isooctane	C ₈ H ₁₈		19°F	Yes		0.69	140	NR	275	200	125	300	70	70	ND	120	500	500	NR	70	300		
Isopropanol (Isopropyl alcohol)	C ₃ H ₈ O		53°F	Yes		0.79	225	180	158	200	125	500	140	212	212	500	500	500	176	212	300		
Kerosene			100°F	Yes		0.8	190	NR	275	200	300	500	70	200	200	500	500	500	NR	158	300		
Lye Solutions (See Sodium & Potassium Hydroxide)																					300		
Magnesium Sulfate	MgSO ₄						180	180	275	200	300	500	200	125	200	500	500	500	176	176	300		
Methane/LPG - confirm NPSHa is sufficient	CH ₄		292°F			0.55	212	NR	285	ND	300	400	700	212	ND	500	500	500	NR	176	300		
Methyl Alcohol (Methanol)	CH ₃ OH		52°F	Yes		0.79	180	70	285	150	300	500	235	212	200	500	500	500	176	NR	584		
Methyl Ethyl Ketone	C ₄ H ₁₀ O ₄		16°F	Yes		0.83	NR	NR	NR	70	300	500	200	200	200	500	500	500	200	NR	300		
Methylamine	CH ₃ NH ₂		46°F	Yes		1.07	NR	NR	NR	ND	200	400	140	70	ND	400	500	500	70	NR	ND		
Monoethanolamine	C ₂ H ₇ NO		185°F			1.02	NR	70	NR	200	200	500	212	200	200	500	500	500	200	NR	300		
Naphtha	NA		50°F	Yes		0.76	180	NR	285	200	300	500	320	200	200	500	500	500	NR	158	300		
Nickel Acetate	Ni(C ₂ H ₃ O ₂) ₂ .4H ₂ O						180	180	250	ND	250	480	70	ND	ND	70	500	500	70	NR	70		
Nickel Chloride	NiCl ₂						225	225	275	200	300	500	70	200	200	500	500	500	212	212	300		
Nickel Nitrate	Ni(NO ₃) ₂ 6H ₂ O						180	180	280	100	300	500	414	70	70	70	500	500	212	248	300		
Nickel Sulfate (Nickel Salt)	NiSO ₄ 6H ₂ O						180	180	285	200	300	500	200	212	200	500	500	500	212	217	300		
Nitric Acid, 10%	HNO ₃				10%	1.05	225	NR	280	140	212	500	181	185	250	NR	500	500	104	120	300		
Nitric Acid, 25-35%	HNO ₃				25-35%	1.21	140	NR	160	100	212	500	181	140	250	NR	500	500	104	120	300		
Nitric Acid, 40%	HNO ₃				40%	1.25	140	NR	160	70	212	500	181	140	250	NR	500	500	NR	120			
Nitric Acid, 50%	HNO ₃				50%	1.31	140	NR	150	NR	221	500	181	140	250	NR	500	500	NR	120	300		
Nitric Acid, 70%	HNO ₃				70%	1.41	70	NR	140	NR	200	500	120	NR	70	NR	500	500	NR	70	300		
Nitric Acid, 90%	HNO ₃				90%	1.48	NR	NR	140	NR	122	500	120	NR	140	NR	500	500	NR	NR	300		
Nitric Acid, White Fuming	HNO ₃					1.5	NR	NR	70	NR	122	500	ND	ND	ND	ND	500	500	NR	NR	300		
Octane	C ₈ H ₁₈		59°F	Yes		0.7	ND	NR	285	ND	300	500	70	70	ND	ND	500	500	NR	70	300		
Octanol, 1 (Octyle Alcohol)	C ₈ H ₁₈		178°F			0.83	100	250	285	ND	ND	500	480	140	140	500	500	500	160	70	70		
Oxalic Acid	C ₂ H ₂ O ₄ 2H ₂ O					1.65	180	140	125	212	300	500	140	140	NR	320	500	500	250	140	300		
Peracetic Acid, 40%	C ₂ H ₄ O ₃		115°F	Yes	40%	1.23	NR	NR	70	ND	ND	500	ND	ND	ND	ND	500	500	ND	ND	300		

Chemical Name	Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Glass-Filled Polypropylene	PVDF	Ryton PPS	ETFE	PTFE	316 Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM	FEP
Perchloric Acid, 10%	HClO ₄			10%	1.06	225	180	250	100	230	500	NR	ND	100	70	500	500	140	140	300
Perchloric Acid, 70%	HClO ₄	235°F		70%	1.68	185	NR	212	100	200	500	NR	212	NR	70	500	500	140	140	300
Phenol	C ₆ H ₅ OH	174°F			1.07	185	NR	150	100	NR	500	414	358	414	500	500	500	NR	140	359
Phosphoric Acid, 10% (Air Free)	H ₃ PO ₄			10%	1.05	212	225	316	248	300	500	316	150	140	500	500	500	212	212	300
Phosphoric Acid, 25% (Air Free)	H ₃ PO ₄			25%	1.15	212	225	316	248	300	500	316	150	140	500	500	500	212	212	300
Phosphoric Acid, 50% (Air Free)	H ₃ PO ₄			50%	1.34	212	225	316	248	275	500	221	150	NR	500	500	500	176	212	300
Phosphoric Acid, 70% (Air Free)	H ₃ PO ₄			70%	1.53	212	225	316	248	275	500	221	200	NR	500	500	500	176	212	300
Phosphoric Acid, 85% (Air Free)	H ₃ PO ₄			85%	1.69	212	212	316	248	275	500	150	150	NR	500	500	500	176	212	300
Plating Solutions, Brass						180	180	248	ND	275	500	140	100	100	100	NR	500	70	140	300
Plating Solutions, Cadmium (Cyanide)						180	180	248	70	275	500	140	90	90	70	500	500	70	140	300
Plating Solutions, Chrome (Chromic Sulfuric)						180	70	260	70	275	500	NR	NR	130	NR	500	500	70	140	300
Plating Solutions, Copper (Sulfate)						225	225	212	70	275	500	NR	NR	ND	70	500	500	200	140	300
Plating Solutions, Gold (Cyanide)						225	180	250	70	275	500	150	150	150	140	500	500	70	150	300
Plating Solutions, Iron (Sulfate)						180	175	200	ND	ND	500	NR	150	150	140	500	500	ND	140	300
Plating Solutions, Lead (Alkali)						180	180	250	70	250	500	70	70	NR	140	500	500	70	140	300
Plating Solutions, Nickel (Chloride)						180	225	250	70	250	500	70	160	160	480	500	500	70	140	300
Plating Solutions, Rhodium						212	180	250	70	250	500	ND	ND	ND	ND	500	500	120	70	300
Plating Solutions, Silver						180	180	250	70	250	500	140	120	120	140	500	500	120	140	300
Plating Solutions, Speculum						ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	500	ND	ND	ND
Plating Solutions, Tin (Acid & Fluoborate)						180	180	212	70	250	500	70	125	NR	480	500	500	140	176	300
Plating Solutions, Zinc (Acid Chloride)						180	180	250	70	250	500	NR	NR	140	480	500	500	70	140	300
Potassium Aluminum Sulfate (Alum)	KAl(SO ₄) ₂ · 12H ₂ O					225	225	285	70	300	500	480	175	392	500	500	500	212	212	300
Potassium Bicarbonate	KHCO ₃					180	70	275	200	300	500	480	130	70	500	500	500	176	212	300
Potassium Bisulfate	KHSO ₄					180	250	285	ND	ND	500	70	ND	ND	ND	500	500	176	212	70
Potassium Bromide	KBr					180	180	285	200	300	500	185	70	200	480	NR	500	200	212	300
Potassium Chlorate	KClO ₃					180	212	212	200	300	500	673	480	200	200	500	500	200	200	300
Potassium Chloride	KCl					180	180	285	200	300	500	140	347	212	200	500	500	212	212	300
Potassium Cyanate	KCNO					ND	70	ND	70	ND	70	ND	ND	ND	ND	500	500	ND	ND	ND
Potassium Cyanide	KCN					180	180	285	200	300	500	140	140	200	500	NR	500	200	70	300
Potassium Hydroxide, 25% (Caustic Potash)	KOH			0.25	1.24	180	180	140	268	212	500	212	200	175	500	500	500	212	NR	300
Potassium Hydroxide, 35% (Caustic Potash)	KOH			0.35	1.34	180	180	NR	268	212	500	150	200	70	500	500	500	200	NR	300

Chemical Name		Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Polypropylene	Glass-Filled	PVDF	Ryton PPS	ETFE	PTFE	3/16 Stainless Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM	FEP
Potassium Hydroxide, 50% (Caustic Potash)	KOH				0.5	1.51	180	180	NR	268	212	500	150	200	70	500	500	500	200	NR	300	
Potassium Permanganate	KMnO ₄						180	70	250	200	300	500	130	70	200	480	500	500	200	140	300	
Potassium Permanganate, 10%	KMnO ₄				0.1		180	180	280	200	300	500	212	212	200	500	500	500	200	140	300	
Potassium Permanganate, 25%	KMnO ₄				0.25		180	180	280	200	300	500	70	212	200	500	500	500	200	140	300	
Potassium Sulfite (Sulfurous Acid)	K ₂ SO ₃						70	140	212	70	ND	300	70	375	185	70	500	500	70	70	300	
Propanol (Propyl Alcohol)	C ₃ H ₈ O	53°F	Yes			0.79	NR	NR	150	200	300	500	356	200	200	500	500	500	200	212	300	
Propionic Acid	C ₃ H ₆ O ₂	129°F	Yes			0.99	NR	NR	280	ND	212	500	340	286	NR	500	500	500	200	NR	122	
Propyl Alcohol (propanol)	C ₃ H ₈ O	54°F	Yes			0.79	NR	NR	150	200	300	500	356	200	200	500	500	500	200	212	300	
Salicylic Acid	C ₇ H ₆ O ₃	315°F				1.44	200	180	230	ND	300	500	212	258	248	500	500	500	200	70	300	
Sea Water	H ₂ O					1.03	212	225	285	200	300	500	250	300	213	340	500	500	200	212	300	
Silver Nitrate, 0-60%	AgNO ₃			0%-60%			180	180	285	200	300	500	125	70	70	500	500	500	176	200	300	
Silver Nitrate, 100%	AgNO ₃			1			180	180	285	100	300	500	125	200	200	500	500	500	176	200	300	
Silver Sulfate	Ag ₂ SO ₄						180	140	250	ND	ND	ND	ND	ND	ND	ND	500	500	176	212	70	
Sodium Benzoate	C ₇ H ₅ NaO ₂	212°F					180	NR	285	ND	300	500	ND	100	70	340	500	500	70	70	300	
Sodium Bicarbonate	NaHCO ₃						180	180	285	300	300	500	150	150	200	500	500	500	212	212	300	
Sodium Bichromate	Na ₂ Cr ₂ O ₇ 2H ₂ O						180	180	275	70	300	500	150	100	70	500	500	500	176	212	300	
Sodium Bisulfate	NaHSO ₄ .H ₂ O						180	180	285	200	300	500	480	140	136	500	500	500	200	212	300	
Sodium Bisulfite	NaHSO ₃						180	180	285	200	300	500	100	212	140	500	500	500	212	212	300	
Sodium Borate	Na ₂ B ₄ O ₇ .10H ₂ O						176	212	275	300	300	500	150	200	200	500	500	500	140	176	300	
Sodium Bromate	NaBrO ₃						185	175	280	ND	300	500	ND	ND	ND	ND	500	500	ND	ND	200	
Sodium Bromide	NaBr						180	180	285	70	300	500	480	70	70	500	500	500	70	70	300	
Sodium Carbonate (Soda Ash)	Na ₂ CO ₃						180	180	285	300	300	500	212	212	140	500	500	500	212	212	300	
Sodium Chlorate 25%	NaClO ₃				0.25		180	180	285	210	300	500	70	212	70	130	500	500	200	200	300	
Sodium Chlorate 50-60%	NaClO ₃			50%-60%			180	180	285	210	300	500	NR	212	ND	ND	500	500	200	200	300	
Sodium Chlorate 60-70%	NaClO ₃			60%-70%			180	180	285	210	300	500	212	212	ND	ND	500	500	200	200	300	
Sodium Chlorate 70-80%	NaClO ₃			70%-80%			180	180	285	210	300	500	212	212	ND	ND	500	500	200	200	300	
Sodium Chlorate 80-100%	NaClO ₃			80%-100%			180	180	285	210	300	500	140	140	220	140	500	500	200	200	300	
Sodium Chloride	NaCl						180	180	285	200	300	500	212	176	140	500	500	500	176	212	300	
Sodium Chlorite	NaClO ₂						ND	200	250	200	300	500	ND	ND	ND	ND	500	500	70	140	300	
Sodium Chromate	Na ₂ CrO ₄ 4H ₂ O						190	175	280	200	300	500	70	212	ND	340	500	500	ND	140	70	
Sodium Cyanide	NaCN						180	180	275	70	300	500	140	200	200	500	500	500	176	176	300	
Sodium Dichromate	Na ₂ Cr ₂ O ₇ 2H ₂ O						70	NR	120	ND	100	300	ND	ND	ND	ND	500	500	70	70	300	
Sodium Dithionite 12% (sodium hydrosulfite)	Na ₂ S ₂ O ₄				0.12		ND	175	248	ND	300	480	230	230	ND	100	500	500	70	70	140	
Sodium Dithionite Solution (sodium hydrosulfite)	Na ₂ S ₂ O ₄						70	175	248	ND	300	480	480	70	ND	100	500	500	70	70	140	
Sodium Ferricyanide	Na ₃ Fe(CN) ₆ .H ₂ O						180	180	275	ND	300	500	70	70	ND	340	500	500	140	140	300	
Sodium Ferrocyanide	Na ₄ Fe(CN) ₆ .10H ₂ O						180	180	275	ND	300	500	70	70	ND	100	500	500	140	140	300	
Sodium Fluoride, 5%	NaF						180	180	285	ND	ND	ND	70	70	70	100	500	500	140	140	300	
Sodium Fluoride	NaF						180	180	285	ND	300	500	NR	200	ND	340	500	500	140	140	300	
Sodium Fluorosilicate	Na ₂ SiF ₆						ND	70	200	ND	ND	ND	80	ND	ND	ND	500	500	ND	ND	ND	

Chemical Name		Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Glass-Filled Polypropylene	PVDF	Ryton PPS	ETFE	PTFE	316 Steel	Hastelloy C-276	Titanium	Carbon	Silicon Carbide	EPDM	FKM	FEP	
Sodium Formate (Formic Acid)	CHO ₂ Na						70	70	214	ND	275	500	212	200	140	340	500	500	NR	70	300
Sodium Hydrogen Phosphate (sodium phosphate dibasic)	HNa ₂ PO ₄						180	180	280	ND	140	500	480	212	70	500	500	500	140	140	300
Sodium Hydroxide, 10% (Caustic Soda)	NaOH				0.1	1.11	180	180	NR	140	250	500	248	225	2534	275	500	500	176	NR	300
Sodium Hydroxide, 15% (Caustic Soda)	NaOH				0.15	1.16	180	180	NR	140	250	500	248	225	2534	275	500	500	176	NR	300
Sodium Hydroxide, 25% (Caustic Soda)	NaOH				0.25	1.27	180	180	NR	140	250	500	212	200	2534	275	500	500	176	NR	300
Sodium Hydroxide, 30% (Caustic Soda)	NaOH				0.3	1.33	180	180	NR	140	250	500	212	200	200	275	500	500	212	NR	300
Sodium Hydroxide, 50% (Caustic Soda)	NaOH				0.5	1.52	180	180	NR	140	250	500	212	200	200	275	500	500	212	NR	300
Sodium Hypochlorite, 5%	NaOCl				0.05	1.1	212	NR	275	NR	300	500	160	140	ND	NR	500	500	70	130	300
Sodium Hypochlorite, 12.5%	NaOCl				12.5%	1.21	212	NR	275	NR	300	500	NR	140	180	NR	500	500	70	130	300
Sodium Iodide	NaI						212	175	280	ND	300	500	ND	ND	ND	ND	500	500	ND	ND	300
Sodium Metaphosphate (sodium hexametaphosphate)	(NaPO ₃) ₆					1.2	180	175	280	ND	300	480	70	ND	ND	500	500	500	212	140	300
Sodium Nitrate	NaNO ₃						180	180	280	200	300	500	170	140	70	500	500	500	200	212	70
Sodium Nitrite	NaNO ₂						180	180	280	ND	300	500	150	70	70	500	500	500	176	212	300
Sodium Perchlorate, 10%	NaClO ₄				0.1		190	180	250	ND	300	350	ND	212	ND	200	500	500	ND	ND	ND
Sodium Permanganate					0.2	1.16		175	275	ND	300	70							70	NR	ND
Sodium Peroxide	Na ₂ O ₂						212	212	285	70	300	500	480	212	ND	350	500	500	140	1214	300
Sodium Phosphate, Acid, Monobasic	Na ₃ PO ₄ ·12H ₂ O						185	180	280	ND	300	500	480	212	70	500	500	500	140	140	300
Sodium Phosphate, Alkaline, Tribasic	Na ₃ PO ₄ ·12H ₂ O						185	180	280	ND	300	480	480	212	70	500	500	500	140	140	300
Sodium Phosphate, Neutral, Dibasic MSDS	Na ₃ PO ₄ ·12H ₂ O						180	180	280	ND	300	500	480	212	70	500	500	500	140	140	300
Sodium Silicate	Na ₂ O ₂				0.35	1.3	180	180	285	200	300	500	212	212	70	500	500	500	200	212	300
Sodium Sulfate	Na ₂ SO ₄						180	180	285	200	300	500	1600	200	200	500	500	500	200	212	300
Sodium Sulfide	Na ₂ S 9H ₂ O						180	180	280	200	300	500	480	176	212	200	500	500	212	212	300
Sodium Sulfite	Na ₂ SO ₃						212	225	280	70	300	ND	480	235	150	70	500	500	176	176	300
Stannic Chloride	SnCl ₄						180	180	285	200	300	500	NR	240	302	340	500	500	140	140	70
Stannous Chloride	SnCl ₂ 2H ₂ O						180	180	248	70	300	500	150	212	70	70	500	500	NR	70	400
Stearic Acid	C ₁₈ H ₃₆ O ₂	235°F				0.87	180	150	285	ND	300	500	482	662	360	500	500	500	140	140	300
Stoddards Solvent		100°F	Yes			0.79	NR	NR	275	200	300	500	70	200	200	500	500	500	NR	158	300
Styrene	C ₈ H ₈	88°F	Yes			0.91	NR	NR	200	70	212	500	480	NR	ND	500	500	500	ND	70	300
Sulfamic Acid	H ₂ NSO ₃ H						NR	250	200	ND	212	500	100	ND	NR	ND	500	500	NR	70	300
Sulfur Dichloride	SCl ₂						ND	NR	75	ND	ND	450	ND	ND	ND	ND	500	500	NR	70	300
Sulfur Dioxide, Wet 10-80%	SO ₂						212	140	257	200	300	500	212	212	ND	ND	500	500	140	140	300
Sulfur Dioxide, Wet 100%	SO ₂						212	140	257	200	300	500	575	700	70	70	500	500	140	140	300
Sulfuric Acid, 10% (air free)	H ₂ SO ₄					1.07	212	212	287	250	300	500	NR	165	70	640	500	500	176	212	400
Sulfuric Acid, 20% (air free)	H ₂ SO ₄					1.14	212	180	287	250	300	500	NR	165	NR	640	500	500	140	212	400
Sulfuric Acid, 3% (air free)	H ₂ SO ₄					1.03	250	212	287	250	300	500	NR	165	140	340	500	500	140	212	400

Chemical Name		Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Polypropylene	Glass-Filled	PVDF	Ryton PPS	ETFE	PTFE	316 Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM	FEP
Sulfuric Acid, 30% (air free)	H ₂ SO ₄					1.22	212	180	287	250	300	500	NR	60	NR	640	500	500	176	212	400	
Sulfuric Acid, 33% (air free)	H ₂ SO ₄					1.24	212	176	287	250	300	500	NR	60	NR	640	500	500	176	212	400	
Sulfuric Acid, 50% (air free)	H ₂ SO ₄					1.4	212	176	287	250	300	500	NR	165	NR	640	500	500	176	212	400	
Sulfuric Acid, 60% (air free)	H ₂ SO ₄					1.5	212	176	287	250	300	500	NR	165	NR	640	500	500	176	176	400	
Sulfuric Acid, 70% (air free)	H ₂ SO ₄					1.61	185	NR	257	220	300	500	NR	90	NR	640	500	500	176	176	400	
Sulfuric Acid, 80% (air free)	H ₂ SO ₄					1.73	185	NR	257	220	300	500	NR	180	NR	340	500	500	140	158	400	
Sulfuric Acid, 85% (air free)	H ₂ SO ₄					1.78	160	NR	212	220	300	500	NR	180	NR	340	500	500	104	158	400	
Sulfuric Acid, 90% (air free)	H ₂ SO ₄					1.81	150	NR	212	220	300	500	NR	210	NR	300	500	500	70	158	400	
Sulfuric Acid, 93% (air free)	H ₂ SO ₄					1.83	150	NR	200	220	300	500	NR	210	NR	160	500	500	70	158	400	
Sulfuric Acid, 95% (air free)	H ₂ SO ₄					1.83	170	NR	180	220	300	500	NR	210	NR	160	500	500	NR	158	400	
Sulfuric Acid, 96% (air free)	H ₂ SO ₄					1.84	130	NR	175	220	300	500	NR	210	NR	220	500	500	NR	158	400	
Sulfuric Acid, 98% (air free)	H ₂ SO ₄					1.84	104	NR	140	220	300	500	NR	210	NR	220	500	500	NR	158	400	
Sulfuric Acid, 100% (air free)	H ₂ SO ₄					1.83	NR	NR	NR	220	300	500	125	350	NR	NR	500	500	NR	158	400	
Sulfuric Acid, Fuming	H ₂ SO ₄					1.94	NR	NR	NR	350	300	500	ND	ND	ND	ND	500	500	NR	140	400	
Tannic Acid, 10%	C ₁₄ H ₁₀ O ₉						180	180	260	200	275	500	212	150	200	500	500	500	140	140	300	
Tannic Acid, 100%	C ₁₄ H ₁₀ O ₉	390°F					180	180	260	200	275	500	212	150	200	500	500	500	140	140	300	
Tetrahydrofuran	C ₄ H ₈ O	7°F	Yes			0.89	NR	NR	NR	140	212	500	200	200	200	500	500	500	NR	NR	300	
Toluene, Toluol	C ₇ H ₈	39°F	Yes			0.87	NR	NR	170	100	250	500	480	212	200	500	500	500	NR	100	300	
Trichloroethylene	C ₂ HCl ₃					1.46	NR	NR	285	100	275	500	480	212	200	500	500	500	NR	ND	300	
Triethylamine	(C ₂ H ₅) ₃ N	18°F	Yes			0.73	NR	NR	100	ND	250	500	480	ND	ND	500	500	500	ND	ND	193	
Trimethylamine	C ₃ H ₉ N	21°F	Yes				ND	NR	150	ND	ND	300	ND	ND	ND	ND	500	500	ND	NR	193	
Turpentine	C10H16	95°F	Yes			0.86	NR	NR	285	200	275	500	480	200	200	500	500	500	NR	158	300	
Urea	CH ₄ N ₂ O						180	180	280	200	275	500	200	200	200	500	500	500	200	200	300	
Water, Deionized	H ₂ O					1	210	210	280	200	300	500	480	600	570	500	500	500	200	200	300	
Water, Demineralized	H ₂ O					1	195	180	280	200	212	500	480	70	570	500	500	500	140	140	300	
Water, Distilled	H ₂ O					1	225	180	280	200	300	500	600	600	572	480	500	500	140	140	300	
Water, Fresh	H ₂ O					1	225	180	302	250	300	500	600	300	500	500	500	500	275	275	300	
Water, Salt	H ₂ O					1	212	180	285	200	300	500	600	300	212	340	500	500	200	200	300	
Water, Sea	H ₂ O					1	212	225	285	200	300	500	600	550	212	500	500	500	200	212	300	
White Liquor						1.15	180	180	280	ND	200	500	480	130	ND	500	500	500	176	140	300	
Xylene	C ₆ H ₄ (CH ₃) ₂	90°F	Yes			0.87	NR	NR	175	200	250	500	480	350	200	340	500	500	NR	140	300	
Xylol	C ₆ H ₄ (CH ₃) ₂	81°F	Yes			0.87	NR	NR	175	200	250	500	480	350	200	340	500	500	NR	70	300	
Zinc Chloride	ZnCl ₂						180	180	285	200	300	500	480	293	200	340	500	500	176	212	300	
Zinc Sulfate	ZnSO ₄ . H ₂ O						180	180	285	200	300	500	480	932	200	340	500	500	212	200	300	