OFFICIAL UK DISTRIBUTOR: Michael Smith Engineers Ltd
Website: www.michael-smith-engineers.co.uk
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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 140ºF 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 Stainless Steel	Hastelloy C C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM
Acetamide	CH_3CONH_2				1.16	ND	150	75	200	250	500	140	70	ND	480	500	500	140	140
Acetic Acid, 10%	$HC_2H_3O_2$			10%	1.01	212	212	225	244	250	500	390	257	244	70	500	500	70	NR
Acetic Acid, 20%	$HC_2H_3O_2$			20%	1.03	176	212	200	244	250	500	300	257	244	70	500	500	70	NR
Acetic Acid, 50%	$HC_2H_3O_2$			50%	1.06	100	212	200	244	250	500	390	257	244	244	500	500	70	NR
Acetic Acid, 80%	$HC_2H_3O_2$			80%	1.07	NR	160	175	244	244	450	550	257	244	244	500	500	70	NR
Acetic Acid, Glacial	$HC_2H_3O_2$	104ºF	Yes		1.05	NR	NR	122	244	244	500	212	257	244	244	500	500	200	NR
Acetone	C_3H_6O	-4ºF	Yes		0.79	NR	NR	NR	200	200	500	212	248	302	212	500	500	200	NR
Acetonitrile (Methylcyanide)	CH_3CN	43ºF	Yes		0.79	NR	NR	125	200	200	500	100	70	ND	400	500	500	70	NR
Acetylene	C_2H_2	63ºF	Yes		0.91	NR	NR	250	200	250	450	140	100	ND	500	500	500	250	200
Acrylic Acid (Propenoic Acid)	CH_2	115ºF	Yes		1.05	NR	NR	280		212	500	122	NR	ND	ND	500	500	200	NR
Acrylonitrile	C_3H_3N	32ºF	Yes		0.81	NR	NR	100	70	150	500	190	230	190	480	500	500	NR	NR
Alcohol, Butyl	$C_4H_{10}O$	95ºF	Yes		0.81	NR	NR	275	200	300	500	480	200	200	480	500	500	250	250
Alcohol, Butyl, Secondary	$C_4H_{10}O$	79ºF	Yes		0.81	NR	NR	275	200	300	500	480	200	200	480	500	500	70	70
Alcohol, Ethyl	C_2H_5OH	57ºF	Yes		0.79	NR	NR	280	300	300	500	200	212	200	500	500	500	70	70
Alcohol, Isopropyl	C_3H_8OH	54ºF	Yes		0.79	NR	NR	158	200	125	500	140	212	212	500	500	500	176	212
Alcohol, Methyl	CH_3OH	52ºF	Yes		0.791	NR	NR	257	150	300	500	212	212	200	500	500	500	176	NR
Alcohol, Propyl (Isopropyl Alcohol)	C_3H_8O	53ºF	Yes		0.79	NR	NR	207	200	300	500	70	200	200	500	500	500	200	212
Alcohols		60ºF	Yes		0.79	NR	NR	275	200	200	480	172	212	200	480	500	500	70	70
Aluminum Acetate	$Al(C_2H_3O_2)_3$				1	70	100	285	ND	ND	480	160	250	70	480	500	500	176	NR
Aluminum Chloride, 1%	$AlCl_3$			1%	1.01	180	250	289	200	300	500	70	352	212	480	500	500	212	212
Aluminum Chloride, 5%	$AlCl_3$			5%	1.04	180	250	289	200	300	500	NR	352	212	480	500	500	212	212
Aluminum Chloride, 20%	$AlCl_3$			20%	1.2	180	250	289	200	300	500	NR	352	212	480	500	500	212	212
Aluminum Chloride, 40%	$AlCl_3$			40%	1.34	120	250	289	200	300	500	NR	352	ND	480	500	500	212	212
Aluminum Chloride, 100%	$AlCl_3$			100%		120	250	289	200	300	500	NR	340	212	480	500	500	212	212
Aluminum Potassium Sulfate (Alum)	$KAl(SO_4)_2 \cdot 12H_2O$					225	225	285	70	300	500	480	175	392	500	500	500	212	212
Aluminum Sulfate NOTE: Pits SS on drying	$Al_2(SO_4)_3.18H_2O$			98-100%	1.69	180	250	280	200	300	500	214	214	214	480	500	500	140	140

Chemical Name	Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Polypropylene	Glass-Filled PVDF	Ryton PPS	ETFE	PTFE	316 Stainless Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM
Aluminum Sulfate NOTE: Pits SS on drying	$Al_2(SO_4)_3.18H_2O$			27.80%	1.33	180	250	280	200	300	500	214	214	214	480	500	500	140	140
Amines						NR	120	NR	70	300	480	212	200	200	480	500	500	70	NR
Ammonia (Anhydrous)	NH_3	52ºF	Yes		0.68	NR	NR	275	200	300	500	600	140	212	500	500	500	140	NR
Ammonia Water, 10%	NH_3				0.9	185	200	275	ND	300	500	ND	ND	ND	250	500	500	140	NR
Ammonium Bisulfide (Ammonium Sulfide)	$(NH_4)_2S$	72ºF	Yes			NR	NR	280	ND	ND	400	480	70	ND	480	500	500	70	NR
Ammonium Bromide, 5%	NH_4Br					ND	ND	ND	ND	ND	ND	70	70	ND	500	500	500	ND	ND
Ammonium Bromide	NH_4Br					ND	ND	ND	ND	ND	ND	480	ND	ND	500	500	500	ND	ND
Ammonium Carbonate	$(NH_4)_2CO_3$					180	250	280	200	300	500	212	185	212	500	500	500	212	212
Ammonium Chloride	NH_4Cl					140	225	280	100	300	500	212	212	968	500	500	500	212	212
Ammonium Dichromate	$(NH_4)_2Cr_2O_7$					ND	125	250	ND	275	500	ND	ND	ND	ND	500	500	70	ND
Ammonium Fluoride, 10%	NH_4F			10%	1.01	225	225	280	NR	300	500	70	175	70	480	500	500	140	140
Ammonium Fluoride, 25%	NH_4F			25%	1.01	225	225	280	NR	300	500	NR	175	ND	480	500	500	140	140
Ammonium Hydroxide, 10% (Ammonia Aqueous)	NH_4OH			10%	0.9	212	225	280	200	300	500	70	200	212	97	500	500	160	70
Ammonium Nitrate	NH_4NO_3					180	180	280	200	230	500	410	410	200	500	500	500	200	176
Ammonium Persulfate	$(NH_4)_2S_2O_8$					225	180	260	ND	275	500	70	140	140	480	500	500	70	140
Ammonium Phosphate (mono basic)	$NH_4H_2PO_4$					212	225	280	200	200	450	70	70	140	140	500	500	140	140
Ammonium Sulfate	$(NH_4)_2SO_4$					180	180	280	200	300	500	480	200	480	480	500	500	200	176
Ammonium Sulfide	$(NH_4)_2S$	72ºF	Yes		1	NR	NR	280	ND	300	500	480	70	ND	480	500	500	70	NR
Amyl Acetate	$CH_3COOC_5H_{11}$	77ºF	Yes		0.88	NR	NR	100	200	250	500	480	400	200	500	500	500	200	212
Amyl Alcohol	$C_5H_{12}O$	66ºF	Yes		0.81	NR	NR	280	200	250	500	480	200	200	500	500	500	200	212
Amyl Chloride, 84-100%	$C_5H_{11}Cl$	-14ºF	Yes			NR	NR	280	70	300	500	150	187	NR	400	500	500	NR	200
Benzaldehyde	C_6H_5CHO	145ºF			1.04	NR	NR	150	140	212	500	200	200	200	480	500	500	200	NR
Benzene	C_6H_6	12ºF	Yes		0.87	NR	NR	120	100	250	500	200	176	70	500	500	500	NR	158
Benzyl Alcohol (Benzal Chloride)	C_7H_8O	201ºF			1.05	NR	250	280	200	300	500	150	ND	140	200	500	500	NR	70
Benzyl Chloride	$C_6H_5.CH_2Cl$	153ºF			1.1	NR	NR	280	200	300	500	100	NR	ND	100	500	500	ND	ND
Bleach, 5.5%	NaClO			5.50%	1.08	212	NR	280	NR	300	500	ND	200	180	NR	500	500	104	130
Bleach, 12.5%	NaClO			12.5%	1.17	212	NR	280	NR	300	500	ND	200	180	NR	500	500	70	130
Brine, Basic	NaCr				1.3	212	200	285	200	300	500	200	245	212	70	500	500	212	248
Bromine, Liquid	Br_2					NR	NR	150	NR	135	450	NR	160	NR	NR	500	500	NR	212
Butanol	$C_4H_{10}O$	84ºF	Yes		0.81	NR	NR	275	200	300	500	200	200	200	480	500	500	250	250
Butyl Acetate	$C_6H_{12}O_2$	79ºF	Yes		0.88	NR	NR	100	200	260	500	302	302	200	480	500	500	NR	NR
Butyl Alcohol	$(CH_3)_3COH$	100ºF	Yes		0.78	NR	NR	275	200	300	500	200	200	200	480	500	500	250	250
Calcium Bisulfide	$Ca(HS)_2$					212	212	275	70	300	ND	480	70	140	500	500	500	NR	176
Calcium Bisulfite	$Ca(HSO_3)_2$					225	180	280	200	300	500	ND	ND	ND	ND	500	500	NR	200
Calcium Carbonate	CaCO3					185	248	285	ND	300	500	480	300	300	480	500	500	140	248
Calcium Chloride	$CaCl_2$					212	212	285	200	300	500	200	212	3000	480	500	500	212	212
Calcium Hydroxide	$Ca(OH)_2$					212	176	280	70	300	500	200	140	300	500	500	500	212	212
Carbon Disulfide	CS_2	-22ºF	Yes	90-100%	1.26	NR	NR	120	200	300	500	212	200	200	500	500	500	NR	200
Carbon Tetrachloride	CCl_4	2ºF	Yes	100%	1.59	NR	NR	170	70	300	500	480	185	200	500	500	500	NR	NR

Chemical Name	Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Polypropylene	Glass-Filled	PVDF	Ryton PPS	ETFE	PTFE	316 Stainless Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM
Caustic Potash (See Potassium Hydroxide)	KOH				1.45	ND	180	NR	200	300	500	70	185	NR	350	500	500	212	NR
Caustic Soda (See Sodium Hydroxide)	NaOH			50%	1.53	150	180	ND	70	250	480	125	70	NR	275	500	500	200	NR
Chlorine Dioxide, 15%	ClO_2			15%		100	NR	280	ND	250	500	NR	110	200	NR	500	500	NR	70
Chlorine Dioxide	ClO_2	100ºF	Yes			NR	NR	280	ND	250	500	NR	70	180	NR	500	500	NR	70
Chlorine, Liquid	Cl_2				1.47	NR	NR	200	NR	250	300	NR	600	212	NR	500	500	NR	70
Chlorobenzene	C_6H_5Cl	84ºF	Yes		1.11	NR	NR	175	200	300	500	480	266	212	500	500	500	NR	200
Chromic Acid, 10%	H_2CRO_4			10%	1.08	180	NR	280	70	212	500	180	212	482	NR	500	500	NR	70
Chromic Acid, 20%	H_2CRO_4			20%	1.16	180	NR	212	70	200	500	212	212	482	NR	500	500	NR	70
Chromic Acid, 40%	H_2CRO_4			40%	1.37	180	NR	212	70	200	500	212	212	482	NR	500	500	NR	70
Chromic Acid, 50%	H_2CRO_4			50%	1.51	180	NR	185	70	232	500	212	200	482	NR	500	500	NR	70
Citric Acid	$C_6H_8O_7$	345ºF				212	180	275	220	300	500	302	374	70	212	500	500	212	350
Copper Sulfate	$CuSO_4$ $5H_2O$					180	180	285	223	300	500	160	212	70	70	500	500	176	140
Cyclohexane	C_6H_{12}	-4ºF	Yes		0.78	NR	NR	212	200	300	500	480	200	300	500	500	500	NR	200
Diethylamine	$C_4H_{11}N$	-38ºF	Yes		0.71	NR	NR	70	ND	230	500	140	85	NR	500	500	500	160	NR
Dimethyl Sulfoxide	C_2H_6OS	203ºF			1.1	NR	NR	NR	200	212	500	ND	ND	ND	ND	500	500	ND	NR
Dimethylamine	C_2H_7N	-0.4ºF	Yes		0.68	NR	NR	70	ND	230	500	ND	ND	ND	ND	500	500	NR	NR
Disodium Phosphate	HNa_2PO_4					180	180	280	ND	140	500	70	70	ND	70	500	500	70	70
Epichlorohydrin	$ClCH_2C_2H_3O$	90ºF	Yes		1.18	NR	NR	NR	70	300	500	480	212	ND	500	500	500	ND	NR
Ethanol (Ethyl Alcohol)	C_2H_5OH	55ºF	Yes		0.79	NR	NR	280	300	300	500	200	212	200	500	500	500	200	70
Ethyl Acetate	$C_4H_8O_2$	25ºF	Yes		0.9	NR	NR	122	100	170	500	302	414	212	500	500	500	130	NR
Ethyl Alcohol (Ethanol)	C_2H_5OH	55ºF	Yes		0.79	NR	NR	280	300	300	500	200	212	200	500	500	500	200	70
Ethylene Glycol	$C_2H_6O_2$	239ºF			1.11	180	180	260	200	300	500	392	386	NR	480	500	500	212	250
Ferric Chloride	$FeCl_3$					180	180	275	200	300	500	NR	175	200	340	500	500	225	212
Ferric Hydroxide	$Fe(OH)_3$					212	140	250	ND	300	400	140	185	200	100	500	500	200	200
Ferric Sulfate	$Fe_2(SO_4)_3$ nH_2O			12%	1.55	180	180	275	200	300	500	140	200	200	500	500	500	200	212
Ferric Sulfide	Fe_2S_3					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	500	ND	ND
Formaldehyde, 37%	CH_2O	133ºF	Yes	37%	1.08	NR	NR	250	70	230	500	265	212	212	500	500	500	212	212
Formaldehyde, 50%	CH_2O	133ºF	Yes	50%		NR	NR	104	70	200	500	600	300	200	500	500	500	120	176
Formic Acid	CH_2O_2	156ºF			1.22	70	70	214	70	275	500	212	200	140	340	500	500	200	NR
Fuel Oil						180	NR	285	200	300	500	480	200	200	480	500	500	NR	200
Furfural	$C_5H_4O_2$	140ºF	Yes		1.16	NR	NR	140	200	212	500	480	200	200	480	500	500	160	NR
Gasoline, Unleaded	CH_3OH	-49ºF	Yes		0.74	NR	NR	285	200	300	500	200	325	200	480	500	500		
Heptane	C_7H_{16}	25ºF	Yes		0.68	NR	NR	285	200	300	500	480	200	200	500	500	500	NR	200
Hexane	C_6H_{14}	-10ºF	Yes		0.66	NR	NR	285	200	300	500	480	257	200	500	500	500	NR	200
Hexyl Alcohol	$C_6H_{14}O$	106ºF	Yes		0.82	NR	NR	180	70	ND	300	140	140	140	480	500	500	200	248
Hydrochloric Acid, 2%	HCl			2%	1.01	225	225	285	NR	300	500	NR	140	175	480	500	500	140	230
Hydrochloric Acid, 10%	HCl			10%	1.05	225	225	285	NR	300	500	NR	140	160	480	500	500	140	230
Hydrochloric Acid, 15%	HCl			15%	1.08	225	225	285	NR	300	500	NR	140	NR	480	500	500	140	230
Hydrochloric Acid, 20%	HCl			20%	1.1	212	180	285	NR	300	500	NR	140	NR	480	500	500	140	230
Hydrochloric Acid, 25%	HCl			25%	1.13	212	175	285	NR	300	500	NR	140	NR	140	500	500	140	140
Hydrochloric Acid, 37%	HCl			37%	1.18	NR	176	194	NR	300	500	NR	140	NR	140	500	500	130	130

Chemical Name	Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Glass-Filled Polypropylene	PVDF	Ryton PPS	ETFE	PTFE	316 Stainless Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM
Hydrofluoric Acid, 30%	HF			30%	1.18	140	NR	275	140	300	500	NR	250	NR	NR	500	500	NR	212
Hydrofluoric Acid, 40%	HF			40%	1.16	100	NR	250	140	300	500	NR	125	NR	NR	500	500	NR	176
Hydrofluoric Acid, 48%	HF			48%	1.18	100	NR	250	140	300	500	NR	130	NR	NR	500	500	NR	176
Hydrofluoric Acid, 50%	HF			50%	1.2	100	NR	250	140	300	500	NR	130	NR	NR	500	500	NR	140
Hydrofluoric Acid, 70%	HF			70%	1.26	NR	NR	230	70	250	500	NR	130	NR	NR	500	500	NR	ND
Hydrofluosilicic Acid, 20%	H_2SiF_6			20%	1.17	212	180	280	200	300	500	145	185	NR	140	500	500	140	140
Hydrofluosilicic Acid, 50%	H_2SiF_6			50%		212	180	280	200	300	500	70	300	NR	ND	500	500	120	70
Hydrogen Peroxide, 5%	H_2O_2			5%	1.0	225	176	212	100	250	500	212	237	237	NR	500	500	NR	176
Hydrogen Peroxide, 30%	H_2O_2			30%	1.19	225	NR	212	100	250	500	125	200	140	NR	500	500	NR	104
Hydrogen Peroxide, 50%	H_2O_2			50%	1.19	185	NR	250	NR	150	500	104	200	70	NR	500	500	NR	104
Hydrogen Peroxide, 90%	H_2O_2			90%	1.4	NR	NR	200	NR	150	500	70	130	70	NR	500	500	NR	104
Hydrogen Sulfide, Aqueous (wet gas)	H_2S	-116ºF	Yes		1.54	212	NR	250	300	250	500	215	170	400	80	500	500	140	NR
Isobutyl Alcohol	$C_4H_{10}O$	82ºF	Yes		0.8	70	NR	275	200	275	480	480	140	140	70	500	500	160	75
Isooctane	C_8H_{18}	19ºF	Yes		0.69	140	NR	275	200	125	300	70	70	ND	120	500	500	NR	70
Isopropanol (Isopropyl alcohol)	C_3H_8O	53ºF	Yes		0.79	225	180	158	200	125	500	140	212	212	500	500	500	176	212
Kerosene		100ºF	Yes		0.8	190	NR	275	200	300	500	70	200	200	500	500	500	NR	158
Lye Solutions (See Sodium & Potassium Hydroxide)																			
Magnesium Sulfate	$MgSO_4$					180	180	275	200	300	500	200	125	200	500	500	500	176	176
Methane/LPG - confirm NPSHa is sufficent	CH_4	292ºF			0.55	212	NR	285	ND	300	400	700	212	ND	500	500	500	NR	176
Methyl Alcohol (Methanol)	CH_3OH	52ºF	Yes		0.79	180	70	285	150	300	500	235	212	200	500	500	500	176	NR
Methyl Ethyl Ketone	$C_4H_{16}O_4$	16ºF	Yes		0.83	NR	NR	NR	70	300	500	200	200	200	500	500	500	200	NR
Methylamine	CH_3NH_2	46ºF	Yes		1.07	NR	NR	NR	ND	200	400	140	70	ND	400	500	500	70	NR
Monoethanolamine	C_2H_7NO	185ºF			1.02	NR	70	NR	200	200	500	212	200	200	500	500	500	200	NR
Naphtha	NA	50ºF	Yes		0.76	180	NR	285	200	300	500	320	200	200	500	500	500	NR	158
Nickel Acetate	$Ni(C_2H_3O_2)_2 .4H_2O$					180	180	250	ND	250	480	70	ND	ND	70	500	500	70	NR
Nickel Chloride	$NiCl_2$					225	225	275	200	300	500	70	200	200	500	500	500	212	212
Nickel Nitrate	$Ni(NO_3)_2$ $6H_2O$					180	180	280	100	300	500	414	70	70	70	500	500	212	248
Nickel Sulfate (Nickel Salt)	$NiSO_4$ $6H_2O$					180	180	285	200	300	500	200	212	200	500	500	500	212	217
Nitric Acid, 10%	HNO_3			10%	1.05	225	NR	280	140	212	500	181	185	250	NR	500	500	104	140
Nitric Acid, 25-35%	HNO_3			25-35%	1.21	140	NR	160	100	212	500	181	140	250	NR	500	500	104	140
Nitric Acid, 40%	HNO_3			40%	1.25	140	NR	160	70	212	500	181	140	250	NR	500	500	NR	140
Nitric Acid, 50%	HNO_3			50%	1.31	140	NR	150	NR	221	500	181	140	250	NR	500	500	NR	140
Nitric Acid, 70%	HNO_3			70%	1.41	70	NR	140	NR	200	500	120	NR	70	NR	500	500	NR	140
Nitric Acid, 90%	HNO_3			90%	1.48	NR	NR	140	NR	122	500	120	NR	140	NR	500	500	NR	158
Nitric Acid, White Fuming	HNO_3				1.5	NR	NR	70	NR	122	500	ND	ND	ND	ND	500	500	NR	120
Octane	C_8H_{18}	59ºF	Yes		0.7	ND	NR	285	ND	300	500	70	70	ND	ND	500	500	NR	70
Octanol, 1 (Octyle Alcohol)	C_8H_{18}	178ºF			0.83	100	250	285	ND	ND	500	480	140	140	500	500	500	160	70
Oxalic Acid	$C_2H_2O_4$ $2H_2O$				1.65	180	140	125	212	300	500	140	140	NR	320	500	500	250	140

Chemical Name	Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Glass-Filled Polypropylene	PVDF	Ryton PPS	ETFE	PTFE	316 Stainless Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM
Peracetic Acid, 40%	$C_2H_4O_3$	115ºF	Yes	40%	1.23	NR	NR	70	ND	ND	500	ND	ND	ND	ND	500	500	ND	ND
Perchloric Acid, 10%	$HClO_4$			10%	1.06	225	180	250	100	230	500	NR	ND	100	70	500	500	140	140
Perchloric Acid, 70%	$HClO_4$	235ºF		70%	1.68	185	NR	212	100	200	500	NR	212	NR	70	500	500	140	140
Phenol	C_6H_5OH	174ºF			1.07	185	NR	150	100	NR	500	414	358	414	500	500	500	NR	140
Phosphoric Acid, 10% (Air Free)	H_3PO_4			10%	1.05	212	225	316	248	300	500	316	150	140	500	500	500	212	212
Phosphoric Acid, 25% (Air Free)	H_3PO_4			25%	115%	212	225	316	248	300	500	316	150	140	500	500	500	212	212
Phosphoric Acid, 50% (Air Free)	H_3PO_4			50%	1.34	212	225	316	248	275	500	221	150	NR	500	500	500	176	212
Phosphoric Acid, 70% (Air Free)	H_3PO_4			70%	1.53	212	225	316	248	275	500	221	200	NR	500	500	500	176	212
Phosphoric Acid, 85% (Air Free)	H_3PO_4			85%	1.69	212	212	316	248	275	500	150	150	NR	500	500	500	176	212
Plating Solutions, Brass						180	180	248	ND	275	500	140	100	100	100	NR	500	70	140
Plating Solutions, Cadmium (Cyanide)						180	180	248	70	275	500	140	90	90	70	500	500	70	140
Plating Solutions, Chrome (Chromic Sulfuric)						180	70	260	70	275	500	NR	NR	130	NR	500	500	70	140
Plating Solutions, Copper (Sulfate)						225	225	212	70	275	500	NR	NR	ND	70	500	500	200	140
Plating Solutions, Gold (Cyanide)						225	180	250	70	275	500	150	150	150	140	500	500	70	150
Plating Solutions, Iron (Sulfate)						180	175	200	ND	ND	500	NR	150	150	140	500	500	ND	140
Plating Solutions, Lead (Alkali)						180	180	250	70	250	500	70	70	NR	140	500	500	70	140
Plating Solutions, Nickel (Chloride)						180	225	250	70	250	500	70	160	160	480	500	500	70	140
Plating Solutions, Rhodium						212	180	250	70	250	500	ND	ND	ND	ND	500	500	120	70
Plating Solutions, Silver						180	180	250	70	250	500	140	120	120	140	500	500	120	140
Plating Solutions, Speculum						ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	500	500	ND	ND
Plating Solutions, Tin (Acid & Fluoborate)						180	180	212	70	250	500	70	125	NR	480	500	500	140	176
Plating Solutions, Zinc (Acid Chloride)						180	180	250	70	250	500	NR	NR	140	480	500	500	70	140
Potassium Aluminum Sulfate (Alum)	$KAl(SO_4)_2 \cdot 12H_2O$					225	225	285	70	300	500	480	175	392	500	500	500	212	212
Potassium Bicarbonate	$KHCO_3$					180	70	275	200	300	500	480	130	70	500	500	500	176	212
Potassium Bisulfate	$KHSO_4$					180	250	285	ND	ND	500	70	ND	ND	ND	500	500	176	212
Potassium Bromide	KBr					180	180	285	200	300	500	185	70	200	480	NR	500	200	212
Potassium Chlorate	$KClO_3$					180	212	212	200	300	500	673	480	200	200	500	500	200	200
Potassium Chloride	KCl					180	180	285	200	300	500	140	347	212	200	500	500	212	212
Potassium Cyanate	KCNO					ND	70	ND	70	ND	70	ND	ND	ND	ND	500	500	ND	ND
Potassium Cyanide	KCN					180	180	285	200	300	500	140	140	200	500	NR	500	200	70
Potassium Hydroxide, 25% **(Caustic Potash)**	KOH			25%	1.24	180	180	140	268	212	500	212	200	175	500	500	500	212	NR
Potassium Hydroxide, 35% **(Caustic Potash)**	KOH			35%	1.34	180	180	NR	268	212	500	150	200	70	500	500	500	200	NR

Chemical Name	Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Polypropylene	Glass-Filled	PVDF	Ryton PPS	ETFE	PTFE	316 Stainless Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM
Potassium Hydroxide, 50% **(Caustic Potash)**	KOH			50%	1.51	180	180	NR	268	212	500	150	200	70	500	500	500	200	NR
Potassium Permanganate	$KMnO_4$					180	70	250	200	300	500	130	70	200	480	500	500	200	140
Potassium Permanganate, 10%	$KMnO_4$			10%		180	180	280	200	300	500	212	212	200	500	500	500	200	140
Potassium Permanganate, 25%	$KMnO_4$			25%		180	180	280	200	300	500	70	212	200	500	500	500	200	140
Potassium Sulfite (Sulfurous Acid)	K_2SO_3					70	140	212	70	ND	300	70	375	185	70	500	500	70	70
Propanol (Propyl Alcohol)	C_3H_8O	53ºF	Yes		0.79	NR	NR	150	200	300	500	356	200	200	500	500	500	200	212
Propionic Acid	$C_3H_6O_2$	129ºF	Yes		0.99	NR	NR	280	ND	212	500	340	286	NR	500	500	500	200	NR
Propyl Alcohol (propanol)	C_3H_8O	54ºF	Yes		0.79	NR	NR	150	200	300	500	356	200	200	500	500	500	200	212
Salicylic Acid	$C_7H_6O_3$	315ºF			1.44	200	180	230	ND	300	500	212	258	248	500	500	500	200	70
Sea Water	H_2O				1.03	212	225	285	200	300	500	250	300	213	340	500	500	200	212
Silver Nitrate, 0-60%	$AgNO_3$			0%-60%		180	180	285	200	300	500	125	70	70	500	500	500	176	200
Silver Nitrate, 100%	$AgNO_3$			100%		180	180	285	100	300	500	125	200	200	500	500	500	176	200
Silver Sulfate	Ag_2SO_4					180	140	250	ND	ND	ND	ND	ND	ND	ND	ND	500	176	212
Sodium Benzoate	$C_7H_5NaO_2$	212ºF				180	NR	285	ND	300	500	ND	100	70	340	500	500	70	70
Sodium Bicarbonate	$NaHCO_3$					180	180	285	300	300	500	150	150	200	500	500	500	212	212
Sodium Bichromate	$Na_2Cr_2O_7$ $2H_2O$					180	180	275	70	300	500	150	100	70	500	500	500	176	212
Sodium Bisulfate	$NaHSO_4$ .H_2O					180	180	285	200	300	500	480	140	136	500	500	500	200	212
Sodium Bisulfite	$NaHSO_3$					180	180	285	200	300	500	100	212	140	500	500	500	212	212
Sodium Borate	$Na_2B_4O_7$.$10H_2O$					176	212	275	300	300	500	150	200	200	500	500	500	140	176
Sodium Bromate	$NaBrO_3$					185	175	280	ND	300	500	ND	ND	ND	ND	500	500	ND	ND
Sodium Bromide	NaBr					180	180	285	70	300	500	480	70	70	500	500	500	70	70
Sodium Carbonate **(Soda Ash)**	Na_2CO_3					180	180	285	300	300	500	212	212	140	500	500	500	212	212
Sodium Chlorate 25%	$NaClO_3$			25%		180	180	285	210	300	500	70	212	70	130	500	500	200	200
Sodium Chlorate 50-60%	$NaClO_3$			50%-60%		180	180	285	210	300	500	NR	212	ND	ND	500	500	200	200
Sodium Chlorate 60-70%	$NaClO_3$			60%-70%		180	180	285	210	300	500	212	212	ND	ND	500	500	200	200
Sodium Chlorate 70-80%	$NaClO_3$			70%-80%		180	180	285	210	300	500	212	212	ND	ND	500	500	200	200
Sodium Chlorate 80-100%	$NaClO_3$			80%-100%		180	180	285	210	300	500	140	140	220	140	500	500	200	200
Sodium Chloride	NaCl					180	180	285	200	300	500	212	176	140	500	500	500	176	212
Sodium Chlorite	$NaClO_2$					ND	200	250	200	300	500	ND	ND	ND	ND	500	500	70	140
Sodium Chromate	Na_2CrO_4 $4H_2O$					190	175	280	200	300	500	70	212	ND	340	500	500	ND	140
Sodium Cyanide	NaCN					180	180	275	70	300	500	140	200	200	500	500	500	176	176
Sodium Dichromate	$Na_2Cr_2O_7$ $2H_2O$					70	NR	120	ND	100	300	ND	ND	ND	ND	500	500	70	70
Sodium Dithionite 12% (sodium hydrosulfite)	$Na_2S_2O_4$			12%		ND	175	248	ND	300	480	230	230	ND	100	500	500	70	70
Sodium Dithionite **Solution** (sodium hydrosulfite)	$Na_2S_2O_4$					70	175	248	ND	300	480	480	70	ND	100	500	500	70	70
Sodium Ferricyanide	$Na_3Fe(CN)_6$ .H_2O					180	180	275	ND	300	500	70	70	ND	340	500	500	140	140
Sodium Ferrocyanide	$Na_4Fe(CN)_6$.$10H_2O$					180	180	275	ND	300	500	70	70	ND	100	500	500	140	140
Sodium Fluoride, 5%	NaF					180	180	285	ND			70	70	70	100	500	500	140	140
Sodium Fluoride	NaF					180	180	285	ND	300	500	NR	200	ND	340	500	500	140	140

Chemical Name	Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Polypropylene	Glass-Filled Polypropylene	PVDF	Ryton PPS	ETFE	PTFE	316 Stainless Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM
Sodium Fluorosilicate	Na_2SiF_6						ND	70	200	ND	ND	ND	80	ND	ND	ND	500	500	ND	ND
Sodium Formate (Formic Acid)	CHO_2Na						70	70	214	ND	275	500	212	200	140	340	500	500	NR	70
Sodium Hydrogen Phosphate (sodium phosphate dibasic)	HNa_2PO_4						180	180	280	ND	140	500	480	212	70	500	500	500	140	140
Sodium Hydroxide, 10% (Caustic Soda)	NaOH			10%	1.11		180	180	NR	140	250	500	248	225	2534	275	500	500	176	NR
Sodium Hydroxide, 15% (Caustic Soda)	NaOH			15%	1.16		180	180	NR	140	250	500	248	225	2534	275	500	500	176	NR
Sodium Hydroxide, 25% (Caustic Soda)	NaOH			25%	1.27		180	180	NR	140	250	500	212	200	2534	275	500	500	176	NR
Sodium Hydroxide, 30% (Caustic Soda)	NaOH			30%	1.33		180	180	NR	140	250	500	212	200	200	275	500	500	212	NR
Sodium Hydroxide, 50% (Caustic Soda)	NaOH			50%	1.52		180	180	NR	140	250	500	212	200	200	275	500	500	212	NR
Sodium Hypochlorite, 5%	NaOCl			5%	1.1		212	NR	275	NR	300	500	160	140	ND	NR	500	500	70	130
Sodium Hypochlorite, 12.5%	NaOCl			12.5%	1.21		212	NR	275	NR	300	500	NR	140	180	NR	500	500	70	130
Sodium Iodide	NaI						212	175	280	ND	300	500	ND	ND	ND	ND	500	500	ND	ND
Sodium Metaphosphate (sodium hexametaphosphate)	$(NaPO_3)_6$				1.2		180	175	280	ND	300	480	70	ND	ND	500	500	500	212	140
Sodium Nitrate	$NaNO_3$						180	180	280	200	300	500	170	140	70	500	500	500	200	212
Sodium Nitrite	$NaNO_2$						180	180	280	ND	300	500	150	70	70	500	500	500	176	212
Sodium Perchlorate, 10%	$NaClO_4$			10%			190	180	250	ND	300	350	ND	212	ND	200	500	500	ND	ND
Sodium Permanganate				20%	1.16			175	275	ND	300	70							70	NR
Sodium Peroxide	Na_2O_2						212	212	285	70	300	500	480	212	ND	350	500	500	140	1214
Sodium Phosphate, Acid, Monobasic	$Na_3PO_4{\cdot}12H_2O$						185	180	280	ND	300	500	480	212	70	500	500	500	140	140
Sodium Phosphate, Alkaline, Tribasic	$Na_3PO_4{\cdot}12H_2O$						185	180	280	ND	300	480	480	212	70	500	500	500	140	140
Sodium Phosphate, Neutral, Dibasic MSDS	$Na_3PO_4{\cdot}12H_2O$						180	180	280	ND	300	500	480	212	70	500	500	500	140	140
Sodium Silicate	Na_2O_2			35%	1.3		180	180	285	200	300	500	212	212	70	500	500	500	200	212
Sodium Sulfate	Na_2SO_4						180	180	285	200	300	500	1600	200	200	500	500	500	200	212
Sodium Sulfide	Na_2S $9H_2O$						180	180	280	200	300	500	480	176	212	200	500	500	212	212
Sodium Sulfite	Na_2SO_3						212	225	280	70	300	ND	480	235	150	70	500	500	176	176
Stannic Chloride	$SnCl_4$						180	180	285	200	300	500	NR	240	302	340	500	500	140	140
Stannous Chloride	$SnCl_2$ $2H_2O$						180	180	248	70	300	500	150	212	70	70	500	500	NR	70
Stearic Acid	$C_{18}H_{36}O_2$	235ºF			0.87		180	150	285	ND	300	500	482	662	360	500	500	500	140	140
Stoddards Solvent		100ºF	Yes		0.79		NR	NR	275	200	300	500	70	200	200	500	500	500	NR	158
Styrene	C_8H_8	88ºF	Yes		0.91		NR	NR	200	70	212	500	480	NR	ND	500	500	500	ND	70
Sulfamic Acid	H_2NSO_3H						NR	250	200	ND	212	500	100	ND	NR	ND	500	500	NR	70
Sulfur Dichloride	SCl_2						ND	NR	75	ND	ND	450	ND	ND	ND	ND	500	500	NR	70
Sulfur Dioxide, Wet 10-80%	SO_2						212	140	257	200	300	500	212	212	ND	ND	500	500	140	140
Sulfur Dioxide, Wet 100%	SO_2						212	140	257	200	300	500	575	700	70	70	500	500	140	140
Sulfuric Acid, 10% (air free)	H_2SO_4				1.07		212	212	287	253	300	500	NR	165	70	640	500	500	176	212
Sulfuric Acid, 20% (air free)	H_2SO_4				1.14		212	180	287	253	300	500	NR	165	NR	640	500	500	140	212

Chemical Name	Molecular Formula	Flashpoint (° F)	Flammable	Concentration	Specific Gravity	CPVC	Glass-Filled Polypropylene	PVDF	Ryton PPS	ETFE	PTFE	316 Stainless Steel	Hastelloy C-276	Titanium	Carbon	Ceramic	Silicon Carbide	EPDM	FKM
Sulfuric Acid, 3% (air free)	H_2SO_4				1.03	250	212	287	253	300	500	NR	165	140	340	500	500	140	212
Sulfuric Acid, 30% (air free)	H_2SO_4				1.22	212	180	287	253	300	500	NR	60	NR	640	500	500	176	212
Sulfuric Acid, 33% (air free)	H_2SO_4				1.24	212	176	287	253	300	500	NR	60	NR	640	500	500	176	212
Sulfuric Acid, 50% (air free)	H_2SO_4				1.4	212	176	287	253	300	500	NR	165	NR	640	500	500	176	212
Sulfuric Acid, 60% (air free)	H_2SO_4				1.5	212	176	287	70	300	500	NR	165	NR	640	500	500	176	176
Sulfuric Acid, 70% (air free)	H_2SO_4				1.61	185	NR	257	70	300	500	NR	90	NR	640	500	500	176	176
Sulfuric Acid, 80% (air free)	H_2SO_4				1.73	185	NR	257	NR	300	500	NR	180	NR	340	500	500	140	158
Sulfuric Acid, 85% (air free)	H_2SO_4				1.78	160	NR	212	NR	300	500	NR	180	NR	340	500	500	104	158
Sulfuric Acid, 90% (air free)	H_2SO_4				1.81	150	NR	212	NR	300	500	NR	210	NR	300	500	500	70	158
Sulfuric Acid, 93% (air free)	H_2SO_4				1.83	150	NR	200	NR	300	500	NR	210	NR	160	500	500	70	158
Sulfuric Acid, 95% (air free)	H_2SO_4				1.83	170	NR	180	NR	300	500	NR	210	NR	160	500	500	NR	158
Sulfuric Acid, 96% (air free)	H_2SO_4				1.84	130	NR	175	NR	300	500	NR	210	NR	220	500	500	NR	158
Sulfuric Acid, 98% (air free)	H_2SO_4				1.84	104	NR	140	NR	300	500	NR	210	NR	220	500	500	NR	158
Sulfuric Acid, 100% (air free)	H_2SO_4				1.83	NR	NR	NR	NR	300	500	125	350	NR	NR	500	500	NR	158
Sulfuric Acid, Fuming	H_2SO_4				1.94	NR	NR	NR	NR	300	500	ND	ND	ND	ND	500	500	NR	140
Tannic Acid, 10%	$C_{14}H_{10}O_9$					180	180	260	200	275	500	212	150	200	500	500	500	140	140
Tannic Acid, 100%	$C_{14}H_{10}O_9$	390ºF				180	180	260	200	275	500	212	150	200	500	500	500	140	140
Tetrahydrofuran	C_4H_8O	7ºF	Yes		0.89	NR	NR	NR	140	212	500	200	200	200	500	500	500	NR	NR
Toluene	C_7H_8	39ºF	Yes		0.87	NR	NR	170	100	250	500	480	212	200	500	500	500	NR	100
Toluene, Toluol	C_7H_8	39ºF	Yes		0.87	NR	NR	170	100	250	500	480	212	200	500	500	500	NR	100
Trichloroethylene	C_2HCl_3				1.46	NR	NR	285	100	275	500	480	212	200	500	500	500	NR	ND
Triethylamine	$(C_2H_5)_3N$	18ºF	Yes		0.73	NR	NR	100	ND	250	500	480	ND	ND	500	500	500	ND	ND
Trimethylamine	C_3H_9N	21ºF	Yes			ND	NR	150	ND	ND	300	ND	ND	ND	ND	500	500	ND	NR
Turpentine	C10H16	95ºF	Yes		0.86	NR	NR	285	200	275	500	480	200	200	500	500	500	NR	158
Urea	CH_4N_2O					180	180	280	200	275	500	200	200	200	500	500	500	200	200
Water, Deionized	H_2O				1	210	210	280	200	300	500	480	600	570	500	500	500	200	200
Water, Demineralized	H_2O				1	195	180	280	200	212	500	480	70	570	500	500	500	140	140
Water, Distilled	H_2O				1	225	180	280	200	300	500	600	600	572	480	500	500	140	140
Water, Fresh	H_2O				1	225	180	302	250	300	500	600	300	500	500	500	500	275	275
Water, Salt	H_2O				1	212	180	285	200	300	500	600	300	212	340	500	500	200	200
Water, Sea	H_2O				1	212	225	285	200	300	500	600	550	212	500	500	500	200	212
White Liquor					1.15	180	180	280	ND	200	500	480	130	ND	500	500	500	176	140
Xylene	$C_6H_4(CH_3)_2$	90ºF	Yes		0.87	NR	NR	175	200	250	500	480	350	200	340	500	500	NR	140
Xylol	$C_6H_4(CH_3)_2$	81ºF	Yes		0.87	NR	NR	175	200	250	500	480	350	200	340	500	500	NR	70
Zinc Chloride	$ZnCl_2$					180	180	285	200	300	500	480	293	200	340	500	500	176	212
Zinc Sulfate	$ZnSO_4 \cdot H_2O$					180	180	285	200	300	500	480	932	200	340	500	500	212	200