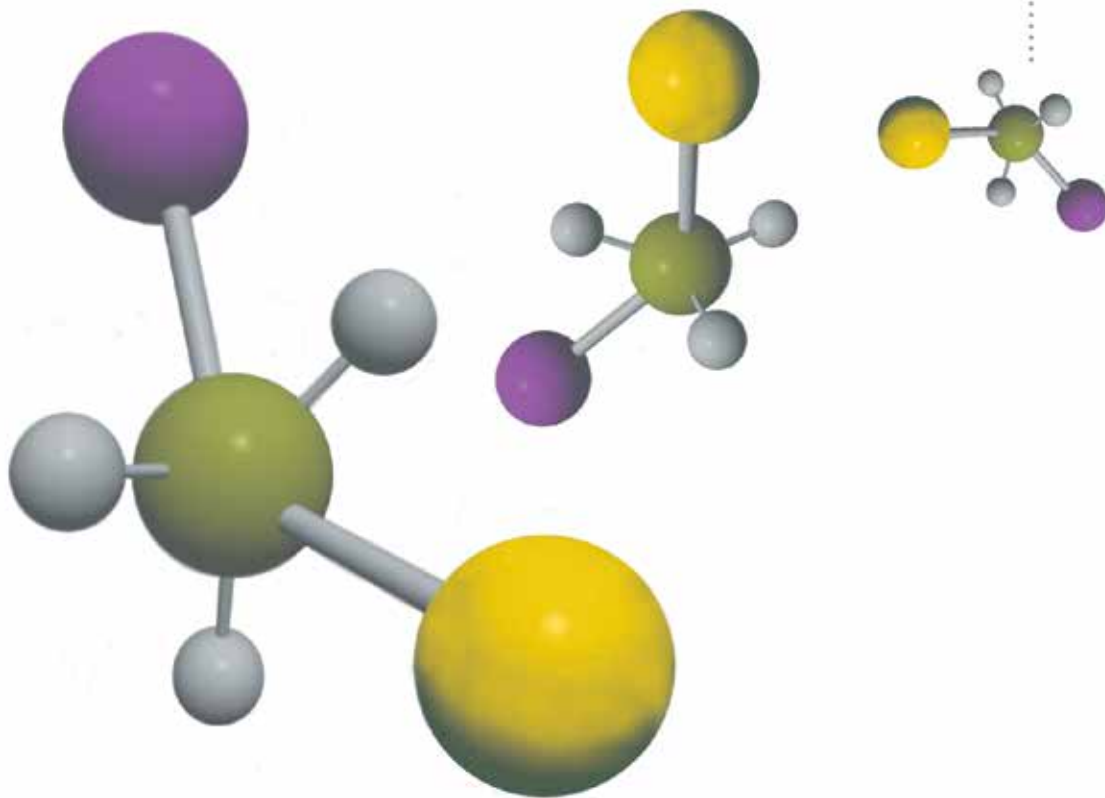




CHEMICAL RESISTANCE CHART



CHEMICAL RESISTANCE CHART

CHEMICALS	FORMULAS	CONCENTRATION	APPROX. SP. GR. @ STATED CONC.	PLASTICS							ELASTOMERS			ALLOYS			SEALS		
				PVC	CPVC	POLYPROPYLENE (PP)	PVDF	POLYETHYLENE	RYTON	TEFLON	VITON	EPDM	HYPALON	316 STAINLESS STEEL	304 STAINLESS STEEL	TITANIUM	HASTELLOY C	CARBON	CERAMIC
Acetaldehyde	CH3CHO	-	-	X	X	120	X	C	A	350	A	B	X	A	A	A	A	A	A
Acetaldehyde, Aqueous	-	40	-	X	X	120	X	X	-	350	X	200	X	A	A	A	A	A	A
Acetamide	CH3CONH2	-	-	-	-	73	-	B	-	A	200	A	-	A	B	-	-	-	A
Acetate Solvents	-	-	-	B	B	X	-	B	-	350	X	-	X	A	B	-	-	-	A
Acetic Acid*	CH3COOH	10	-	B	B	140	200	X	A	350	180	-	X	A	-	A	A	A	A
Acetic Acid*	CH3COOH	30	-	B	B	140	200	X	A	350	180	-	X	A	-	A	A	A	A
Acetic Acid*	CH3COOH	50	-	140	140	140	200	X	-	350	180	-	X	A	-	A	A	A	A
Acetic Acid*	CH3COOH	80	-	X	X	73	140	X	-	350	180	-	X	A	-	A	A	A	A
Acetic Acid*, Glacial	CH3COOH	100	1.05	X	X	B	A	B	A	350	X	B	-	A	B	A	A	A	A
Acetone	CH3COCH3	100	0.8	X	X	73	X	X	A	350	X	A	X	A	A	A	A	A	A
Acetonitrile	CH3CN	-	-	X	X	73	100	-	X	350	X	-	X	A	A	-	B	-	-
Acetyl Chloride	CH3COCL	-	-	X	X	B	130	-	A	200	X	X	X	A	C	-	-	-	-
Acetylene	HCCH	-	-	X	X	73	250	-	-	250	200	200	X	A	A	-	A	A	A
Acrylonitrile	H2CCHCN	-	-	X	X	73	100	-	-	350	X	X	140	C	A	-	B	A	A
Adipic Acid Aqueous	-	-	-	140	180	180	250	140	-	350	250	200	-	A	B	-	B	-	-
Alcohol, Allyl	-	-	-	X	X	100	130	X	-	250	200	70	200	A	A	A	A	A	-
Alcohol, Amyl	C5H11OH	-	-	100	100	170	250	140	-	400	190	200	200	A	A	A	A	A	-
Alcohol, Benzyl	C6H5CH2OH	-	-	X	X	140	180	-	-	A	140	B	140	A	A	A	A	A	-
Alcohol, Butyl	-	-	-	140	180	180	240	140	-	250	100	180	140	A	A	B	A	A	-
Alcohol, Ethyl	C2H5OH	-	-	140	140	180	750	-	-	300	170	B	200	A	A	A	A	A	A
Alcohol, Hexyl	-	-	-	100	100	70	-	-	-	A	160	A	70	A	A	A	A	A	A
Alcohol, Isobutyl	-	-	-	-	-	-	250	-	-	300	140	140	70	A	A	A	A	A	A
Alcohol, Isopropyl	(CH3)2CHOH	-	-	140	140	150	230	-	-	300	200	140	200	A	A	A	-	A	A
Alcohol, Methyl	CH3OH	100	0.8	140	140	150	230	-	-	300	100	100	140	A	A	A	A	A	A
Alkanes	-	-	-	140	180	100	250	-	-	300	210	X	X	A	A	-	-	-	-
Aluminum, Acetate	-	-	-	100	100	100	250	-	-	A	-	-	-	-	-	-	-	-	-
Aluminum, Chloride	ALCL3	SAT	2.44	140	170	170	140	140	A	210	180	210	200	C	-	-	-	-	A
Aluminum, Fluoride	ALF3	SAT	2.88	A	A	A	A	B	-	A	180	-	X	C	D	D	B	A	-
Aluminum, Formate	AL(HCOO)3	-	-	140	180	180	250	-	-	A	250	210	200	-	B	-	-	-	-
Aluminum, Hydroxide	AL(OH)3	-	-	140	180	180	250	-	-	A	180	-	240	A	A	-	-	-	-
Aluminum, Nitrate	AL(NO3)3	-	-	140	180	180	200	140	-	A	200	200	240	-	-	-	-	-	A
Aluminum, Potassium Sulfate	-	-	-	140	140	180	280	B	-	A	A	200	80	A	D	-	B	A	A
Aluminum, Sulfate	AL2(SO4)3	100	2.7	B	B	180	280	B	A	250	A	210	200	C	C	A	A	A	A
Amines	-	-	10	-	C	C	-	-	-	A	D	B	D	A	A	B	A	A	A
Ammonia	NH3	15	-	140	180	180	210	-	A	250	70	-	X	A	-	A	A	-	A
Ammonia	NH3	25	-	140	180	180	210	-	A	250	70	-	X	A	-	A	A	-	A
Ammonia	NH3	99	-	X	X	100	180	-	-	250	X	120	X	A	-	B	A	-	A
Ammonia, Anhydrous	-	-	-	A	A	A	A	B	A	X	A	X	A	B	B	A	C	A	A
Ammonium, Acetate	-	-	-	140	180	180	A	-	-	350	X	140	-	-	B	-	-	-	-
Ammonium, Bifluoride	NH4HF4	-	-	140	180	180	250	-	-	300	140	-	-	A	C	-	B	-	A
Ammonium, Bisulfide	NH4HS	-	-	140	180	-	250	-	-	300	-	-	-	-	-	-	-	-	-
Ammonium, Carbonate	NH4HCO3	SAT	-	140	180	200	250	140	-	250	B	A	X	A	A	B	A	A	A
Ammonium, Chloride	NH4CL	SAT	1.5	140	180	180	250	140	A	250	220	A	X	C	B	A	A	A	A
Ammonium, Dichromate	(NH4)2Cr2O7	-	-	73	-	-	250	-	-	A	70	100	X	-	-	-	-	-	-
Ammonium, Fluoride	NH4F	10	1.15	100	100	180	250	-	C	A	140	C	X	C	X	B	A	A	A
Ammonium, Fluoride	NH4F	20	1.3	100	100	180	250	-	C	B	140	C	X	C	X	B	A	A	A
Ammonium, Hydroxide	NH4OH	10	-	140	170	180	250	B	A	250	180	200	200	A	A	A	A	A	A
Ammonium, Metaphosphate	-	-	-	140	180	-	A	140	-	A	180	-	-	-	-	-	-	-	-
Ammonium, Nitrate	NH4NO3	SAT	1.7	140	180	180	250	140	A	250	180	A	X	A	A	A	A	A	A
Ammonium, Oxalate	(NH4)2C2O4	-	-	-	-	-	A	140	-	A	-	-	140	A	A	-	A	A	-
Ammonium, Persulfate	(NH4)2S2O8	SAT	2.0	140	150	X	A	140	-	A	X	A	X	A	A	A	A	A	A
Ammonium, Phosphate	NH4H2PO4	-	-	140	180	180	250	140	-	250	180	A	X	A	A	A	A	A	A
Ammonium, Phosphate Dibasic	(NH4)2HPO4	-	-	140	180	180	250	140	-	300	180	210	140	A	A	A	A	A	A
Ammonium, Phosphate Monobasic	NH4H2PO4	-	-	140	180	180	250	140	-	A	190	210	140	A	A	A	A	A	A
Ammonium, Phosphate Tribasic	-	-	-	140	180	180	250	140	-	A	190	210	140	A	A	A	A	A	A
Ammonium, Salts	-	-	1.8	140	180	180	250	140	-	350	180	210	200	-	B	-	-	-	A
Ammonium, Sulfate	(NH4)2SO4	SAT	1.8	140	180	180	250	140	A	A	180	210	200	B	B	A	A	A	A
Ammonium, Sulfide	(NH4)2S	100	-	68	68	-	250	140	-	A	-	210	-	-	B	-	-	-	-
Ammonium, Thiocyanate	NH4SCN	SAT	1.3	140	140	A	280	140	-	A	A	-	70	-	A	-	A	-	A
Ammonium, Thiosulfate	(NH4)2S2O3	SAT	0.86	140	140	-	250	140	-	A	-	-	-	A	A	A	-	A	A

CHEMICAL RESISTANCE CHART

CHEMICAL	FORMULAS	CONCENTRATION	APPROX. SP. GR. @ STATED CONC.	PLASTICS							ELASTOMERS			ALLOYS				SEALS	
				PVC	CPVC	POLYPROPYLENE (PP)	PVDF	POLYETHYLENE	RYTON	TEFLON	VITON	EPDM	HYALON	316 STAINLESS STEEL	304 STAINLESS STEEL	TITANIUM	HASTELLOY C	CARBON	CERAMIC
Amyl, Acetate	CH3COOC5H11	100	0.86	X	X	X	100	X	A	A	X	70	X	A	A	A	A	A	A
Amyl, Chloride	-	100	0.8	X	X	X	200	X	-	A	68	X	X	B	C	A	A	A	A
Aniline	C6H5NH2	100	1.02	X	X	100	140	X	A	A	X	70	X	A	A	C	B	A	A
Anti-Freeze	-	-	-	140	180	180	180	-	-	A	250	210	200	A	A	-	A	A	A
Antimony Chloride	-	-	3.1	140	A	180	100	140	-	A	190	140	140	X	X	-	A	-	A
Antimony Trichloride	SbCl3	-	-	140	A	180	100	140	-	A	190	140	140	X	X	-	A	-	A
Aqua Regia	80%HCL/20%HNO3	-	-	X	X	X	73	X	X	A	B	X	X	X	X	A	D	-	D
Aromatic Hydrocarbons	-	-	-	X	X	68	73	-	-	A	180	X	-	A	-	-	-	A	-
Arsenic Acid	H3AsO4	-	-	100	140	140	210	140	-	A	210	150	200	A	A	-	A	A	-
Barium Carbonate	BaCO3	SAT	4.3	140	180	180	250	140	-	A	250	250	200	A	A	A	A	A	A
Barium Chloride	BaCl2	SAT	3.1	140	180	180	250	140	A	A	300	250	200	A	A	A	A	A	A
Barium Hydroxide	Ba(OH)2	SAT	2.2	140	180	180	250	B	A	A	250	200	200	A	C	B	B	A	A
Barium Nitrate	Ba(NO3)2	-	-	140	180	180	250	140	A	A	300	200	200	A	A	A	B	A	A
Barium Salts	-	-	-	140	180	180	250	140	A	A	250	200	200	A	A	A	B	A	A
Barium Sulfate	BaSO4	SAT	4.4	140	180	180	250	140	A	300	200	200	200	A	A	A	A	A	B
Barium Sulfide	BaS	SAT	4.3	140	180	180	280	B	-	300	250	140	200	A	A	-	-	A	A
Beer	-	-	-	140	180	180	250	B	-	300	200	200	200	A	A	A	A	A	A
Beer Sugar Liquors	-	-	1.05	100	150	180	230	-	-	A	180	A	80	A	A	-	-	A	A
Benzaldehyde	C6H5CHO	100	-	X	X	X	73	X	A	100	X	A	X	A	A	A	A	A	A
Benzene	C6H6	-	-	X	X	X	100	X	X	210	140	X	X	B	A	A	B	A	A
Benzoic Acid	C6H5COOH	-	-	140	140	X	230	B	140	A	180	-	-	A	A	A	A	A	B
Benzyl Benzoate	-	-	-	-	-	-	-	-	-	A	100	X	X	-	B	-	B	-	-
Benzyl Chloride	C6H5CH2CL	100	1.1	-	-	73	250	-	-	300	200	X	X	-	-	-	-	-	-
Bismuth Carbonate	(BiO)2CO3	SAT	6.8	140	180	180	250	-	-	300	180	-	-	-	-	-	-	-	-
Bleach	-	-	-	140	150	150	250	140	-	A	190	140	80	-	A	-	A	-	-
Borax	Na2B4O7	-	1.4	140	180	180	250	140	A	A	180	A	200	A	A	A	A	A	A
Boric Acid	H3BO3	-	-	140	190	180	250	140	-	A	200	210	200	A	A	A	A	A	A
Brine	-	-	-	140	190	180	280	140	A	A	300	250	180	A	A	A	A	A	A
Bromic Acid	HBrO3	-	-	140	190	X	200	-	-	180	70	70	-	-	-	-	-	-	-
Bromine Liquid	-	-	-	X	X	X	200	X	X	A	190	X	X	X	X	A	A	X	A
Bromine Water	-	-	-	X	X	X	-	X	X	A	100	X	X	X	X	A	A	-	-
Bromotoluene	C6H5CH2Br	-	-	X	X	X	180	-	-	A	-	-	-	-	-	-	-	-	-
Butane	C4H10	-	-	140	180	180	250	X	A	250	180	X	100	A	A	-	B	A	A
Butyl Acetate	-	-	0.9	-	-	C	C	C	A	A	C	-	C	A	-	-	A	A	A
Butyl Alcohol	-	-	-	-	-	-	A	-	A	A	B	-	A	A	-	-	A	A	A
Butyl Ether	C4H9OC4H9	-	-	X	X	X	100	-	A	140	X	X	-	-	-	-	-	-	-
Butyl Phthalate	-	-	-	X	X	120	100	-	-	200	X	-	X	-	-	-	-	-	-
Butyl Stearate	-	-	-	-	-	-	250	-	-	250	190	100	X	-	A	-	-	-	-
Butylene	-	-	-	B	B	X	250	-	A	250	140	X	X	A	A	-	-	A	A
Butyric Acid	-	-	-	B	B	180	250	X	-	A	X	X	X	A	B	A	A	A	C
Cadmium Cyanide	Cd(CN)2	-	-	140	180	-	-	140	-	A	-	-	-	-	-	-	-	-	-
Calcium Bisulfide	Ca(HS)2	-	-	140	100	200	210	B	-	210	180	X	-	B	-	A	A	A	A
Calcium Bisulfite	Ca(HSO3)2	-	-	100	140	200	210	-	-	210	180	X	100	A	X	A	A	-	A
Calcium Carbonate	CaCO3	SAT	2.7	140	200	200	250	B	A	300	180	140	70	A	A	A	A	A	A
Calcium Chlorate	Ca(CLO3)2	SAT	2.7	140	180	200	250	A	-	250	180	140	73	A	A	-	B	A	-
Calcium Chloride	CaCL2	100	2.1	140	210	210	250	140	A	350	180	200	200	A	B	A	A	A	A
Calcium Hydroxide	Ca(OH)2	100	2.3	140	180	210	250	B	A	210	200	180	200	A	A	A	A	A	A
Calcium Hypochlorite	Ca(OCL)2	100	2.3	140	140	140	200	B	A	200	180	100	140	C	C	A	B	A	A
Calcium Nitrate	Ca(NO3)2	100	1.82	140	180	180	210	140	A	210	210	180	100	-	-	-	-	A	A
Calcium Oxide	CaO	-	-	140	-	-	250	-	-	A	-	210	200	-	A	-	-	-	-
Calcium Sulfate	CaSO4	100	2.9	140	140	180	210	140	A	210	200	210	200	A	A	A	B	A	A
Calcium Sulfide	CaS	-	-	140	140	180	180	140	-	210	200	150	200	-	-	-	-	-	-
Calgon	-	-	-	-	-	-	-	140	A	A	A	-	A	A	A	-	-	A	A
Cane Sugar Liquors	-	-	-	140	140	180	X	-	-	350	200	250	100	A	A	-	-	A	A
Carbolic Acid (See Phenol)	-	100	1.07	-	-	-	120	70	-	-	200	73	X	A	A	B	A	-	-
Carbon Bisulfide	CS2	-	-	X	X	X	68	X	-	210	180	X	X	A	A	-	A	A	A
Carbon Dioxide (wet or dry)	CO2	-	-	140	180	180	250	140	-	250	210	170	200	A	A	A	A	A	A
Carbon Disulfide	CS2	-	-	X	X	X	68	X	A	210	180	X	X	A	B	-	A	A	B
Carbon Monoxide	CS	-	-	A	A	A	A	B	-	A	180	A	200	A	A	-	-	A	A
Carbon Tetrachloride	CCL4	100	1.6	X	X	X	140	X	C	350	190	-	X	B	C	A	A	A	A
Carbonic Acid	H2CO3	-	-	140	210	210	250	140	-	350	200	210	70	A	A	-	A	A	A

CHEMICAL RESISTANCE CHART

CHEMICALS	FORMULAS	CONCENTRATION	APPROX. SP. GR. @ STATED CONC.	PLASTICS							ELASTOMERS			ALLOYS				SEALS				
				PVC	CPVC	POLYPROPYLENE (PP)		PVDF	POLYETHYLENE	RYTON	TEFLON	VITON	EPDM	HYPALON	316 STAINLESS STEEL		304 STAINLESS STEEL		TITANIUM	HASTELLOY C	CARBON	CERAMIC
Castro Oil	-	100	0.95	140	190	180	250	X	A	350	140	140	150	A	A	-	A	A	A	A	A	
Caustic Lime	Ca(OH)2	-	-	140	180	200	250	-	-	250	210	210	200	-	A	-	A	A	A	A	A	
Caustic Potash	KOH	100	2.04	140	180	200	140	-	-	200	X	200	200	-	A	-	-	-	-	-	-	
Caustic Soda	NaOH	-	2.13	140	180	200	100	X	-	250	X	200	140	-	A	-	-	-	-	-	-	
Cellosolve	-	100	-	73	100	100	140	-	-	210	X	140	X	A	A	-	-	-	-	-	-	
Chloral Hydrate	CCL3CH(OH)2	100	1.9	140	200	-	-	-	-	200	X	-	70	C	C	-	-	-	-	-	-	
Chloric Acid	HClO3	20	-	X	-	-	-	-	-	140	100	-	X	D	D	-	-	-	-	-	-	
Chlorine Dioxide	ClO2	100	-	140	140	X	140	-	-	140	X	X	-	-	-	-	-	-	-	-	-	
Chlorine Gas, Wet	-	-	-	X	X	X	-	X	-	A	X	X	X	-	C	-	-	A	-	-	-	
Chlorine Liquid	-	-	-	X	X	X	200	X	X	A	A	B	X	X	X	X	A	-	-	-	-	
Chlorine Water	-	-	-	140	180	X	250	-	-	350	-	73	73	X	X	A	B	A	X	A	X	
Chlorosulfonic Acid	CLSO2OH	100	1.77	X	X	X	X	X	X	180	X	X	X	X	X	A	A	A	A	A	A	
Chlorox Bleach	NaOCL:H2O	-	-	140	140	68	140	140	-	250	A	B	X	A	A	-	A	A	A	A	A	
Chrome Alum	CrK(SO4)2	-	-	73	73	140	200	140	-	210	210	140	200	-	B	-	-	-	-	-	-	
Chromic Acid	H2CrO4	10	-	140	180	X	250	X	A	250	180	73	X	B	B	A	A	X	A	A	A	
Chromic Acid	H2CrO4	20	-	140	180	X	250	X	X	50	140	73	-	X	X	A	A	X	A	A	A	
Chromic Acid	H2CrO4	30	-	73	73	X	200	X	X	250	300	-	100	X	X	A	A	X	A	A	A	
Chromic Acid	H2CrO4	50	-	B	B	X	140	X	X	200	300	-	X	X	X	A	B	X	A	A	A	
Citric Acid	C6H8O7H2O	100	1.54	140	180	140	200	X	-	200	200	200	200	A	A	A	A	A	A	A	A	
Copper Acetate	-	-	-	73	73	73	250	-	-	250	X	150	-	-	B	-	B	-	-	-	A	
Copper Carbonate	Cu2(OH)2CO3	-	-	140	190	-	250	-	-	350	190	210	200	-	A	-	-	-	-	-	A	
Copper Chloride	CuCl3	SAT	3.4	140	190	180	250	B	-	350	200	210	200	D	D	A	A	-	-	-	A	
Copper Cyanide	Cu(CN)2	SAT	-	140	190	180	200	B	A	300	190	200	200	A	A	A	A	A	A	A	A	
Copper Fluoborate	-	-	-	100	100	-	A	A	-	A	-	-	-	X	X	-	B	A	X	A	X	
Copper Fluoride	CuF2	SAT	2.9	140	140	140	250	-	-	250	190	210	140	-	-	-	-	-	-	-	A	
Copper Nitrate	Cu(NO3)2	SAT	2.3	140	140	180	210	B	-	250	200	210	200	A	A	A	A	A	A	A	A	
Copper Salts	-	-	-	140	140	180	210	140	-	210	210	200	200	-	-	-	-	-	-	-	A	
Copper Sulfate	CuSO4	SAT	2.3	140	180	180	210	140	A	210	210	200	200	A	A	A	A	-	-	-	A	
Copper Sulfide	CuSO4	5	-	140	180	180	210	140	-	210	210	200	200	-	A	-	-	-	-	-	A	
Corn Oil	-	-	-	73	73	100	250	-	-	250	200	X	250	-	A	-	-	-	-	-	A	
Corn Syrup	-	-	-	140	140	150	250	-	-	250	210	100	200	-	A	-	-	-	-	-	A	
Cottonseed Oil	-	100	0.9	140	190	180	250	X	-	250	300	X	240	-	A	-	-	-	-	-	A	
Creosol	CH3C6H4OH	100	1.05	X	X	X	180	X	A	210	100	X	140	A	A	-	-	-	-	-	A	
Creosote	-	-	-	X	X	-	-	-	-	210	100	X	X	-	-	-	-	-	-	-	-	
Cresols	-	-	-	X	X	X	180	-	-	210	100	X	X	-	A	-	-	-	-	-	-	
Cresylic Acid	-	-	-	X	X	73	150	X	-	A	200	X	X	A	A	A	B	A	A	A	A	
Croton Aldehyde	CH3CHCHCHO	-	-	X	X	73	180	-	-	210	100	-	-	-	A	-	-	-	-	-	-	
Crude Oil	-	-	-	140	190	73	250	-	-	350	300	X	-	-	A	-	-	-	-	-	-	
Cryolite	Na3ALF6	-	-	140	100	180	250	-	-	300	200	100	-	-	-	-	-	-	-	-	-	
Cupric Flouride	CuF2	-	-	140	180	180	250	-	-	250	200	210	-	-	-	-	-	-	-	-	-	
Cupric Nitrate	Cu(NO3)2	-	-	140	200	150	250	-	-	A	200	210	-	-	-	-	-	-	-	-	A	
Cupric Salts	-	-	-	140	200	150	250	-	-	A	200	210	-	-	-	-	-	-	-	-	A	
Cupric Sulfate	CuSO4	SAT	-	140	180	180	210	-	-	210	210	200	200	-	A	-	-	-	-	-	-	
Cyanic Acid (Isocyanic Acid)	HN=C=O	-	-	-	-	-	-	-	-	A	X	-	-	A	A	-	-	-	-	-	-	
Cychlohexane	C6H12	100	0.8	X	X	X	210	-	A	250	180	X	A	A	A	A	-	-	-	-	A	
Cychlohexanol	C6H11OH	100	0.94	X	X	X	210	-	A	210	180	X	-	-	-	-	-	-	-	-	A	
Cychlohexanone	C6H10O	100	0.95	X	X	68	68	X	A	210	X	X	-	A	-	-	-	-	-	-	A	
Detergents	-	-	-	140	200	180	250	B	A	A	210	200	-	A	A	-	-	-	-	-	A	
Developers	-	-	-	A	A	A	A	-	-	A	A	A	-	A	-	A	A	A	A	A	A	
Diacetone Alcohol	-	-	-	X	X	100	100	-	-	350	X	70	-	-	A	-	A	-	-	-	-	
Diazo Salts	-	-	-	140	190	120	70	140	-	350	-	-	-	-	-	-	-	-	-	-	-	
Dibutyl Ether	-	-	-	-	-	-	100	-	-	350	X	X	X	-	-	-	-	-	-	-	-	
Dibutyl Phthalate	C6H4(COOC4H9)2	-	-	X	X	73	100	-	-	350	X	70	X	-	A	-	-	-	-	-	-	
Dichlorethane	ClCH2CH2CL	-	-	X	X	X	210	-	-	250	150	-	-	A	A	-	A	-	-	-	-	
Dichlorobenzene	C6H4CL2	-	-	X	X	-	180	-	-	250	150	X	X	-	-	-	-	-	-	-	-	
Dichloroethylene	CLHC:CHCL	100	1.25	X	X	A	250	-	C	350	190	X	X	-	-	-	-	-	-	-	A	
Dichloroisopropyl (Ether)	-	-	-	X	X	X	100	-	-	A	-	-	-	-	-	-	-	-	-	-	-	
Diesel Fuel	-	-	-	72	72	X	250	X	A	A	190	X	X	A	A	-	-	-	-	-	A	
Diethanolamine	-	-	1.1	X	X	A	-	-	A	100	-	-	-	-	-	-	-	-	-	-	A	
Diethyl Cellosolve	-	-	-	-	-	-	280	-	-	A	200	X	-	-	A	-	-	-	-	-	-	
Diethyl Ketone	C2H2COC2H5	-	-	X	X	-	-	-	-	A	X	-	X	-	-	-	-	-	-	-	-	

CHEMICAL RESISTANCE CHART

CHEMICALS	FORMULAS	CONCENTRATION	APPROX. SP. GR. @ STATED CONC.	PLASTICS							ELASTOMERS			ALLOYS				SEALS			
				PVC	CPVC	POLYPROPYLENE (PP)	PVDF	POLYETHYLENE	RYTON	TEFLON	VITON	EPDM	HYPALON	316 STAINLESS STEEL	304 STAINLESS STEEL	TITANIUM	HASTELLOY C	CARBON	CERAMIC		
Diethylamine	(C2H5)2NH	-	-	X	X	100	68	C	-	210	X	120	X	A	A	-	-	A	A		
Diethylbenzene	C6H4(C2H5)2	-	-	X	X	X	-	-	-	A	150	X	X	A	-	-	-	-	-		
Diethylene Glycol	-	100	-	140	200	180	280	B	A	350	200	A	A	A	A	A	-	A	A		
Diethylether (Ether)	(C2H5)2O	-	-	X	X	75	100	-	-	210	X	X	X	-	-	-	-	-	-		
Diglycolic Acid	O(CH2COOH)2	-	-	140	190	73	70	-	-	210	-	-	-	A	-	-	-	-	-		
Dimethyl Phthalate	-	100	1.05	X	X	X	60	-	-	A	200	-	-	-	-	-	-	-	A	A	
Dimethylbenzene	C6H4(CH3)2	-	-	X	X	X	140	-	-	250	100	X	X	-	-	-	-	-	-		
Dimethylformamide	HCON(CH3)2	100	0.95	X	X	120	C	-	A	A	X	X	X	A	-	-	-	-	-		
Diisocyle Phthalate	C6H4(COOC4H9)2	100	-	X	X	-	-	X	A	A	-	-	X	A	-	-	-	-	A	A	
Dipropylene Glycol	-	100	1.25	140	180	120	280	-	-	A	250	210	200	A	-	-	-	-	A	A	
Disobutyl Ketone	-	-	-	X	X	-	140	-	-	A	X	X	-	-	-	-	-	-	-	-	
Disobutylene	C8H16	-	-	-	-	-	180	-	-	250	140	X	-	A	-	-	-	-	-	-	
Disodium Phosphate	-	-	-	140	210	180	250	140	-	350	80	210	140	-	A	-	-	-	-	-	
Disopropyl Ketone	-	-	-	X	X	-	68	-	-	70	X	70	-	-	-	-	-	-	-	-	
Distilled Water	HOH	-	-	140	210	180	250	140	-	350	-	250	200	-	A	-	-	-	-	-	
Dry Cleaning Solvent	-	-	-	X	X	73	250	X	-	250	200	X	X	-	A	-	-	-	-	-	
Epsom Salts	MgSO4	-	-	140	200	180	280	140	-	300	200	180	140	A	A	A	A	A	140	A	
Esters	-	-	-	X	X	X	100	-	-	180	-	-	-	-	-	-	-	-	-	-	
Ethane	C2H6	-	-	-	-	X	280	-	-	350	A	X	X	A	A	-	-	-	-	A	A
Ethanolamine	-	100	1.02	X	X	X	X	-	A	100	D	C	X	A	A	-	-	-	-	A	A
Ethyl Acetate	CH3COOL2H5	100	-	X	X	100	100	C	A	210	X	70	X	A	A	-	B	A	A	A	
Ethyl Alcohol	C2H5OH	96	0.8	-	-	A	A	X	A	300	180	170	200	A	A	-	A	A	A	A	
Ethyl Chloride (Cloroethane)	C2H5CL	100	0.92	X	X	C	250	X	-	350	140	70	70	A	A	-	A	A	A	A	
Ethyl Ether	(C2H5)2O	-	-	X	X	B	100	X	-	200	C	C	X	A	A	-	-	-	-	A	A
Ethylene Dichloride	CLCH2CH2CL	100	1.25	X	X	X	-	X	B	A	150	X	X	A	A	A	A	A	A	A	A
Ethylene Glycol	CH2OHCH2OH	100	1.12	140	190	180	200	X	-	-	300	A	200	A	A	A	B	A	A	A	A
Fatty Acids	-	-	-	140	140	140	250	B	A	250	180	X	200	A	A	A	A	A	A	A	A
Ferric Chloride, Anhydrous	FeCL3	SAT	2.9	140	190	180	250	140	-	300	210	200	200	X	X	A	B	A	A	A	A
Ferric Hydroxide	Fe(OH)3	-	-	140	180	180	250	-	-	250	180	180	100	-	-	-	-	-	-	-	-
Ferric Nitrate	FeNO3	SAT	1.7	140	190	180	250	140	A	250	180	180	100	A	A	A	A	A	A	A	A
Ferric Sulfate	Fe(SO4)3	SAT	3.1	140	180	180	250	140	C	250	190	210	240	A	C	A	A	C	A	A	A
Ferrous Chloride	FeCL2	SAT	3.2	140	180	180	250	140	A	250	200	200	240	X	X	A	B	A	A	A	A
Ferrous Nitrate	-	-	-	140	180	180	250	140	-	250	200	180	140	A	-	A	A	A	A	A	A
Ferrous Sulfate	FeSO4	SAT	1.9	140	190	180	280	140	-	400	200	190	200	A	A	A	A	A	A	A	A
Fluoboric Acid	HF4	48	1.4	140	190	140	200	140	-	250	200	160	100	B	D	X	A	A	A	X	-
Fluorine , Liquid	F2	-	-	140	140	140	250	X	-	X	-	-	-	X	X	X	A	X	-	-	-
Fluosilicic Acid	H2SiF6	-	-	X	190	180	210	140	-	250	200	140	240	B	-	-	-	A	A	X	X
Formaldehyde	HCHO	100	0.82	140	150	150	140	X	A	250	X	140	100	A	A	A	A	-	-	A	A
Formaldehyde	HCHO	40	1.01	140	100	73	140	-	A	250	X	140	X	A	A	-	A	-	-	A	A
Formic Acid	HCOOH	98	1.22	100	100	100	210	X	A	300	100	200	70	A	A	C	A	A	A	A	A
Freon 11 (MF)	CCL3F	-	-	72	72	73	250	-	A	250	180	X	120	A	A	-	-	-	-	A	A
Freon 113 (TF)	CL3CCF3	-	-	C	C	D	250	-	A	250	70	X	-	A	A	-	-	-	-	A	A
Freon 12 (wet)	CL2CF2	-	-	-	-	-	-	-	-	250	-	-	-	-	-	-	-	-	-	-	-
Fructose	C6H12O6	-	-	140	190	180	250	140	-	300	180	75	140	A	A	-	-	-	-	A	A
Fruit Juice	-	-	-	140	190	180	250	140	A	300	210	A	150	A	A	-	-	-	-	A	A
Furfural (Ant Oil) Bran Oil	C4H3OCHO	SAT	1.2	X	X	C	B	-	A	A	X	X	X	A	A	-	A	A	A	A	A
Gallic Acid	-	-	-	140	190	73	100	X	-	300	190	70	-	A	A	-	A	-	-	-	-
Gasoline	-	100	-	C	C	X	250	X	A	250	180	X	80	A	A	X	A	A	A	A	A
Glucose	C6H12O6	20	1.54	140	190	180	280	140	A	400	300	250	200	A	A	-	-	-	-	A	A
Glue	-	-	-	140	190	120	-	-	-	250	250	100	200	A	B	A	-	-	-	A	A
Glycerine	C3H5(OH)3	100	4.3	140	190	180	280	-	-	400	250	200	200	A	A	A	A	A	A	A	A
Glycerol (Glycol Alcohol)	C3H5(OH)3	100	1.3	140	190	180	280	X	-	400	250	200	200	A	A	-	A	A	A	A	A
Glycolic Acid	CH2OHC	100	4.3	140	190	150	B	X	A	200	X	-	X	-	-	-	-	-	-	A	A
Glycols	-	-	-	140	190	120	250	X	-	300	250	200	200	A	A	-	-	-	-	A	A
Heptane	CH3(CH2)5CH3	100	-	100	150	73	250	D	A	300	340	X	70	A	A	-	-	-	-	A	A
Hexane	CH3(CH2)4CH3	100	0.66	X	72	73	250	X	A	300	340	X	70	A	A	-	-	-	-	A	A
Hexyl Alcohol (Hexanol)	C6H11OH	-	-	140	190	73	180	-	-	250	250	-	X	-	-	-	-	-	-	-	-
Hydraulic Oil	-	-	-	-	-	X	-	-	-	300	250	X	70	A	A	-	-	-	-	A	A
Hydrazine	H2NNH2	100	1	X	X	X	200	-	-	250	A	70	A	A	A	-	-	-	-	A	-
Hydrobromic Acid	HBr	48	1.5	140	180	180	250	140	-	250	190	140	100	X	X	A	A	A	A	A	B
Hydrobromic Acid	HBr	20	-	140	180	180	250	140	-	250	190	140	100	X	X	A	A	A	A	A	A

CHEMICAL RESISTANCE CHART

CHEMICALS	FORMULAS	CONCENTRATION	APPROX. SP. GR. @ STATED CONC.	PLASTICS							ELASTOMERS			ALLOYS				SEALS	
				PVC	CPVC	POLYPROPYLENE (PP)		POLYETHYLENE	RYTON	TEFLON	VITON	EPDM	HYPALON	316 STAINLESS STEEL	304 STAINLESS STEEL	TITANIUM	HASTELLOY C	CARBON	CERAMIC
Hydrochloric Acid	HCL	100	-	A	A	-	-	-	-	A	C	X	X	X	X	X	C	A	A
Hydrochloric Acid	HCL	10	1.05	140	210	120	250	140	C	250	100	70	C	X	X	C	B	A	A
Hydrochloric Acid	HCL	25	1.12	140	210	120	250	140	X	250	100	70	X	X	X	C	B	A	A
Hydrochloric Acid	HCL	37	1.19	140	210	120	210	140	X	250	70	X	X	X	X	C	B	A	A
Hydrocyanic Acid	HCN	-	-	140	140	140	250	140	-	250	190	200	70	A	A	A	A	A	A
Hydrofluoric Acid	HF	20	1.1	100	140	150	250	70	B	300	150	100	150	X	X	X	A	A	B
Hydrofluoric Acid	HF	40	-	68	68	120	250	70	C	300	200	70	140	X	C	X	A	A	B
Hydrofluoric Acid	HF	70	1.26	X	X	100	200	C	C	250	100	X	100	X	X	X	C	X	X
Hydroflusilicic Acid	H2SiF6	-	-	X	X	73	250	140	-	300	200	140	150	X	X	X	C	A	X
Hydroflusilicic Acid	H2SiF6	20	-	X	X	73	250	140	A	300	200	140	150	X	X	X	B	A	X
Hydrogen Cyanide	HCN	-	-	140	190	150	280	-	-	300	150	100	100	A	A	-	-	-	-
Hydrogen Fluoride	HF	-	-	X	X	73	200	-	-	250	180	X	-	X	X	-	-	-	-
Hydrogen Peroxide	H2O2	10	1.05	140	X	73	250	140	B	250	180	100	200	C	X	B	A	A	A
Hydrogen Peroxide	H2O2	30	1.15	140	X	A	250	140	C	250	200	100	200	A	X	B	A	A	A
Hydrogen Peroxide	H2O2	50	1.25	68	X	X	250	-	C	250	100	X	200	A	X	C	A	A	A
Hydrogen Peroxide	H2O2	SAT	1.5	X	X	X	68	-	C	250	100	X	200	A	X	C	A	A	A
Hydrogen Sulfide (Aq Sol)	H2S	SAT	1.19	140	190	150	200	140	A	250	140	100	-	A	A	A	A	A	A
Hydroquinone	C6H4(OH)2	100	1.3	140	190	150	250	140	-	250	B	X	X	-	-	-	-	A	A
Hypochlorous Acid	HOCL	-	-	140	190	120	250	140	-	250	180	70	X	-	D	-	-	-	-
Ink	-	-	-	-	-	-	-	B	-	A	70	70	-	A	A	-	-	A	A
Iodine Solution	I2	0	-	72	72	73	150	X	-	200	70	70	70	X	X	B	D	D	A
Isooctane	(CH3)3CCH2CH(CH3)2	100	0.7	72	72	73	250	-	A	A	190	X	200	-	A	-	-	A	A
Isopropyl Acetate	CH3COOCH(CH3)2	SAT	0.92	X	-	-	-	-	-	200	X	70	X	B	B	-	-	A	A
Isopropyl Alcohol	(CH3)2CHOH	100	0.78	140	140	140	250	X	A	300	180	140	200	A	A	-	A	A	A
Isopropyl Ether	-	100	0.72	X	X	X	130	-	-	140	X	X	X	A	A	-	-	A	A
Jet Fuel JP-3, JP4, JP5	-	-	-	A	A	X	A	X	A	200	190	X	X	A	A	-	-	A	A
Kerosene	-	100	0.81	140	72	X	250	X	A	250	300	X	X	A	A	A	A	A	A
Ketones	-	-	-	X	X	C	A	-	B	200	X	X	X	A	A	A	A	A	A
Lacquer	-	-	-	C	C	B	A	-	-	A	X	A	X	A	A	A	A	-	A
Lacquer Thinner	-	-	-	X	X	B	-	-	-	A	-	A	X	A	A	A	A	-	A
Lactic Acid (Milk Acid)	-	-	1.2	140	140	180	250	X	A	250	210	70	140	A	A	A	A	A	A
Lead Acetate	Pb(C2H3O2)2	-	-	140	190	180	250	140	A	250	X	210	100	A	A	A	A	A	A
Lemon Oil	-	-	-	72	72	X	250	-	-	250	200	-	A	-	-	-	-	A	-
Lime - Sulfur Solution	-	-	-	140	190	10	150	-	-	A	190	X	160	-	-	-	-	-	-
Linseed Oil (Flaxseed Oil)	-	-	-	140	190	150	250	X	-	300	250	70	200	-	-	-	-	-	-
Lithium Bromide	LiBr	100	3.46	140	190	-	230	-	-	300	200	-	200	-	-	-	-	-	-
Lithium Chloride	LiCL	-	-	140	190	-	250	-	-	300	140	100	-	-	A	-	-	-	-
Lubricants	-	-	-	A	A	A	-	-	A	A	A	-	-	A	A	A	A	A	A
Lubricating Oil	-	-	-	140	190	73	250	-	70	350	180	X	X	A	A	A	A	A	A
Machine Oil	-	-	-	140	190	120	210	-	A	210	140	-	-	A	A	A	A	A	A
Magnesium Carbonate	MgCO3	SAT	3	140	180	180	210	140	-	210	210	170	140	A	A	-	B	-	A
Magnesium Chloride	MgCL2	SAT	2.3	140	190	180	280	140	A	400	180	180	200	B	B	A	A	-	A
Magnesium Citrate	MgHC6H5O7	-	-	140	180	180	250	140	-	300	210	180	-	-	-	-	-	-	-
Magnesium Hydroxide	Mg(OH)2	SAT	2.36	140	190	180	250	A	A	300	230	170	200	A	A	A	A	A	A
Magnesium Nitrate	Mg(NO2)2	SAT	2.03	140	190	180	250	140	-	300	230	140	140	A	A	A	A	-	A
Magnesium Sulfate	MgSO4	SAT	2.6	140	190	180	250	140	A	300	200	180	140	A	B	A	B	A	A
Maleic Acid	-	SAT	1.59	140	190	180	250	70	-	250	200	70	X	-	-	-	-	A	A
Malic Acid (Apple)	-	SAT	1.6	140	190	73	250	-	X	250	200	X	70	A	A	A	A	D	A
Manganese Sulfate	MnSO4	SAT	2.6	140	180	180	250	B	A	250	230	180	180	A	B	A	B	A	D
Mercuric Chloride	HgCL2	40	-	140	190	180	250	-	-	300	190	210	140	X	X	A	A	A	A
Mercuric Cyanide	Hg(CN)2	SAT	4	140	180	180	250	-	-	300	70	70	70	A	A	A	-	A	A
Mercury (Quicksilver)	Hg	100	13.6	140	190	150	250	140	-	300	100	70	80	A	A	C	A	A	A
Methane (Methyl Hydride)	CH4	-	-	140	72	120	280	-	-	300	300	X	200	A	A	-	-	-	-
Methanol	-	100	0.8	140	140	150	230	-	-	300	100	100	140	A	A	A	A	A	A
Methyl "Cellosolve"	-	-	-	X	X	73	250	-	-	A	X	70	70	-	A	-	-	-	-
Methyl Acrylate	-	100	0.92	X	X	68	100	-	-	A	X	B	X	A	A	-	A	-	A
Methyl Alcohol	CH3OH	100	0.8	140	140	150	230	-	-	300	100	100	140	A	A	A	A	A	A
Methyl Chloride	CH3CL	100	1.3	X	X	X	250	X	-	250	150	X	X	A	X	A	A	A	A
Methyl Chloroform	-	100	-	X	X	X	120	X	-	200	80	X	X	A	A	-	-	-	-
Methyl Ethyl Ketone (MEK)	CH3COC2H5	100	0.82	X	X	A	X	X	A	200	X	70	X	A	B	A	A	A	A
Methyl Isobutyl Ketone	-	100	0.8	X	X	X	X	X	A	210	X	-	-	A	B	A	A	A	A

CHEMICAL RESISTANCE CHART

CHEMICALS	FORMULAS	CONCENTRATION	APPROX. SP. GR. @ STATED CONC.	PLASTICS							ELASTOMERS			ALLOYS				SEALS	
				PVC	CPVC	POLYPROPYLENE (PP)		PVDF	POLYETHYLENE	RYTON	TEFLON	VITON	EPDM	HYPALON	316 STAINLESS STEEL	304 STAINLESS STEEL	TITANIUM	HASTELLOY C	CARBON
Methylamine	CH3NH2	-	-	X	X	X	X	X	X	250	100	70	X	A	B	-	-	A	A
Methylene Chloride	CH2CL2	100	1.34	X	X	X	100	X	-	250	X	X	X	A	A	A	A	A	A
Methylisobutyl Carbinol	-	-	-	72	72	120	150	-	-	200	70	70	70	-	-	-	-	-	-
Milk	-	-	-	140	190	180	280	140	-	400	190	190	200	A	A	A	A	A	A
Mineral Oil	-	-	-	140	190	72	250	X	A	300	300	X	70	A	A	A	A	A	A
Molasses	-	-	-	140	190	180	250	140	A	300	300	X	150	A	A	-	-	A	A
Monoethanolamine	-	-	-	X	X	150	X	-	-	100	190	70	X	-	-	-	-	-	-
Motor Oil	-	-	-	140	190	X	250	-	A	250	250	X	-	A	A	A	A	A	A
Naphtha	-	-	-	140	A	100	210	X	A	210	150	X	X	A	A	A	A	A	A
Naphthalene (Tar Camphor)	C10H8	100	1.15	X	X	B	200	X	A	250	170	X	X	B	B	A	A	A	A
Nickel Acetate	-	SAT	1.74	140	180	180	210	140	-	A	X	70	X	-	-	-	-	-	-
Nickel Chloride	NiCL2	SAT	3.5	140	210	180	250	140	-	250	210	210	200	A	A	A	A	A	A
Nickel Nitrate	Ni(NO3)4	SAT	2.1	140	190	180	250	140	-	300	250	210	X	A	B	B	A	A	A
Nickel Sulfate	NiSO4	SAT	3.7	140	190	180	250	140	-	300	180	210	200	A	A	A	A	A	A
Nitric Acid	HNO3	10	-	100	180	180	250	140	X	250	190	B	100	A	A	A	A	B	A
Nitric Acid	HNO3	30	-	73	100	180	210	70	X	250	190	X	73	A	A	A	A	X	A
Nitric Acid	HNO3	50	-	73	100	73	120	X	X	250	100	X	X	A	A	A	A	X	A
Nitric Acid	HNO3	70	-	X	X	X	100	X	X	210	X	X	X	A	B	A	A	X	A
Nitric Acid	HNO3	SAT	1.5	X	X	X	73	X	X	73	X	X	X	A	B	A	A	X	A
Nitric Acid	HNO3	-	-	X	X	X	X	X	A	X	X	X	X	X	B	B	B	X	A
Nitrobenzene	C6H5NO2	100	1.2	X	X	73	140	X	B	250	70	X	X	A	B	A	B	A	B
Oils, Aniline	-	-	-	X	X	100	120	-	-	250	X	140	70	A	A	A	D	A	A
Oils, Citric	-	-	-	-	-	72	A	-	-	300	140	-	-	A	A	-	-	A	A
Oils, Coconut	-	-	-	140	72	150	250	-	-	350	140	X	140	A	A	-	-	A	A
Oils, Corn	-	-	-	68	68	100	250	-	-	250	140	X	X	A	A	-	-	A	A
Oils, Cottonseed	-	-	-	140	210	150	250	-	A	300	140	X	200	A	A	-	-	A	A
Oils, Creosote	-	-	-	X	X	X	-	-	A	300	73	X	X	A	A	-	-	A	A
Oils, Fuel	-	-	-	140	140	73	250	-	A	300	140	X	-	A	A	-	-	A	A
Oils, Linseed	-	-	-	140	180	180	250	-	A	300	220	X	200	A	A	-	-	A	A
Oils, Mineral	-	-	-	140	190	100	250	-	-	300	300	X	70	A	A	-	-	A	A
Oils, Olive	-	-	-	140	180	180	250	-	-	300	150	-	100	A	A	-	-	A	A
Oils, Pine	-	-	-	140	180	-	-	-	-	300	70	-	-	A	A	-	-	A	A
Oils, Silicone	-	-	-	140	190	150	250	-	-	350	190	140	140	A	A	-	-	A	A
Oils, Vegetable	-	-	-	140	190	120	250	-	-	350	200	X	70	A	A	-	-	A	A
Oleic Acid (Red Oil)	-	-	0.9	140	190	73	250	-	-	250	190	70	70	A	A	-	A	A	A
Oxalic Acid	-	50	1.7	140	190	150	200	A	-	300	180	150	70	A	B	C	B	A	A
Paraffin	-	100	-	120	140	120	250	-	A	250	250	X	X	A	A	-	-	A	A
Pentane (Amyl Hydride)	CH3(CH2)3CH3	100	-	B	B	-	-	-	A	100	100	X	70	X	X	-	B	A	A
Perchloric Acid	HCL04	10	1.8	140	140	100	250	-	-	250	70	70	70	A	A	-	-	-	-
Perchloric Acid	HCL04	70	-	X	X	X	120	140	-	180	180	70	X	-	B	-	-	-	-
Perchloroethylene	CL2CCCL2	100	1.6	X	X	X	250	X	B	250	200	X	X	A	A	-	-	A	A
Petrolatum	-	-	-	140	190	120	250	X	-	300	100	X	70	A	A	-	-	A	A
Petroleum Oils	-	-	-	140	200	73	250	B	-	-	180	B	X	A	A	-	-	A	A
Phenols	C6H5OH	100	1.1	X	72	B	150	X	A	250	200	70	X	A	A	C	A	A	X
Phosphoric Acid	H3PO4	20	1.1	140	190	180	250	140	A	250	200	100	200	A	A	A	A	A	A
Phosphoric Acid	H3PO4	50	1.4	140	190	180	250	X	A	250	200	70	200	B	C	B	A	A	A
Phosphoric Acid	H3PO4	85	1.7	140	190	180	280	X	C	250	200	70	200	B	C	B	A	A	A
Phosphoric Acid	H3PO4	100	1.8	100	100	100	250	X	X	250	100	70	X	B	C	B	A	B	A
Phosphoric Acid Crude	H3PO4	-	1.83	B	A	B	A	X	X	250	100	70	X	C	X	X	A	B	A
Photographic Developer	-	-	-	140	190	150	250	X	A	250	190	A	100	A	B	A	A	A	A
Photographic Solutions	-	-	-	140	190	150	250	X	A	250	180	A	80	A	B	A	A	A	A
Phthalic Acid	C6H4(COOH)2	SAT	1.59	X	X	X	200	-	-	250	140	100	140	A	B	-	A	-	-
Pickle Brine	-	-	-	140	180	140	250	-	-	300	70	100	200	-	-	-	-	A	A
Pickling Solutions	-	-	-	140	180	180	250	X	-	250	-	X	X	-	-	-	-	A	A
Picric Acid	C6H2(NO2)3OH	SAT	1.77	70	70	73	70	X	-	250	190	140	70	A	A	-	A	-	-
Plating Solutions, Antimony *	-	-	-	140	190	150	240	-	A	300	140	-	-	A	B	A	A	A	A
Plating Solutions, Arsenic *	-	-	-	140	190	150	240	140	A	300	100	-	-	A	B	A	A	A	A
Plating Solutions, Brass *	-	-	-	140	180	180	250	140	A	250	150	70	200	A	B	A	A	A	A
Plating Solutions, Bronze *	-	-	-	140	180	180	200	140	A	250	70	70	-	A	B	A	A	A	A
Plating Solutions, Cadmium *	-	-	-	140	210	A	240	140	A	250	180	70	200	A	-	A	A	A	A

* see back of chart for additional information

CHEMICAL RESISTANCE CHART

CHEMICALS	FORMULAS	CONCENTRATION	APPROX. SP. GR. @ STATED CONC.	PLASTICS							ELASTOMERS			ALLOYS				SEALS			
				PVC	CPVC	POLYPROPYLENE (PP)	PVDF	POLYETHYLENE	RYTON	TEFLON	VITON	EPDM	HYPALON	316 STAINLESS STEEL	304 STAINLESS STEEL	TITANIUM	HASTELLOY C	CARBON	CERAMIC		
Plating Solutions, Chrome *	-	-	-	140	180	X	250	140	-	250	250	-	80	X	X	-	-	-	-	-	-
Plating Solutions, Copper *	-	-	-	140	180	180	210	140	A	250	180	70	200	-	-	-	-	-	-	A	A
Plating Solutions, Gold *	-	-	-	140	180	X	250	140	-	250	180	70	200	-	-	-	-	-	-	A	A
Plating Solutions, Indium *	-	-	-	140	180	120	200	140	A	250	100	-	-	-	-	-	-	-	-	-	-
Plating Solutions, Iron *	-	-	-	A	A	A	A	140	-	A	A	-	200	-	-	D	A	A	B	B	B
Plating Solutions, Lead *	-	-	-	140	140	140	250	140	A	250	180	70	200	-	-	-	-	-	-	A	A
Plating Solutions, Nickel *	-	-	-	140	140	140	250	140	A	250	180	70	200	A	A	A	A	A	A	A	A
Plating Solutions, Rhodium *	-	-	-	140	100	140	250	140	A	250	180	-	80	-	-	-	-	-	-	-	A
Plating Solutions, Silver *	-	-	-	140	190	180	250	140	A	300	1880	70	200	-	-	-	-	-	-	A	A
Plating Solutions, Tin *	-	-	-	140	190	180	250	140	A	300	180	100	200	-	-	-	-	-	-	A	A
Plating Solutions, Zinc *	-	-	-	140	200	180	250	140	A	300	180	70	200	-	-	-	-	-	-	A	A
Polyethylene Glycol	-	SAT	-	140	180	180	250	-	-	250	200	100	200	-	-	-	-	-	-	A	A
Potash	K2CO3	-	-	140	180	180	250	B	-	250	200	-	-	A	A	A	A	A	A	A	A
Potassium Acetate	KC2H3O2	40	-	-	-	100	250	-	A	250	C	100	-	-	-	-	-	-	-	A	A
Potassium Bicarbonate	KHCO3	SAT	2.2	140	200	180	250	-	A	400	200	170	200	A	B	A	B	A	B	A	A
Potassium Bichromate	K2Cr2O7	SAT	2.7	140	180	180	250	-	-	300	250	170	-	-	-	-	-	-	-	-	-
Potassium Bisulfate	KHSO4	SAT	-	140	180	180	250	-	-	300	200	170	140	-	-	-	-	-	-	-	-
Potassium Bromate	KBrO3	10	-	140	180	180	250	-	-	250	220	-	140	-	-	-	-	-	-	A	A
Potassium Bromide	KBr	SAT	2.7	140	180	180	250	B	A	300	200	150	200	A	A	A	A	A	A	A	A
Potassium Carbonate	K2CO3	SAT	2.4	140	180	180	250	B	A	300	200	160	200	A	A	A	A	A	A	A	A
Potassium Chlorate	KClO3	SAT	2.3	140	180	180	250	B	A	300	180	140	200	A	A	A	A	A	A	A	A
Potassium Chloride	KCl	SAT	2	140	180	180	250	B	A	300	200	200	200	A	A	A	A	A	A	A	A
Potassium Chromate	K2CrO4	40	-	140	180	180	250	B	A	250	100	170	200	B	-	A	B	A	A	A	A
Potassium Cyanide	KCN	SAT	1.5	140	180	180	250	B	A	250	190	140	200	A	A	A	A	A	A	A	A
Potassium Dichromate	K2Cr2O7	40	-	140	180	180	250	B	A	250	180	170	200	A	A	A	B	A	A	A	A
Potassium Ferrocyanide	K4Fe(CN)6	SAT	1.9	140	150	140	250	A	-	300	180	140	80	A	A	A	A	A	A	A	A
Potassium Hydroxide	KOH	50	-	A	A	A	X	B	A	A	B	200	140	B	B	C	A	A	X	X	X
Potassium Hydroxide	KOH	25	-	140	180	180	140	B	A	250	B	200	140	A	A	C	A	A	X	X	X
Potassium Nitrate	KNO3	SAT	2.1	140	190	150	250	B	A	350	180	210	200	A	A	A	A	A	A	A	A
Potassium Perbotate	-	SAT	-	140	180	180	250	-	-	250	-	-	-	-	-	-	-	-	-	A	A
Potassium Perchlorate	KClO4	10	-	140	180	180	250	-	-	200	150	140	150	-	-	-	-	-	A	A	A
Potassium Permanganate	KMNO4	20	-	140	180	120	250	B	A	300	150	210	200	A	A	B	B	A	A	A	A
Potassium Sulfate	K2SO4	SAT	2.7	140	190	180	250	-	A	250	200	180	140	A	A	A	A	A	A	A	A
Potassium Sulfide	K2S	SAT	1.8	100	120	A	250	-	A	300	100	-	-	A	A	-	B	A	A	A	A
Propane	C3H8	-	-	X	X	X	250	-	-	300	300	X	70	A	A	-	-	-	-	A	A
Propyl Alcohol	CH3CH2CH2OH	100	0.8	72	72	150	150	-	A	250	200	140	200	A	B	A	A	A	A	A	A
Propylene Glycol	CH3CHOHCH2OH	100	1	-	-	A	250	B	A	300	200	-	-	A	B	A	A	A	A	A	A
Pyridine	N(CH)4CH	100	1	X	X	72	X	C	B	170	X	70	X	B	C	-	-	-	-	A	A
Pyrogallol Acid (Pyrogallol)	C6H3(OH)3	-	-	73	A	-	150	-	A	150	80	-	200	A	A	-	-	-	A	A	A
Rum	-	-	-	100	100	100	A	-	A	A	70	-	-	A	A	A	A	A	A	A	A
Salt Brine	-	-	-	140	190	180	250	140	A	A	280	250	180	A	B	A	A	A	A	A	A
Sea Water	-	-	-	140	190	180	250	140	A	A	280	250	180	A	C	A	A	A	A	A	A
Silicone Oil	-	-	-	140	150	150	250	-	A	350	190	140	140	A	A	A	A	A	A	A	A
Silver Cyanide	AgCN	-	3.95	140	180	180	250	140	A	350	140	140	200	-	-	-	-	-	-	-	-
Silver Nitrate	AgNO3	-	4.32	140	180	180	280	140	A	350	250	200	200	A	A	A	A	A	A	A	A
Soap Solutions	-	-	-	140	190	180	280	B	A	350	200	200	140	A	A	A	A	A	A	A	A
Sodium Acetate	NaC2H3O2	-	1.5	140	180	180	250	140	A	350	X	170	70	A	A	A	A	A	A	A	A
Sodium Alum	-	-	-	140	180	180	250	140	A	200	210	160	140	-	-	B	B	A	A	A	A
Sodium Benzoate	C6H5COONa	-	-	140	190	180	250	140	-	300	200	210	-	-	-	-	-	-	-	-	-
Sodium Bicarbonate	NaHCO3	SAT	2.2	140	190	140	280	140	A	400	300	210	200	A	A	A	A	A	A	A	A
Sodium Bichromate	Na2Cr2O7	-	-	140	140	180	250	140	-	350	200	140	70	-	-	-	-	-	-	-	-
Sodium Bisulfate	NaHSO4	SAT	2.4	140	200	180	280	140	A	250	250	200	100	A	A	A	A	A	A	A	A
Sodium Bisulfide	NaHSO3	SAT	1.5	140	190	180	250	140	A	350	250	200	200	A	A	A	A	A	A	A	A
Sodium Borate (Borax)	Na2B4O7	-	1.7	100	190	200	250	140	A	300	180	140	100	A	A	A	A	A	A	A	A
Sodium Bromide	NaBr	-	-	140	190	180	250	-	-	300	250	210	200	A	A	-	-	-	A	A	A
Sodium Carbonate	Na2CO3	SAT	1.55	140	190	180	250	B	A	350	200	140	200	A	A	A	A	A	B	A	A
Sodium Chlorate	NaClO3	SAT	2.5	100	190	180	250	B	A	350	180	140	200	A	A	A	A	A	A	A	A
Sodium Chloride (Salt)	NaCl	SAT	2.2	140	210	180	280	140	A	350	200	140	100	A	B	A	A	A	A	A	A
Sodium Chlorite	NaClO2	SAT	-	X	X	73	140	-	-	200	X	X	200	-	-	-	-	-	A	A	A
Sodium Chromate	NaCrO4	SAT	-	-	-	A	200	-	A	A	70	70	X	A	B	-	-	-	A	A	A
Sodium Cyanide	NaCN	SAT	-	140	170	180	A	B	A	350	200	140	140	A	A	-	-	-	A	A	A

CHEMICAL RESISTANCE CHART

CHEMICALS	FORMULAS	CONCENTRATION	APPROX. SP. GR. @ STATED CONC.	PLASTICS							ELASTOMERS			ALLOYS				SEALS	
				PVC	CPVC	POLYPROPYLENE (PP)	PVDF	POLYETHYLENE	RYTON	TEFLON	VITON	EPDM	HYALON	316 STAINLESS STEEL	304 STAINLESS STEEL	TITANIUM	HASTELLOY C	CARBON	CERAMIC
Sodium Dichromate	Na2Cr2O7	SAT	2.5	140	140	140	250	-	A	350	200	140	70	-	-	-	A	A	A
Sodium Ferricyanide	Na3Fe(CN)6	SAT	1.5	140	190	150	250	-	-	300	140	140	200	C	X	-	-	A	A
Sodium Ferrocyanide	Na4Fe(CN)6	SAT	1.5	140	190	150	250	-	-	350	140	140	-	-	-	-	-	A	A
Sodium Fluoride	NaF	SAT	2.6	140	190	180	250	C	-	350	C	140	200	C	X	A	A	A	A
Sodium Hydroxide	NaOH	20	1.2	140	190	180	73	X	A	350	100	210	140	A	A	A	A	A	A
Sodium Hydroxide	NaOH	30	1.3	140	190	180	X	X	A	350	100	210	140	A	A	A	A	A	A
Sodium Hydroxide	NaOH	50	1.5	140	190	180	X	X	A	350	X	180	140	A	A	A	A	B	A
Sodium Hydroxide	NaOH	70	1.7	140	190	180	X	X	B	350	X	70	100	X	B	A	B	B	A
Sodium Hydroxide Conc.	NaOH	SAT	2.1	140	150	120	X	X	-	70	X	100	72	X	X	-	-	X	-
Sodium Hypochlorite	NaOCL	10	-	140	190	C	250	B	C	300	140	70	150	C	C	B	C	C	A
Sodium Hypochlorite Conc.	NaOCL	20	-	140	190	X	250	X	C	300	180	B	100	C	C	B	C	C	A
Sodium Metaphosphate	(NaPO3)n	-	-	-	190	X	250	-	-	A	180	70	70	A	A	-	-	A	A
Sodium Metasilicate	Na2SiO3	-	-	140	190	180	250	-	-	350	200	-	-	A	A	-	-	A	A
Sodium Nitrate	NaNO3	SAT	2.3	140	180	180	250	B	A	400	210	200	100	A	A	A	A	B	A
Sodium Nitrite	NaNO2	SAT	2.2	140	180	180	250	-	-	400	200	170	140	A	A	A	-	A	A
Sodium Perborate	NaBO3	-	-	140	190	180	250	-	-	350	A	A	200	B	B	-	-	A	A
Sodium Perchlorate	NaClO4	SAT	2.02	140	180	180	250	-	-	350	-	-	-	-	-	-	-	-	-
Sodium Peroxide	Na2O2	SAT	2.8	140	180	180	200	-	-	250	180	140	200	A	A	-	B	A	A
Sodium Polyphosphate	-	-	-	140	180	180	250	-	-	350	200	150	200	A	A	A	A	A	A
Sodium Silicate	Na2OSiO2	-	-	140	190	180	250	-	A	350	200	200	200	A	A	A	B	A	A
Sodium Sulfate	Na2SO4	SAT	2.7	140	190	150	280	140	A	400	200	140	140	A	A	A	A	A	A
Sodium Sulfide	Na2S	25	1.4	140	190	180	250	140	A	350	200	140	200	A	A	A	B	A	A
Sodium Sulfite	Na2SO3	SAT	2.6	140	190	180	250	140	-	350	200	140	140	A	A	A	A	A	A
Sodium Terabornate	Na2B4O7	-	-	140	180	120	-	-	-	300	140	-	100	A	B	-	-	A	A
Sodium Thiocyanate	NaSCN	-	-	140	140	140	240	140	-	250	180	140	-	-	-	-	-	A	A
Sodium Thiosulfate	Na2S2O3	SAT	1.7	140	180	180	250	140	A	350	200	A	80	A	A	A	A	A	A
Stannic Chloride	Na2SnCl6	SAT	2.3	140	190	150	280	-	-	350	200	100	70	X	X	A	B	A	A
Stannous Chloride	SnCl2	-	-	140	180	180	250	A	-	250	B	100	B	C	X	A	A	-	-
Starch (Amylum)	-	100	1.51	140	180	180	250	140	-	350	200	100	140	A	A	A	A	A	A
Stearic Acid	-	SAT	0.84	140	190	120	250	B	-	350	80	140	120	A	A	A	A	A	A
Stoddard Solvent	-	-	-	A	A	X	250	X	A	300	180	X	X	A	A	A	A	A	A
Styrene	C6H5CH:CH2	100	0.9	-	-	-	200	-	-	250	B	X	X	A	A	-	-	A	A
Succinic Acid	-	SAT	1.55	140	170	150	150	-	-	200	70	70	-	A	A	-	-	-	-
Sugar Solutions	-	-	-	140	200	180	270	-	-	350	200	140	140	A	A	A	A	A	A
Sulfate Liquors (Paper Pulp)	-	-	-	-	-	150	150	-	-	200	-	-	-	C	C	-	A	-	-
Sulfur Chloride	S2CL2	SAT	1.69	140	190	X	250	-	-	250	180	X	70	X	X	-	-	-	-
Sulfur Dioxide Wet	SO2	-	-	100	150	180	250	70	-	300	140	140	200	A	A	-	-	-	-
Sulfuric Acid	H2SO4	10	1.09	140	190	180	250	140	A	250	200	140	200	C	X	A	A	A	A
Sulfuric Acid	H2SO4	30	1.2	140	190	150	250	140	A	250	200	140	200	X	X	C	B	A	A
Sulfuric Acid	H2SO4	50	1.4	140	190	150	200	140	A	250	200	140	200	X	X	C	B	A	A
Sulfuric Acid	H2SO4	70	1.7	140	190	140	200	X	-	200	200	X	X	X	X	X	X	B	A
Sulfuric Acid	H2SO4	98	1.85	X	X	X	140	X	X	200	200	X	X	X	C	X	X	X	A
Sulfuric Acid	H2SO4	100	1.86	X	X	X	X	X	X	200	100	X	X	X	C	X	X	X	A
Sulfurous Acid	H2SO3	-	-	140	180	180	250	-	-	300	180	X	150	A	B	-	-	A	A
Tannic Acid	C76H52O46	-	-	140	200	180	250	X	-	250	100	70	100	A	A	A	B	A	A
Tanning Liquors	-	-	-	140	190	73	68	X	A	250	200	-	70	A	A	A	A	A	A
Tartaric Acid	-	SAT	1.8	140	180	140	250	140	-	250	180	X	200	A	A	A	B	A	A
Tetrachlorethane	CHCL2CHCL2	-	-	X	X	A	250	-	-	350	70	X	X	A	A	A	A	A	A
Tetrahydrofuran	-	-	-	X	X	X	X	X	A	A	B	B	X	A	A	-	-	A	A
Toluene	CH3C6H5	100	0.9	X	X	X	150	X	A	200	B	X	X	A	A	A	A	A	A
Tomato Juice	-	-	-	140	190	150	250	70	A	350	200	200	X	A	A	A	A	A	A
Transformer Oil	-	-	-	140	190	73	200	X	-	300	180	X	-	A	A	-	-	A	A
Tributyl Phosphate	(C4H9)3PO4	-	-	X	X	70	100	-	-	140	X	70	X	-	-	A	-	A	A
Trichloroacetic Acid	CCL3COOH	SAT	1.6	73	72	100	100	-	-	140	180	70	70	-	-	B	-	-	-
Trichloroethane	CHCL2CH2CL	-	-	X	X	X	-	X	C	150	A	X	-	A	C	A	A	A	A
Trichloroethylene	CHCL:CCL2	100	1.1	X	X	X	250	X	C	200	200	X	X	A	A	A	A	A	A
Triethanolamine	(HOCH2CH2)3N	100	1.12	72	X	X	X	-	-	A	X	70	150	-	-	A	-	-	-
Triethylamine	(C2H5)3N	-	-	A	A	-	-	-	-	A	200	-	-	-	-	-	-	A	A
Trisodium Phosphate	Na3PO4	-	-	140	190	180	250	-	-	350	180	70	100	A	A	-	-	-	-
Turbine Oil	-	-	-	72	72	70	-	-	-	250	140	X	X	A	A	-	-	A	A
Turpentine	C10H16	100	0.9	A	A	B	250	X	A	300	180	X	X	A	A	A	B	A	A
Urea	CO(HN2)2	SAT	1.3	140	180	180	250	X	-	250	180	140	100	-	-	-	-	-	-

CHEMICAL RESISTANCE CHART

CHEMICALS	FORMULAS	CONCENTRATION	APPROX. SP. GR. @ STATED CONC.	PLASTICS							ELASTOMERS			ALLOYS				SEALS	
				PVC	CPVC	POLYPROPYLENE (PP)	PVDF	POLYETHYLENE	RYTON	TEFLON	VITON	EPDM	HYALON	316 STAINLESS STEEL	304 STAINLESS STEEL	TITANIUM	HASTELLOY C	CARBON	CERAMIC
Varnish	-	-	-	-	-	A	250	-	A	250	68	X	X	A	A	-	-	A	A
Vegetable Oil	-	-	-	140	150	140	200	-	A	300	300	140	200	A	A	-	-	A	A
Vinegar (4-8% Acetic Acid)	-	-	-	140	150	140	200	140	A	300	180	140	200	A	A	-	-	A	A
Vinyl Acetate	-	100	0.93	X	X	-	250	-	-	300	180	70	200	A	A	-	-	-	-
Water Acid Mine	-	-	-	140	190	150	280	-	A	A	180	250	200	A	A	-	A	A	A
Water Deionized	H2O	-	-	140	190	180	280	140	A	400	140	250	200	A	A	A	A	A	A
Water Distilled	H2O	-	-	140	190	180	280	140	A	400	140	250	200	A	A	A	A	A	A
Water Potable	H2O	-	-	140	190	180	280	140	A	400	140	250	200	A	A	A	A	A	A
Water Salt	H2O	-	-	140	190	180	280	140	A	400	180	250	200	A	A	A	A	A	A
Whiskey	-	SAT	0.9	140	190	180	250	X	A	350	180	200	100	A	A	A	A	A	A
White Liquor	-	-	-	140	190	180	250	-	A	350	180	170	140	A	A	A	A	A	A
Wines	-	-	-	140	190	140	250	140	-	300	180	170	140	A	A	A	A	A	A
Xylene	C6H4(CH3)2	100	0.9	X	X	X	250	X	-	350	180	X	X	A	A	-	A	A	A
Zinc Acetate	Zn(C:2H3O2)2	SAT	1.7	140	180	180	250	140	-	350	70	180	70	-	-	-	-	A	A
Zinc Chloride	ZnCL2	SAT	2.9	140	190	180	250	140	A	350	200	180	200	A	B	A	A	A	A
Zinc Nitrate	Zn(NO3)2	SAT	2.06	140	190	180	250	140	A	350	200	180	200	-	-	-	-	A	A
Zinc Salts	-	-	-	140	190	180	250	140	A	350	200	180	200	-	-	-	-	A	A
Zinc Sulfate	ZnSO4	SAT	2	140	190	180	50	140	A	400	200	180	200	-	-	-	-	A	A

Plating Solutions:

- 1) Arsenic, conventional (110°F)
- 2) Brass, conventional barrel/rock (90°-120°F), conventional (140°F), alkaline lightspeed (140°-160°)
- 3) Bronze, conventional cyanide, alkaline (160°F)
- 4) Cadmium, alkaline cyanide (75°-90°F), acid sulfate (60°-90°F), neutral chloride (70°-100°F)
- 5) Chrome, trivalent: conventional, hexavalent; conventional (120°-140°F), hexavalent functional (hard) (130°-140°F)
- 6) Copper, alkaline cyanide strike (75°-140°F), pyrophosphate (72°-86°F) acid sulfate (ambient temp.) acid fluoborate (65°-150°F), electroless (78°F)
- 7) Gold, decorative (130°-160°F), alkaline cyanide (60°-160°F), neutral cyanide (120°-160°F), acid cyanide (70°-120°F) electric (pure, bright, hard, soft) (95°-160°F)
- 8) Indium, sulfamide (ambient temp.), fluoborate (70°-90°F)
- 9) Iron, chloride (190°-210°F), sulfate (150°F), sulfate-chloride (80°-160°F), fluoborate (135°-145°F)
- 10) Nickel, conventional sulfamate (90°-140°F), watts semi-bright and bright (120°-140°F), electroless (low, mid, and high phosphorous) baron (180°- 195°F)
- 11) Palladium, sulfamate (77°-95°F), chloride (77°-220°F), acid chloride (104°-122°), nickel (86°-113°F)
- 12) Platinum, sulfate (104°), acid (149°F), alkaline (149°-167°F)
- 13) Rhodium, phosphate, sulfate, phosphate-sulfate (104°-122°F)
- 14) Ruthenium, conventional sulfamate (80°-140°F), electroplated (120°-180°F)
- 15) Silver, cyanide (70°-85°F) cyanide strike (60°-80°F), non-cyanide high speed (140°-160°F)
- 16) Tin, tin lead [tin/lead solder (70°-100°F), tin (70°-130°F), lead (70°-100°F), alkaline tin (60°-110°F)], tin nickel [conventional (140°-160°F), pyrophosphate (122°F)]
- 17) Zinc, acid chloride (60°-130°F), alkaline cyanide/non-cyanide (60°-110°F), zinc alloy (cobalt, iron or nickel) (77°-104°F)

FOR PLASTICS AND ELASTOMERS, we have given the maximum recommended temperature use for the specific chemicals. Where there are no markings, sufficient data was not available for a recommendation. Where an "X" is used, the material is unacceptable for the specific chemical.

FOR ALL, we have ratings as follows:

- A = Excellent
- B = Good, minor effect
- C = Fair, needs further testing
- D = Unsuitable

We believe the information contained on this chemical resistance chart to be accurate. However, we do not assume any liability whatsoever for the accuracy or completeness of such information.

Final determination of the suitability of any information or product for a specific material compatibility is testing under actual service for the particular application.