



CHEMICAL COMPATIBILITY GUIDE



D E D I C A T E D T O I N N O V A T I O N

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Media	Chemical Formula	Metals													Elastomers				Polymers								
		Aluminum	Brass	Carbon Steel	Ductile Iron / Cast Iron	316/316Ti/321 S.S.T	17-4PH	Alloy20	Monel	Hastelloy C®	Inconel 625	Titanium	Bronze	304 Stainless Steel	Duplex	Buna N (Nitrile)	EPDM/EPR	Viton	Flexible Graphite	Delrin®	Peek®	PVDF	Teflon® and Reinforced Teflon	PCTFE	UHMWPE®	VespeL®	PFA
Acetaldehyde	C ₂ H ₄ O	B	B	C	C	A	A	A	A		A	C	A		D	A	D	A	A	B	D	A	A	A		A	A
Acetamine	HCl	B	B	B	B	B			A				B		A							A					
Acetate Solvents	-	A	A	D	B	A	A		A	A		A	B	B	D	A	D	A	D		A	A					B
Acetic Acid (aerated)	C ₂ H ₄ O ₂	C	D	D	C	A			A	A		A	C		C		C	A	D	A		A					
Acetic Acid (air free)	C ₂ H ₄ O ₂	C	D	D	C	A	A	A	A	A		A	C		C		D	A	D	A		A					
Acetic Acid (crude)	C ₂ H ₄ O ₂	C	D	D	D	A	A	A	A	A		A	C		D		D	A	D	A		A					
Acetic Acid Glacial	C ₂ H ₄ O ₂	C	D	D	D	A	B	A	A	A		A	C	C	D	B	C	A	D	A	B	A	A	A		A	
Acetic Acid (pure)	C ₂ H ₄ O ₂	C	D	D	D	A	A	A	A	A	A	A	C	D	D		D	A	D	A	C	A				A	
Acetic Acid 10%	C ₂ H ₄ O ₂	C	D	D	D	A	A	A	A	A		A	C	C	D	B	D	A	B	A	A	A	A	A	A	A	
Acetic Acid 80%	C ₂ H ₄ O ₂	C	D	D	D	A	A	A	A	A		A	C	D	D	C	D	A	D	A	C	A			B	A	A
Acetic Acid Vapors	-	B	D			C	C	B	C	A					D			A				A					
Acetic Anhydride	C ₄ H ₆ O ₃	C	D	D	D	B	B	B	B	A		A	C	B	D	C	D	A	D	D	D	A	A	A		A	A
Acetone	C ₃ H ₆ O	A	A	A	A	A	A	A	A	A	A	A	A	B	D	A	D	A	B	A	D	A	A	A	A	A	A
Other Ketones	RC(=O)R'	A	A	A	A	A	A	A	A	A					D	B	D		B		D	A				A	
Acetyl Chloride	CH ₃ COCl	C	B	A	C	A	A	A	A	A			D	C	D	D	D		D	B	B	A				A	
Acetylene	C ₂ H ₂	A	C	A	A	A	A	A	A	A		B	C	A	B	A	A	A	A	B	A	A				A	
Acid Fumes	-	B	D	D	D	B		B							C				D		A	A	A			A	
Acrylonitrile	C ₃ H ₃ N	B	A	A	C	A	A	A	B		B	A	A		D	D	D	B	D	A	B	A					
Air	-	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A				
Alcohol, Amyl	C ₅ H ₁₁ OH	B	B	B	B	A	B	B	B	A		A	B	A	C	A	B	A	A	A	A	A	A			A	A
Alcohol, Butyl	C ₄ H ₉ OH	A	B	B	C	A	B	A	A	A		B	B	A	B	B	A	A	A	A	A	A	A			A	
Alcohol, Diacetone	CH ₃ C(O)CH ₂ C(OH)(CH ₃) ₂	A	B	B	B	A	B	A	B	A		A	B	A	D	A	D	A	A	A	B	A	A			A	B
Alcohol, Ethyl	C ₂ H ₆ O	B	B	B	B	A	B	A	B	A		A	B	A	A	A	A	A	B	A	A	A	A			A	A
Alcohol, Fatty	-	B	B	B	B	A	B	A				B			B			A	A		A	A	A			A	
Alcohol, Isopropyl	C ₃ H ₈ O	B	B	B	B	B	B	A	B	A		B	B	B	C	A	A	A	A	A	A	A	A			A	
Alcohol, Methyl	CH ₄ O	C	B	B	B	A	B	A	A	A		A	B	A	B	A	C	A	B	A	A	A	A			A	B
Alcohol, Propyl	C ₃ H ₈ O	B	B	A	B	A	B	A	A	A		A	B	A	B	A	A	A	A		A	A	A			A	
Alumunia	-	A	A						A						A	A			A			A					
Aluminum Acetate	Al(C ₂ H ₃ O ₂) ₃	C	C		C	B	B	A	B	B	A		C		D	A	D		D			A					
Aluminum Chloride (dry)	AlCl ₃	C	D	D	D	C	B	D	B	A		C	D	D	B	A	A	A	C	A	A	A	A	A	A	A	A
Aluminum Chloride Solution	-	B	D	D	D	D	C	B	B	A		B	D	C	B		A	A	D	A	A	A	A	A			A

Ratings: A-Excellent | B-Good | C-Poor | D-Do not use | Blank -No Information

KEL-F® is a registered trademark of 3M Company, NYLATRON® is a registered trademark of Quadrant DSM Engineering Plastic Products, PEEK® is a trademark of VICTREX, TFM™ is a trademark of Dyneon, Teflon® is a registered trademark of DuPont, DELRIN® is a registered trademark of DuPont, VESPEL® is a registered trademark of DuPont.

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Aluminum Fluoride	AlF ₃	C	D	D	D	C	C	B	A	B		C	C	D		A	A	A	A	C		A	A					
Aluminum Hydroxide	AlH ₆ O ₃	B	D	D	D	A	A	A	B	A		B	D	A		A	A	A	A	B		A	A					B
Aluminum Nitrate	AlN ₃ O ₉	D	D	D	D	B	A	A	C	B		A	D	C		B	B	D	A	C		B	A					B
Aluminum Oxalate	C ₆ AlO ₁₂₋₃	B			B	A		A	B	A			D									A						
Aluminum Potassium Sulfate	AlKO ₈ S ₂	B	B	C	D	B	C	B	B	C		A	C	C		B	A	B	A	C		A	A					A
Aluminum Sulfate (Alum)	Al ₂ O ₁₂ S ₃	C	C	D	D	B	B	B	C	B		A	C	B		A	A	A	A	C	A	A	A	A		A	A	A
Amines	R ₃ -xNH _x	C	B	B	C	A	A	A	B	A		B	C	A	A	D	C	D	A	D	A	A						A
Ammonia Alum	AlH ₂₈ NO ₂₀ S ₂	C			C	A	B	A	B	A		B	C	B		B			A	C		A						
Ammonia, Anh. Liquid	NH ₃	A	D	A	B	A	A	A	A	B		B	D	B		B	B	D	A	D	A	B	A	A			A	A
Ammonia Aqueous	H ₅ NO	B	C	C	C	A		A	B	A		B	D	A	A	D	B	C	A		A	A	A	A				A
Ammonia Gas (hot)	H ₃ N	B	C	B	B	B	A	A	A	A		B	D			A		D		D	A		A					
Ammonia Liquor	-	A	C	A	B	B	A	A	A	B			D	C		D	A	D	A	D		A						
Ammonia Solutions	-	B	D	B	C	A	A	A	A	A		B	D			C	A	D	A	D	A		A					
Ammonium Acetate	C ₂ H ₃ O ₂ NH ₄	A	D	D	D	B	A	A	B	A			D	B		C	A	D	A	D		A						
Ammonium Bicarbonate	NH ₄ HCO ₃	B	B	C	C	B		B	B	B				B		B	A	A		B		A						
Ammonium Bromide 5%	NH ₄ Br	D				B		B	B											B		A						
Ammonium Carbonate	(NH ₄) ₂ CO ₃	B	D	B	B	B	B	B	B	B		A	D	B		C	A	B	A	D	A	A	A					
Ammonium Chloride	NH ₄ Cl	C	C	D	D	C	C	B	B	B		C	D	D		B	A	A	A	C	A	A	A				A	A
Ammonium Hydroxide 28%	NH ₄ OH	C	D	C	B	B	A	A	B	B		A	D	B		B	A	B	A	C	A	A	A			B		A
Ammonium Hydroxide Conc.	NH ₄ OH	C	D	C	B	B	A	A	C	B		A	D	A		C	A	B	A	D	A	B	A			D		
Ammonium Monosulfate	-	D				B	A	B	B	B				A						D		A						
Ammonium Nitrate	(NH ₄)(NO ₃)	B	D	D	B	A	A	A	A	A		A	D	A		A	A	B	A	C	A	A	A					A
Ammonium Oxalate 5%	C ₂ H ₈ N ₂ O ₄	A		A	D	A	A	A	B	A			D	A		D	A			B		A						
Ammonium Persulfate	H ₈ N ₂ O ₈ S ₂	D	D	C	D	A	A	A	D	B		B	C	A		D	B	B	A	D		B	A					
Ammonium Phosphate (mono)	(NH ₄) ₃ PO ₄	B	C	D	D	B	A	A	C	A		A	C	C		C	A	A		B	A		A					
Ammonium Phosphate Di-basic	(NH ₄) ₂ HPO ₄	B	C	D	C	B	B	B	C	A		A	D	B		A	A	A	A	B		A	A					A
Ammonium Phosphate Tri-basic	-	B	C	D	C	B	B	B	C	A		A	C	B		A	A	A		B		A						
Ammonium Sulfate	(NH ₄) ₂ SO ₄	C	D	C	C	C	B	A	B	B		A	D	C		B	A	C	A	C	A	A	A					A
Ammonium Sulfide	(NH ₄) ₂ S	B	D	D	D	B	B	B	B	A			D	C		A	A	D		B		A						
Ammonium Sulfite	(NH ₄) ₂ SO ₃	D	C	C	C	A	B	B	D	A			B	B		B	B	C	D	D		A						A
Amyl Acetate	CH ₃ COO(CH ₂) ₄ CH ₃	A	A	C	C	B	A	A	A	A		A	B	A		D	B	C	A	C	A	A	A	A	A		A	B

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Amyl Chloride	C ₅ H ₁₁ Cl	B	B	A	B	B	B	A	A	A		C	A	B		D	D	D	A	A		A	A					A
Aniline	C ₆ H ₇ N	C	D	C	C	A	A	A	B	B		C	C	A		D	B	C	A	B	A	B	A	A				A
Aniline Dyes	-	C	C	C	C	A	A	A	A				C	A		C	B	B		B			A					
Apple Juice	-	B	C	D	D	B		A	A						A	B	A		A	A		A						
Aqua Regia (Strong Acid)	-	D	D	D	D	C	C	B		C		B	D	D		D	D	D	D	D	D	A	A	A	D		A	A
Aromatic Solvents	-	A	A	C	B	A		A	B						D	D	A		A	A	A	A	A				A	
Arsenic Acid	AsH ₃ O ₄	D	C	D	D	B	B	A	A	B		B	C	A		A	B	A	A	D		A	A					
Asphalt Emulsion	-	C	B	B	B	A	A	A	B	A			B	A		D	D	A	A	B	A	A	A					A
Asphalt Liquid	-	C	B	B	B	A	A	A	B	A			A		C	D	A	A	B	A		A						A
Barium Carbonate	CBaO ₃	C	B	B	B	B	A	A	A	A		A	B	B		B	A	A	A	A	A	A						A
Barium Chloride	BaCl ₂	D	B	C	C	B	A	A	A	A		A	B	A		A	A	A	A	A	A	A						A
Barium Cyanide	Ba(CN) ₂	D	C		C	B	A	B	C	A			C	A		B	A	A		B			A					
Barium Hydrate	BaH ₂ O ₂	D	D			A		A	B										A			A						
Barium Hydroxide	Ba(OH) ₂	D	D	C	C	A	A	A	A	B		B	D	B		A	A	A	A	D	A	A						A
Barium Nitrate	Ba(NO ₃) ₂	B	D	A	A	A	B	A		A		A	D	B		A	A	A	A	B		A						A
Barium Sulfate	BaSO ₄	C	B	B	C	B	A	A	A	A		A	C	C		A	A	A	A	B	A	A	A					A
Barium Sulfide	BaS	D	C	C	C	B	A	A	A	A		B	D	C		A	A	A	A	A	A	A	A					
Beer	-	A	B	C	D	A	A	A	A	A	A	A	A	A		B	A	A	A	B	A	A	A	A	A		A	A
Beet Sugar Liquors	-	A	B	B	B	A	A	A	A	A		A	B	A		A	A	A	A	B	A	A	A					A
Benzaldehyde	C ₇ H ₆ O	B	B	B	C	A	A	A	B	A		A	A	C		D	A	D	A	A	A	A	A	A	A		A	A
Benzene (Benzol)	C ₆ H ₆	B	A	B	B	B	A	A	A	A	A	A	A	B		D	D	A	A	A	A	A	A	A	A	A	A	B
Benzoic Acid	C ₇ H ₆ O ₂	B	C	D	D	B	A	A	B	A		A	C	B		C	D	A	A	B	A	A	A	A	A	A	A	A
Beryllium Sulfate	BeO ₄ S	B	B		B	B		A	B							B	B	B		A			A					
Bleaching Powder Wet	-		B	C	C	C		B	A					B		D	B	B		B			A					
Blood (meat juices)	-	B	B		D	A	A	A	A	A	A		B	A		A	B	B		B			A					
Borax (Sodium Borate)	Na ₂ B ₄ O ₇ ·10H ₂ O	C	B	C	A	A	A	A	A	A		B	B	A		A	A	A	A	B		A	A		A			A
Bordeaux Mixture	-					A		A	A							A							A					
Borax Liquors	-	C	A	C	C	B		A	B	A						A	A	A		B			A					
Boric Acid	BH ₃ O ₃	C	C	D	D	C	B	A	A	A	A	A	B	B		B	A	A	A	A	A	A	A	A	A	A	A	A
Brake Fluid	-	B	B	A	B	A	A	A	A	A			B	A		D	B	D		B	A		A					
Brines (saturated)	-	C	B	C	C	B	B	B	B	A			A	B	A	A	A	A		A			A	A	A		A	A

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Bromine (dry)	Br	D	C	D	D	D	C	B	B	A	A	B	D	D	D	D	A	D	D	D	A	A	A	D		A	A
Bunker Oils (Fuel)	-	A	B	A	B	A		A	A	A		A	A		B	C	A		A			A					
Butadiene	C ₄ H ₆	A	B	B	B	A	A	A	A	B		A	C	A	C	C	A	A	A	A	A	A					A
Butane	C ₄ H ₁₀	A	A	B	C	A	A	A	A	A		A	B	A	A	D	A	A	A	A	A	A		A			A
Butter	-	A			D	A		A					D	C		B	A	A		A							
Buttermilk	-	A	D	D	D	A		A	D	A			D	A		A	B	A	A	A	A						A
Butyl Acetate	C ₆ H ₁₂ O ₂	B	B	B	B	B	A	A	A	A		B	B	C		D	C	D		B	A	A	A	A	A		A
Butylene	C ₄ H ₈	A	A	A	A	A	A	A	A	A			A	A		D	D	D	A	A	A	A	A		A		C
Butyric Acid	C ₄ H ₈ O ₂	B	B	D	D	B	A	A	A	A		A	C	C		C	C	C	A	B	A	A	A		A		A
Calcium Bisulfite	CaH ₂ O ₆ S ₂	C	D	D	D	B	B	A	D	B		A	C	B		A	D	A	A	D	A	A	A				A
Calcium Carbonate	CaCO ₃	C	D	C	D	B	A	A	A	A		A	C	A		B	B	A	A	A	A	A		A			
Calcium Chlorate	Ca(ClO ₃) ₂	B	C	B	C	B		A	A	B		B	B	B		B	B	B	B	C		A	A				
Calcium Chloride	CaCl ₂	D	C	C	C	B	B	A	A	A	A	A	B	C		A	A	A	A	D	A	A	A		A	A	A
Calcium Hydroxide	Ca(OH) ₂	C	D	C	C	B	A	A	A	A	A	A	C	B		A	A	A	A	D	A	A	A			D	A
Calcium Nitrate	Ca(NO ₃) ₂	C	B	B	C	B	B	A	A	B		B	B	C		B	B	A	B	D	A	A	A		A	A	B
Calcium Phosphate	Ca ₃ (PO ₄) ₂	D	C		C	B		B								B	B	B		B							
Calcium Silicate	Ca ₂ SiO ₄	D	C		C	B		B		A						B	B	B		A							
Calcium Sulfate	CaO ₄ S	C	B	B	C	C	A	A	A	B	A	A	B	B		A	B	A	A	D	A	A	A			A	A
Caliche Liquor	-			B		A		A								B				A							
Camphor	C ₁₀ H ₁₆ O	C	C	B	C	B	A	A	C				B			B	B	B		A	A			A		A	
Cane Sugar Liquors	C ₁₂ H ₂₂ O ₁₁	B	B	A	B	A	A	A	A	A			A	A		B	A	B		A			A				
Carbonated Beverages	-	B	B	D	B	B	B	B	C	A						B	B	B	A	A							
Carbonated Water	-	A	D	B	C	A	B	A	B				B	A		A	A	A	A	A							
Carbon Bisulfide	CS ₂	B	C	B	B	B	A	B	B	B			B	A		D	D	A		A							
Carbon Dioxide (dry)	CO ₂	B	B	B	B	A	A	A	A	A		A	B	A	A	C	B	B	A	A	A	A	A			A	A
Carbonic Acid	CH ₂ O ₃	A	D	B	D	B	A	A	A	B		B	C	A	B	B	B	A	A	B	A	A	A	A	A	A	A
Carbon Monoxide	CO	A	A	B	B	A	A	A	A	A			A	A		B	B	B	A	A	A	B	A			A	B
Carbon Tetrachloride (dry)	CCl ₄	C	B	C	C	A	A	A	A	A		A	B	B		D	D	B	B	B	A	A	A	B	A	A	D
Carbon Tetrachloride (wet)	CCl ₄	D	C	D	D	B	A	B	B	A		A	C	A		D	D	B	B	B		A	A	A	B	A	B
Casein	-	C	C		C	B		B	C	B						B	B	B		A							
Castor Oil	-	A	A	A	A	A	A	A	A	A			B	A		A	B	A	A	A	A			A			

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CHEMICAL COMPATIBILITY GUIDE

Media	Chemical Formula	Metals													Elastomers				Polymers								
		Aluminum	Brass	Carbon Steel	Ductile Iron / Cast Iron	316/316Ti/321 S.S.t	17-4PH	Alloy20	Monel	Hastelloy C®	Inconel 625	Titanium	Bronze	304 Stainless Steel	Duplex	Buna N (Nitrile)	EPDM/EPR	Viton	Flexible Graphite	Delrin®	Peek®	PVDF	Teflon® and Reinforced Teflon	PCTFE	UHMWPE®	VespeI®	PFA
Caustic Potash	HKO	C	C	B	B	A	A	A	A	A					B			A	D	A		A	A	A			
Caustic Soda	HNaO	D	D	B	B	A	A	A	A	A			B	A	C	B	C	A	D	A	A	A	A	A		A	
Cellulose Acetate	-	B	B		B	B		B	B						D	B	D		C			A				A	
China Wood Oil (Tung)	-	A	C	C	C	A	A	A	A	A			A		A	D	A		A			A					
Chlorinated Solvents	-	C	C	C	C	C		A	B	A			A		D	D	C		A	B		A					
Chlorinated Water		D	D	C	D	C	C	A	C	B		A	C	C	B	C	A	B	D	D	A	A	A				A
Chlorine Gas (dry)	Cl2	C	D	C	B	B	B	B	A	A		C	D	B	C	D	B	A	D	D	A	A	A	B	A	A	D
Chlorobenzene (dry)	C6H5Cl	B	B	B	C	A	A	A	A	A		B	B	A	D	D	A	A	C	C	B	A	A		A	A	B
Chloroform (dry)	CHCl3	C	B	C	C	A	A	A	A	B		A	B	A	D	D	B	A	B	A	C	A	A	B	A	A	C
Chlorophyll (dry)	-	B	B		B	B		A	B	A					B	B	B					A					
Chlorosulfonic Acid (dry)	HSO3Cl	C	C	C	B	C	C	B	A	B		A	C	D	D	D	D	A	D	B	D	A	A	D	A	A	
Chrome Alum	CrKO8S2	C	C	B	C	A		A	B						B	B	B		B			A					
Chromic Acid<50%	CrH2O4	D	D	D	D	C	B	B	C	C		A	D	B	D	C	C	C	D	D	A	A	A	A	D	A	A
Chromic Acid>50%	CrH2O4	D	D	D	D	C	C	B	D	C		B	D	C	D	C	C	C	D	D	A	A	A	A	D	A	B
Chromium Sulfate	Cr2O12S3	B	C		D	B	B	C	B					B	B	B	B		C			A					
Cider	-	B			D	A	A	B	A	A			A	A	A	A	A		A			A					
Citric Acid	C6H8O7	C	D	D	D	C	A	A	A	A		A	D	B	B	B	A	A	C	A	A	A	A	A	A	A	A
Citrus Juices	-	C	B	D	D	B	A	A	A	A					A		A		A			A					
Coca Cola Syrup	-					A		A	A					A	B		B		A	A		A					
Coconut Oil	-	B	B	C	C	A	A	A	B	A			B	A	A	A	A		A	A	A	A		A			
Coffee	-	A	A	C	C	A	A	A	B	A		A	A	A	A	A	A		A			A					
Coffee Extracts (hot)	-	A	A	C	C	A		A	A										A			A					
Coke Oven Gas	-	A	C	B	B	A	A	A	B				B		C	D	B		C			A					
Cooking Oil	-	B	B	B	B	A		A	A	A					A	D	A		A	A		A					
Copper Acetate	C4H6CuO4	D	D	C	D	A		A	B	A			C		C	B	D		C	A	A	A	A				
Copper Carbonate	CCuO3	D				A		A	A										A	A	A	A	A				
Copper Cyanide	CCuN	D	D	C	D	A		A	C	A		A	D	B	A	B	B	A	B	A	A	A	A				
Copper Nitrate	Cu(NO3)2	D	D	D	D	B		A	D	B		B	D	A	A	B	A	A	A	A	A	A	A				A
Copper Sulfate	CuO4S	D	D	D	D	B	A	A	D	A		A	D	B	A	A	A	A	D	A	A	A	A		A		A
Corn Oil	-	B	B	B	C	B	A	A	B	A			B	A	A	C	A		A	A		A		A			
Cotton seed Oil	-	B	B	B	C	B	A	A	B	A		A	B	A	A	C	B		B	A	A	A					

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		Aluminum	Brass	Carbon Steel	Ductile Iron / Cast Iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Hastelloy C [®]	Inconel 625	Titanium	Bronze	304 Stainless Steel	Duplex	Buna N (Nitrile)	EPDM/EPR	Viton	Flexible Graphite	Delrin [®]	Peek [®]	PVDF	Teflon [®] and Reinforced Teflon	PCTFE	UHMWPE [®]	VespeI [®]	PFA	KEL-F [®]
Cresol	C ₇ H ₈ O	A	C	A	C	B	A	B	B	B		B	A	A		D	D	D	A	D	D	B	A		A			B
Creosote Oil	-	B	B	B	B	A	A	A	B	A		A	B	A		C	D	A		D	A		A		A			
Cresylic Acid	C ₇ H ₈ O	C	B	C	D	B	A	A	A	A		A	C	A		D	D	B	A	D	A	C	A	A			A	
Crude Oil, sour	-	A	C	C	C	B	A	A	B	A	A		D	B	A	A	D	A		A	A		A			A		
Crude Oil, sweet	-	A	B	A	B	A	A	A	A	A	A		B	A	A	A	D	A		A	A		A			A		
Cupric Nitrate	CuN ₂ O ₆	D				A		A	D											D			A					
Cutting Oils, Water Emulsions	-	A	A	B	B	A	A	A		A			A	A		A		A		A	A		A					
Cyanide Plating Solution	-	D	D		D	B		B	D	A						B	B	B		D			A					
Cyclohexane	C ₆ H ₁₂	A	A	A	B	A	A	A	A	A		A	A	A		C	D	A	A	A	A	A	A	A	A		A	A
Cyclohexanone	C ₆ H ₁₀ O	A	B	B	B	A	A	A	B	B			B	A		D	B	D	A	A	A	C	A		A			B
Detergents, Synthetic	-	B	B	A	B	B	A	A	A	A		A	B	A		B	B	A	A	A	A	A	A	A	A		A	
Dextrin	C ₁₈ H ₃₂ O ₁₆	B	A	B	B	B		A	B				A			B	B	B		A			A					
Dichloroethane	C ₂ H ₄ Cl ₂	B	B		C	A	B	B	B	A		B	D	B		D	D	B	A	B	A	A	A					A
Dichloroethyl Ether	C ₄ H ₈ Cl ₂ O	B	B	A	B	B		B		A			B	A		D	C	D		C	A		A		D			
Diesel Oil Fuels	-	A	A	A	A	A	A	A	A	A		C	A	A	A	A	D	A	A	A	A	B	A	A	A			B
Diethylamine	C ₄ H ₁₁ N	B	C	C	B	A	A	A	B	A		B	A	A		B	C	D	A	B	A	A	B	A				A
Diethyl Benzene	-					B		B								D	D	A		C			A					
Diethylene Glycol	C ₄ H ₁₀ O ₃	B	B	A	A	A	B	A	B	B		A	A	B		A	A	B	A	B	A		A					
Diethyl Sulfate	(C ₂ H ₅) ₂ SO ₄	A	B	A	B	B		B	B	A			A			C	C	B		A	A		A					
Dimethyl Formamide	C ₃ H ₇ NO	B	B	B	B	A	A	A	A	A			C	A		B	B	D		C	A	A	A			D		A
Dimethyl Phthalate	C ₁₀ H ₁₀ O ₄					A										B	B	D		C	A		A					
Dioxane	C ₄ H ₈ O ₂	B	A	A	B	B	A	B	A	A			A			D	C	D	A	C	A		A					
Dipentane (Pinene)	C ₁₀ H ₁₆	A	A		A	A		A					A	A		B	D	B		A			A					
Disodium Phosphate	HNa ₂ O ₄ P	B	B		B	B		A	B				B			B		B		A			A					
Dowtherm	C ₂₄ H ₂₀ O	A	A	B	B	A	A	A	A	A			A	A		D	D	A	A	A	B		A					
Drilling Mud	-	B	B	A	A	A	A	A	A	A			B	A	A	B	A	A		A			A					
Dry Cleaning Fluids	-	A	C	B	B	A		A	A							B	A	B		D			A					
Drying Oil	-	C	C	C	B	B		B	B							B	A			A			A					
Enamel	-		A													A				B			A					
Epsom Salts	MgO ₄ S	B	A	C	A	B	A	B	B	B		A	B	A		B	A	A	A	B			A					A
Ethane	C ₂ H ₆	A	B	B	A	A	A	B	B	A			A	A	A	A	D	A	A	B	A		A					

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Ethers	H ₂ O	B	A	B	B	A	A	A	A	B		A	B	A	A	D	C	C	A	C	A	C	A	A		A	C
Ethyl Acetate	C ₄ H ₈ O ₂	B	B	B	B	B	A	A	A	B		A	B	B		D	C	D	A	A	A	B	A		A		B
Ethyl Acrylate	C ₅ H ₈ O ₂	B	B	A	B	A	A	A	A			A	A		D	C	D		B	A		A					
Ethyl Benzene	C ₈ H ₁₀	A		A	B	B	B	A	A	A			B	B		C	D	A		A	A		A				
Ethyl Bromide	C ₂ H ₅ Br	B	A		B	B		C	B				B			B	B	B		A			A				
Ethyl Chloride (dry)	C ₂ H ₅ Cl	B	B	B	B	A	A	A	A	C		A	B	A		C	C	B	A	B	A	B	A				B
Ethyl Chloride (wet)	C ₂ H ₅ Cl	D	C	C	D	B	B	B	B	C			C	C		C	B	B		B	A		A				
Ethylene Chloride	C ₂ H ₄ Cl	B			C	A	B	A	A	B			B	A	B		D	D	D	A	B		B	A		A	B
Ethylene Dichloride	C ₂ H ₄ Cl ₂	B	B	B	A	A	A	A	A	C			B	B	B		D	D	D	A	C	A	B	A		B	A
Ethylene Glycol	C ₂ H ₆ O ₂	A	B	B	B	A	A	A	B	A			A	B	B	A	A	A	A	B	A	A	A		A	A	A
Ethylene Oxide	C ₂ H ₄ O	D	D	B	C	B	B	A	B	A				B	B		D	C	D	A	C	A	A	A			A
Ethyl Ether	C ₄ H ₁₀ O	B	B	A	B	A	B	A	A	B			A	B	B		D	D	D		B	A	B	A			B
Ethyl Silicate	C ₈ H ₂₀ O ₄ Si	B	B		B	B		B	B	A						B	B	B		A			A				
Ethyl Sulfate	C ₄ H ₁₀ O ₄ S	A				D		B						D		B	C	A	A	A		A	A				A
Fatty Acids	R-COOH	C	C	D	D	B	A	A	A	A			A	C	B		B	D	A	A	B	A	A	A	A		A
Ferric Hydroxide	FeH ₃ O ₃	C			D	A		A	A	B										A			A				
Ferric Nitrate	FeN ₃ O ₉	D	D	D	D	B	A	A	D	A			A	D	B		A	A	A	A	D	A	A	A			A
Ferric Sulfate	Fe ₂ O ₁₂ S ₃	D	C	D	D	B	A	A	D	B			A	D	B		A	A	A	A	D	A	A	A		A	A
Ferrous Ammonium Citrate	C ₆ H(5+4y)Fe(x)N(y)O ₇	B				B		B												A			A				
Ferrous Chloride	Cl ₂ Fe	D	D	D	D	D	D	D	C				A	C	D		A	A	A	A	D	A	C	A			C
Ferrous Sulfate	FeH ₂ O ₄ S	C	C	D	D	B	A	A	A	B			A	C	B		A	A	A	A	D	A	A	A	A		A
Ferrous Sulfate (Saturated)	-	C	C	C	C	A		A	B	B			A				C	B	B	A	B			A			
Fertilizer Solutions	-	D	C	A	A	A	A	B	B	A				D	A		B	A	A			A					
Fish Oils	-	B	B	A	B	A	A	A	A	A				A	A		A	D	A		A			A			
Flue Gases	CO	C	B	A	B	A	A	A	A	A				A			C	D	C		C			A			
Fluoboric Acid	BF ₄ H	C			C	B	B	A	A	A			D	C	B		A	A	A	A	B		B	A		A	B
Fluorosilicic Acid	F ₆ H ₂ Si	D	B	D	D	B	B	A	A	B			D	B	C		C	C	C	A	B		C	A		A	C
Formaldehyde (cold)	CH ₄	B	B	B	B	A	A	A	A	A			B	B	B		B	B	D	A	A	A	A	A	A	A	A
Formaldehyde (hot)	CH ₄	B	B	C	D	C	B	B	B	B					B		B				A	A	A	A	A	A	A
Formic Acid (cold)	CH ₂ O ₂	B	D	D	D	B	A	A	A	A	B	B	C	C		D	A	B	A	C	B	A	A	A	A	A	B
Formic Acid (hot)	CH ₂ O ₂	B	D	D	D	B	B	B	B	B	B	C				D		A	A	D	B	A	A	A	A	A	A

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Freon Gas (dry)	-	B	A	B	B	A	A	A	A	B			A		C	C	C	A	A			A							
Freon 11, MF,112, BF	CCl ₃ F	D	A	B	C	A	A	A	A	A		B	B	A		C	C	C	A	D	D	A	A					A	
Freon 12, 32, 114, 115	CCl ₂ F ₂	B	A	B	B	A	A	A	B	A		B	B	B		B	B	B	A	B	A	C	A					C	
Freon 21, 31	CHCl ₂ F	B	A	B	C	A	A	A	B	A			B	C		D	D	D	A	A									
Freon 22	CHClF ₂	D	A	B	C	A	A	A	B	A		B	B	A		D	D	D	A	A	A	A	A				A		
Freon 113, TF	C ₂ Cl ₃ F ₃	D	A	B	C	A	A	A	B	A		C	B	C		B	D	D	A	A	B		B			A			
Freon (wet)	-	D	B		D	C	B	B	B	B			B			B	B	D	A	B		A							
Fruit Juices	-	B	D	D	D	A	A	A	B	A	A	A	B	A		A	A	A		C	A	A	D	A	A		A	A	
Fuel Oil	-	B	B	A	B	A	A	A	B	A		A	A	A		A	D	A	A	A	A	A	B					A	
Fumaric Acid	C ₄ H ₄ O ₄							A								B	B	A		A		A							
Furfural	C ₅ H ₄ O ₂	A	A	A	B	A	A	A	A	A		A	B	A		D	C	D	A	B	A	D	A					D	
Gallic Acid 5%	C ₇ H ₆ O ₅	B	C	D	D	B	B	B	B	A		B	B	B		B	C	A	B	A	B	A	A					A	
Gas, Manufactured	-	C	B	B	B	B		B	A					A	A	A		A	A	A		A							
Gas, Natural	-	B	B	B	B	A	A	B	A					A	A	A	D	A		A	A		A						
Gas, Odorizers	-	A	A	B	B	B		A	B					A	A	B		A		A		A							
Gasoline (aviation)	-	A	A	A	B	A	A	A	A	A				A		C	D	A	A	A			A		A			A	
Gasoline (leaded)	-	A	A	A	A	A	A	A	B	A		A	A	A		C	D	A	A	A	A	B	A		A			A	
Gasoline (motor)	-	A	A	A	B	A	A	A	B	A						C	D	A	A	A			A		A				
Gasoline (refined)	C ₁₂ H ₁₃ N ₅ O ₆ S ₂	A	B	B	B	A		A	B	A						C	D	A	A	A			A		A				
Gasoline (sour)	-	A	B	B	B	A		A	C	A			B			C	D	A	A	A			A		A				
Gasoline (unleaded)	-	A	A	A	B	A	A	A	B	A		A	A	A		C	D	A	A	A	A	B	A		A			A	
Gelatine	-	A	C	D	D	A	A	A	B	A		A	B	A		A	A	A	A	B		A	A	A	A			A	
Glucose	C ₆ H ₁₂ O ₆	A	A	B	B	A	A	A	A	A		A	A	A		A	A	A	A	A	A		A						
Glue	-	A	A	A	B	B	A	A	A	A		A	A	A		A	B	B	A	A			A						
Glycerine (Glycerol)	C ₃ H ₈ O ₃	A	B	B	B	B	A	A	A	A		A	A	A		C	A	A	A	A	A	A		A	A			A	A
Glycol Amine	-	C	D	A	B	B	A	A	A	B			C	B		A	D	C	A	C									
Glycol	C ₂ H ₆ O ₂	B	B	B	B	B	A	A	A	B			A	A	A	B	A	A		C	A	A	A	A	A			A	
Graphite	CH ₄	B	B		C	B		A	B					A		B	B	B		A			A						
Grease	-	B	B	A	A	A	A	A	A	A			B	A		A	D	A		B			A						
Helium Gas	He	B	B		B	A		A	B	A				A	A	B	B	B		A			A						
Heptane	C ₇ H ₁₆	A	A	A	A	A	A	A	A	A		A	A	A		A	D	A	A	A	A	A	A			A		A	

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Hexane	C6H14	A	A	A	A	A	A	A	A		A	A	A		A	D	A	A	A	A	A	A						A
Hexanol, Tertiary		A	A	A	A	A	A	A	A			A	A		A	D	B		A			A						
Hydraulic Oil Petr. Base	-	A	B	A	A	A	A	A	A			A	A		A	D	A	B	B	A		A		A				
Hydrazine	H4N2	C	D	C	D	B	A	A	B	A		C	A		C	B	C	A	B	D	A	A		A	D	A		
Hydrocyanic Acid	CHN	C	D	D	C	A	B	A	B	A		B	D	B		B	B	A	A	C	D	A	A		A	A	A	
Hydrofluoric Acid 20%	HF	D	D	D	D	D	C	B	A	B		D	C	D		D	D	A	A	D	D	B	B	A	C		B	
Hydrofluoric Acid 50%	HF	D	D	D	D	D	D	C	B	C		D	C	D		D	D	B	A	D	D	B	B	A	C		B	
Hydrofluoric Acid 75%	HF	D	D	D	D	D	D			C		D	C	D		D	D	B	A	D	D	B	A	A	C		B	
Hydrofluoric Acid 100%	HF	D	D	D	D	D	D			B		D	C	D		D	D	B	A	D	D	A	A	A	C		A	
Hydrofluosilicic Acid	H2SiF6	D	B	D	D	C	B	B	B	C		D	B	C		B	B	A	B	B		B	A				B	
Hydrogen Gas (cold)	H	A	A	B	A	A	A	A	A	A		A	A	A	A	B	B	A		A	A	B	A				B	
Hydrogen Gas (hot)	H	C		B		B		A		A						B	B			A								
Hydrogen Peroxide Conc.	H2O2	C	D	D	D	B	A	A	C	B	A	B	D	B		D	C	B	C	D	A	B	A	A	A	A	B	
Hydrogen Peroxide, Dilute	H2O2	C	D	D	D	B	A	A	B	A	A	B	D	B		A	B	A	B	D	A	A	A	A	A	A	A	
Hydrogen Sulfide (dry)	H2S	C	C	C	C	C	B	B	B	B		A	D	C		C	A	D	A	C	A	B	A	A	A	A	B	
Hydrogen Sulfide (wet)	H2S	C	C	C	D	C	C	B	C	B		B	D	C		C	B	D	A	C	A	B	A	A	A	A	B	
Hypo (Sodium Thiosulfate)	Na2S2O3	B	C	D	D	B	A	B	B				B	B		C	A	A		A	A		A				A	
Illuminating Gas	-	A	A	A	A	A		A	A							A	D	A		A			A					
Ink-Newsprint	C11H16O3P+	C	C	D	D	A	B	A	B	A			B	C		A	B	A		B			A					
Iodoform	CHI3	C	C	B	C	A	A	A	C	B		B	C	A		D	A	A		A			C					
Iso-Butane	C4H10	A	A	B	A	A	A	A	A	A			A	A		B	D	A		A	A		A					
Iso-Octane	C8H18	A	A	A	B	A	A	A	A	A			A	A		A	D	A	A	A	A	B	A		A		B	
Isopropyl Acetate	C5H10O2	B		B	C	B	A	A	A	A			B	B		D	D	D	A	D	A		A					
Isopropyl Ether	C6H14O	A	A	A	B	A	A	A	A	A			A	A		C	D	D	A	D	A	B	A		A		A	
JP-4 Fuel	-	A	A	A	A	A	A	A	A	A		A	A	A		A	D	A	A	A	A	A	A				A	
JP-5 Fuel	-	A	A	A	A	A	A	A	A	A		A	A	A		B	D	A	A	A	A	A	A				A	
JP-6 Fuel	-	A	A	A	A	A	A	A	A	A			A	A		A	D	A	A	A	A	A	A				A	
Kerosene	-	B	A	B	B	A	A	A	A	A		A	A	A	A	A	D	A	A	A	A	A	A		A		A	
Ketchup	-	C		C	C	A	A	A	A				C			A		A		A	A		A					
Ketones	CH2O	B	A	A	A	A	A	A	A	A		A	A	A		D	D	D	A	D	A	D	A	A			C	
Laquer (and Solvent)	-	A	C	D	C	B	B	A	A	A		B	A	B		D	D	D	A	D	A		A					

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		Aluminum	Brass	Carbon Steel	Ductile Iron / Cast Iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Hastelloy C®	Inconel 625	Titanium	Bronze	304 Stainless Steel	Duplex	Buna N (Nitrile)	EPDM/EPR	Viton	Flexible Graphite	Delrin®	Peek®	PVDF	Teflon® and Reinforced Teflon	PCTFE	UHMWPE®	VespeI®	PFA	KEL-F®
Lactic Acid Concentrated (cold)	C ₃ H ₆ O ₃	C	D	D	D	A	A	A	A	B		A	D	B		B	B	A	A	C	A	B	A	A	A	A		B
Lactic Acid Concentrated (hot)	C ₃ H ₆ O ₃	C	D	D	D	B	B			B		A	D	B		C	C	B	A	C	A	C	A	A	A			
Lactic Acid Dilute (cold)	C ₃ H ₆ O ₃	B	D	D	D	A	A	A	A	A		A	C	B		B	A	A	A	B	A	B	A		A	A	B	
Lactic Acid Dilute (hot)	C ₃ H ₆ O ₃	B	D	D	D	A	B			B		A	C	B		C	C	B	A	B	A	C	A		A	A		
Lactose	C ₁₂ H ₂₂ O ₁₁	B	B		C	B		B	B							B	B	B		A			A					
Lard	-	A	B		A	A	A	A	B	A		A	A	A		B	C	A	A	A		A						
Lard Oil	-	B	B	C	C	B		A	B	A			C	A		A	B	A		A	A		A					
Lead Acetate	C ₄ H ₆ O ₄ Pb	D	C	C	D	B	B	B	B	B		A	C	B		A	B	D	A	B	A	A				A	A	
Lead Sulfate	O ₄ PbS	D	C	C	D	B	B	B	B	B			B	C		B	B	B	A	A			A					
Lecithin	C ₄₆ H ₈₉ NO ₈ P+	B	C	C	C	B		B	B	A			A	A		D	D	B		A			A					
Linoleic Acid	C ₁₈ H ₃₂ O ₂	B	C	C	B	B	B	A	A	A			C	B		B	D	B	A	B	A	A	A					
Linseed Oil	-	A	A	A	A	A	A	A	A	A	A	A	B	A		A	D	A		A	A		A		A			
Lithium Chloride	CLi	C	B	C	B	B	A	A	A	A			B	A		B	B	B	A	A	A	A	A					
Liquid Petroleum Gas (LPG)	C ₃ H ₇ NO ₂	A	A	A	B	B		B	B	A			A	A		A	D	A		A	A		A					
Lubricating Oil Petroleum Base	C ₆ H ₆	A	A	A	A	A	A	A	A	A			A	A	A		A	D	A	A	A	A						
Ludox	O ₂ Si	C	D	A	B	B	A	A	A	A			C			B	B	B		B			A					
Magnesium Bisulfate	HMgO ₄ S+	D	B	B	B	A	A	A	B				A	A		B	B	B	B	A			A					
Magnesium Bisulfate	-	C	D		D	B		B	B							B	B	B		A			A					
Magnesium Carbonate	CMgO ₃	A	B	B	B	A	A	A	A	B		A	B	B		B	B	B		A	A	A	A					
Magnesium Chloride	Cl ₂ Mg	D	C	C	D	C	D	C	B	A		A	B	D		A	A	A	A	A	B	A		A	A		A	
Magnesium Hydroxide	H ₂ MgO ₂	D	B	B	B	A	A	A	B	A		A	B	B		A	A	A	A	A	A	A	A				A	
Magnesium Hydroxide (hot)	H ₂ MgO ₂	D	C	B	B	A	A	A	A	B				B		B		A		A			A					
Magnesium Nitrate	MgN ₂ O ₆	B	C	B	B	A		A	B	A		A	C	B		B	A	B		A	A	A	A					
Magnesium Sulfate	MgO ₄ S	B	B	B	B	A	A	A	B	B		A	C	A		A	A	A	A	A	A	A	A				A	
Maleic Acid	C ₄ H ₄ O ₄	B	B	C	C	B	B	A	B	B		A	B	A		B	D	A	A	A	A	A	A	A	A	A		
Maleic Anhydride	C ₄ H ₂ O ₃	B	B		B	B	A	B	B	A				A		D	D	B		D		A	A					
Malic Acid	C ₄ H ₆ O ₅	B	B	D	D	B	A	B	B	B	A	A	C	A		A	D	A	B	A		A	A		A			
Malt Beverages	-					A		B	A							A	B	A		A			A					
Manganese Carbonate	-	B				B		A								B				A			A					
Manganese Sulfate	MnO ₄ S	B	D	B	D	A	B	A	A	A		A	A	B		B	B	B	A	B	A	A	A				B	
Mayonnaise	-	D		D	D	A	B	A	B	A			D	B		A		A		A		A	A					

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CHEMICAL COMPATIBILITY GUIDE

Media	Chemical Formula	Metals													Elastomers				Polymers									
		Aluminum	Brass	Carbon Steel	Ductile Iron / Cast Iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Hastelloy C®	Inconel 625	Titanium	Bronze	304 Stainless Steel	Duplex	Buna N (Nitrile)	EPDM/EPR	Viton	Flexible Graphite	Delrin®	Peek®	PVDF	Teflon® and Reinforced Teflon	PCTFE	UHMWPE®	VespeL®	PFA	KEL-F®
Meat Juices	-	B	D			A	A								B				A		A	A	A			A		
Melamine Resins	C ₃ H ₆ N ₆		D		D	C	C	C	A			D	C		B	A	A	C	A			A						
Methanol	CH ₄ O	A	A	A	A	A	A	A	A		B	A	A		B	D	B	A	A	A	A	A		A				
Mercuric Chloride	Cl ₂ Hg	D	D	D	D	D	C	D	B		A	D	D		A	A	A	C	B	A	A	A	A	A		A	B	
Mercuric Cyanide	C ₂ HgN ₂	D	D	D	D	B	C	A	D	A		A	D	C		A	B	A		A	B	A	B				D	
Mercurous Nitrate	HgNO ₃	D	D	D	D	A	A	A	D	A		A	D	A		B		B	C	A	B	A	A					
Mercury	Hg	C	D	A	A	A	A	A	B	A		A	A	A		A	A	A	C	A	A	A	A	A	A	A	A	
Methane	CH ₄	A	A	A	A	A	A	A	A	A		A	A	A	A	D	A	B	A	A	A	A	A					
Methyl Acetate	C ₃ H ₆ O ₂	A	A	B	B	A	A	A	A	A		B	A		D	B	D	A	B	A	C	A					A	
Methyl Acetone	C ₄ H ₈ O	A	A	A	A	A	A	A	A	A		A	A		D	A	D	B	D		D	A						
Methyl Amine	CH ₅ N	B	C	B	B	A	A	A	C	B		D	A		D	B	D		A	A		A						
Methyl Bromide 100%	CH ₃ Br	C	C	C	D	B	B	B	B	B		D	B		B	D	A	A	D	B	A							
Methyl Cellosolve	C ₃ H ₈ O ₂	B	A	B	B	A	A	A	A	A		A	B		C	B	D	A	D	A	A	A						
Methyl Cellulose	-					A		A	B						D				C			A						
Methyl Chloride	CH ₃ Cl	D	C	A	B	A	A	A	A	A		A	B	A		D	D	B	A	C		A	A			A	B	
Methyl Ethyl Ketone	C ₄ H ₈ O	B	A	A	A	A	A	A	A	A		A	A	A		D	B	D	A	B	B		A		A		B	
Methylene Chloride	CH ₂ Cl ₂	C	B	B	B	A	A	A	A	A		B	B	B		D	D	C	A	B	A	C	A		B		A	A
Methyl Formate	C ₂ H ₄ O ₂	B		C	B	A	A	A	A	A		A	A		D	B	D		A			A						
Methyl Isobutyle Ketone	C ₆ H ₁₂ O	B			B	B	A	A	A	A		A	A	A		D	C	D	A	C	B	D	A				A	
Milk & Milk Products	-	C	C	C	D	A	A	A	A	A	A	A	B	A		A	A	A	A	A	A	A	A	A	A	A	A	
Mineral Oils	-	A	A	A	B	A	A	A	A	A		A	A	A		A	D	A		A	A		A		A			
Mineral Spirits	-	A	B	B	B	B	A	B	B	B		B	B	A		A	D	A	A	A	A		A				A	
Mixed Acids (cold)	-	D	D	C	C	B		B	C						D	D	B		D			A						
Molasses, crude	-	B	B	A	A	A	A	A	A	A		A	A	A		A	B	A	A	A	A	C	A	A	A		A	
Molasses, Edible	-	A	B	A	C	A	A	A	A	A		A	A		A	B	A	A	A	A	A	B	A	A	A		A	
Molybdc Acid	H ₂ MoO ₄					A		A												A			A					
Monochloro Benzene (dry)	C ₆ H ₅ Cl	B		B	A	A	A	A	A	A			B	B		D	D	B	A	C	B		A					
Morphine	C ₁₇ H ₁₉ NO ₃	B	B	B	B	A		A	B						D	B	D		A			A		A				
Mustard	C ₄ H ₈ Cl ₂ S	B	A	B	B	A		A	A	A		A	B	A		A	A	A	A	C		A	A					
Naptha	-	A	A	A	B	A	A	A	A	A		A	A	A		B	D	A	A	B	A	A	A	A	A	A	A	
Napthalene	C ₁₀ H ₈	A	B	A	B	A	A	A	A	A		A	A	A		D	D	A	A	B	A	A	A		A		A	A

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Natural Gas, Sour	-	B	A	A	B	A	A	A	B	A			A	A		A	D	A		B	A		A					
Nickel Ammonium Sulfate	H ₈ N ₂ NiO ₈ S ₂	D	D	D	D	A		A	C				D			A	B	B		C	A		A	A				
Nickel Chloride	Cl ₂ Ni	D	D	D	D	B	B	A	C	A		A	D	D		A	B	A	A	A	A	A	A					A
Nickel Nitrate	N ₂ NiO ₆	D	D	D	D	B	A	A	C	B		B	C	B		A	A	A	A	C	A	A	A					A
Nickel Sulfate	NiO ₄ S	D	D	D	D	B	B	A	B	C		B	C	B		A	B	A	A	B	A	A	A					A
Nicotinic Acid	C ₆ H ₅ NO ₂	A	A	C	C	A		A	B			B				D	D	B		C			A		B			
Nitric Acid 10%	HNO ₃	C	D	D	D	B	A	A	D	B		A	D	A		C	B	A	A	D	A	A	A	A	A	D	A	B
Nitric Acid 30%	HNO ₃	D	D	D	D	B	B	A	D	A		A	D	A		C	C	A	C	D	B	B	A	A	A		A	B
Nitric Acid 80%	HNO ₃	D	D	D	D	B	C	A	D	B		B	D	A		D	D	B	D	D	D	B	A	A	B		A	B
Nitric Acid 100%	HNO ₃	B	D	D	D	B	C	A	D	B		B	D	A		D	D	B	D	D	D	B	A	A			A	B
Nitric Acid Anhydrous	-	B	D	D	C	B	D	A	D				D	B		D	D	A	C	D			A					
Nitrobenzene	C ₆ H ₅ NO ₂	B	D	A	B	A	B	A	B	B		A	B	B		D	C	C	B	B	D	B	A	A	A	A	A	B
Nitrogen	N ₂	A	A	A	A	A	A	A	A	A		A	A	A	A	A	B	A	A	A	A		A					B
Nitrous Acid 10%	HNO ₂	D	D	D	D	B	B	A	D	C			C	B		C	A	A		B	B	B						B
Nitrous Gases	-	B	D	B	C	A		A	D											B			A		A			
Nitrous Oxide	N ₂ O	B	B	B	C	B	B	B	D	B			C	B		B	A	A	B	A	A	D	A					
Oils&Fats	-	B				A		A								B	D			A		A	A	A				A
Oils&Animal	-	A	A	A	A	A		A	B	A						A	B	B		A		A	A	A				A
Oils, Petroleum (refined)	C ₆ H ₆	A	B	A	B	A	A	A	A	A			C	A	A	A	A	D		B	A		A					
Oils, Petroleum (sour)	C ₆ H ₆	A	C	B	C	A	A	A	A	A			C	A	A	A	A	D		B			A					
Oils, Water Mixture	-	A	A	B	B	A	A	A		A			A	A		A	D	A		A	A		A					
Olaic Acid	-	B				B		B	A	A							C			D			A					
Oleic Acid	C ₁₈ H ₃₄ O ₂	B	D	C	C	B	A	A	B	B		B	C	A		B	D	C	A	C	A	A	A			A		B
Oleum	H ₂ O ₄ S	C	C	B	D	B	B	B	C	B		D	D	B		D	C	A	C	D	D	D	A			D		A
Oleum Spirits	-	D	D		D	B		B	D							C	D	A		D		C	A					
Olive Oil	-	A	B	B	A	A	A	A	A	A		A	A	A		A	B	A	A	A	A		A	A			A	
Oxalic Acid	C ₂ H ₂ O ₄	C	C	C	D	B	B	B	B	B		A	C	B		C	B	A	A	C	C	A	A	A	A	A	A	D
Oxygen	O ₂	A	A	A	A	A	A	A	A	A		A	A	A	A	B	A	A	A	D	A		A					
Ozone (dry)	O ₃	A	A	A	A	A	A	A	A	A			A	B		D	A	B	C	C	A	B	A	A	B		A	A
Ozone (wet)	O ₃	B	B	B	C	A		A	A	A			B			D	B	B		C	A	B	A	A	B		A	
Paints & Solvents	-	A	A	A	A	A		A	A					A		D	D	B		A			A					

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Palmitic Acid	C ₁₆ H ₃₂ O ₂	B	C	C	C	B	A	A	A	A		B	B		B	B	A	A	A	A	B	A					
Palm Oil	-	A	B	C	C	B	A	A	A	A		A	C	A	B	D	A		D	A	A						
Paper Pulp	-	C	B		B	A		A	B						B	B	B		A								
Paraffin	C _n H _{2n+2}	A	A	B	B	A	A	A	A		A	A	A		A	D	A	A	A	A	A	A	A	A		A	
Paraformaldehyde	CH ₂ O	B	B	B	B	B		B	B	A					B	C			A			A					
Paraldehyde	C ₆ H ₁₂ O ₃					B		B		A					B	D		A	A			A					
Pentane	C ₅ H ₁₂	A	A	B	B	B	A	A	A	B		B	B		A	D	A	A	B	A	A	A					
Perchloroethylene (dry)	C ₂ Cl ₄	B	C	B	B	A	A	A	B	A		A	B	B	D	D	A	A	B	A	A	A					A
Petrolatum (Vaseline Petr. Jelly)	-	B	B	C	C	B	A	A	A	A		A	A		A	A	A	A	B		A	A					
Phenol	C ₆ H ₆ O	A	D	C	D	A	A	A	A	A	A	B	A	B	D	B	B	A	C	D	B	A	A	A	A	A	B
Phosphate Ester 10%	-	C	D	A	C	A		A	A	A					D	A			A			A		A			
Phosphate Acid 10%	-	C	D	D	D	C	B	B	D						B	B	A	A	D			A		A			
Phosphoric Acid 50% (cold)	H ₃ O ₄ P	D	D	D	D	C	B	B	D	B		B	D	D	B	B	A	A	D	A	B	A	A	A	A	A	A
Phosphoric Acid 50% (hot)	H ₃ O ₄ P	D	D	D	D	C	C	B	D	B		C	D	D	B	B	A	A	D	A	B	A	A	A	A	A	A
Phosphoric Acid 85% (cold)	H ₃ O ₄ P	D	D	D	D	C	C	B	D	B		B	D	D	C	B	B	A	D	A	B	A	A	A	A	A	A
Phosphoric Acid 85% (hot)	H ₃ O ₄ P	D	D	D	D	C	D	B	D	B		C	D	D	C	B		A	D	B	B	A	A	A	A	A	A
Phosphoric Anhydride	P ₂ O ₅	C		D		A	B	A				D	C	B	D		D	A	D	A	D	A					
Phosphorus Trichloride	PCl ₃	C		B	C	A	A	A	A	B		A		A	D	B	B	A	D			A		A			A
Phthalic Acid	C ₈ H ₆ O ₄	C	B	D	C	B	A	A	B	A		A	B	B	C	C	A	B	C	A	B	A	A	A	A	A	A
Phthalic Anhydride	C ₈ H ₄ O ₃	B	B	D	C	B	A	B	A	A			B	A	C	B	A	A	C	A	A	A					
Picric Acid	C ₆ H ₃ N ₃ O ₇	C	D	D	D	B	B	B	D	B		A	C	B	C	B	A	A	B	A	B	A				A	A
Pineapple Juice	-	A	C	C	C	A		A	A						A		A		A			A					
Pine Oil	-	B	B	B	B	A	A	A	A	A		A	C	A	A	D	A		D		A	A					
Pitch (Bitumen)	C ₆ H ₆					A		A							C	D			A			A					
Polysulfide	-	C	D		B	B		A	B						B	B	B		C			A					
Polyvinyl Acetate	C ₆ H ₁₂ O ₂	B	B	C	B	B	B	B	B	A			B	A		B			A	A		A					
Polyvinyl Chloride	C ₂ H ₃ Cl	B	D		B	B		B	B							B			A			A					
Potassium Bicarbonate	CHKO ₃	C		A	D	A	B	A	B	B		A	C	B	B	A	A	A	B	A	B	A			D		A
Potassium Bichromate	Cr ₂ K ₂ O ₇	B	B	B		A		A	A						B		B		B	C		A		A			
Potassium Bisulfate	HKO ₄ S	B		C	C	A		A	C				C		B	B	A		A			A					
Potassium Bisulfite	HKO ₄ S	C	C	D	D	B		B	D						A	B	A		A			A					

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Potassium Bromide	BrK	C	C	C	D	A	B	B	B	B		A	C	B		A	B	A	A	A	A	A					A
Potassium Carbonate	CK ₂ O ₃	C	B	B	B	A	A	A	A	A		A	C	B		A	B	A	A	B	A					D	
Potassium Chlorate	ClKO ₃	B	B	B	B	A	A	A	A	A		A	C	B		A	B	A	B	B	A	A					A
Potassium Chloride	KCl	D	C	C	B	B	B	A	B	A		A	C	B		A	A	A	A	A	A	A		A			A
Potassium Chromate	CrK ₂ O ₄	B	B	B	B	B	A	A	A	A			A	B		B	B	A	A	C		B	A				
Potassium Cyanide	KCN	D	D	B	B	B	A	A	A	A		A	D	B		A	A	A	A	C		A	A		A		A
Potassium Dichromate	Cr ₂ K ₂ O ₇	B	D	C	C	B	A	A	A	B		A	C	B		A	B	A	B	B	A	A	A			D	A
Potassium Ferricyanide	C ₆ FeK ₃ N ₆	C	D	C	C	A	B	A	A	B		A	D	B		A	B	A	A	C	A	B	A				B
Potassium Ferrocyanide	C ₆ FeK ₄ N ₆ +4	C	C	C	C	B	A	A	A	B		A	C	B		A	A	A	A	A	A	A	A				A
Potassium Hydroxide Dilute (cold)	HKO	D	D	B	D	B	A	A	A	A	B	C	D	B		A	A	D	B	C	A	A	A			D	B
Potassium Hydroxide to 70% (cold)	HKO	D	D	C	D	B	B	B	A	B		C	D	B		B	B	D		C	A		A			D	
Potassium Hydroxide Dilute (hot)	HKO	D	D	B	D	B	C	B	A	A		D	D	B		B	A			D	A		A			D	
Potassium Hydroxide to 70% (hot)	HKO	D	D	C	D	B	C	B	A	B		D	D	B		C	B			D	A		A			D	
Potassium Iodide	IK	B	C	B	B	B	A	A	B	B		A	D	A		A	B	A	B	A		B	A				
Potassium Nitrate	KNO ₃	B	B	B	B	B	A	A	A	A		A	B	B		A	B	A	B	B	A	A	A			A	
Potassium Oxalate	C ₂ K ₂ O ₄	B			A	B	B	A		A		A	A	B					B	A							
Potassium Permanganate	KMnO ₄	B	B	B	B	A	A	A	A	A	A	A	B	B		A	B	A	C	C	A	A	A		A	D	
Potassium Phosphate (mono)	KH ₂ PO ₄	D	C		C	B	A	B	B	B				A		A	A	A		A			A				
Potassium Phosphate Di-basic	K ₂ HPO ₄	B	B	A	A	A		A	B	B						A	B	A		A			A				
Potassium Phosphate Tri-basic	K ₃ PO ₄	D		A	A	B		B	B							B	B						A				
Potassium Sulfate	K ₂ O ₄ S	B	C	B	B	A	A	A	A	A		A	B	B		A	A	A	A	B	A	A	A				B
Potassium Sulfide	HK ₂ S+	C	D	D	C	A	B	B	D	B		A	D	B		A	B	A	A	A	A	A	A				A
Potassium Sulfite	K ₂ O ₃ S	B	B	D	C	A	B	A	C	B		A	C	B		B	A	A		A			A				
Producer Gas	-	B	B	B	B	B	A	B	A					A		A	D	A		A			A				
Propane Gas	C ₃ H ₈	A	A	A	A	A	A	A	B	A		A	B	A	A	A	D	A	A	B	A	A	A				A
Propyl Bromide	C ₃ H ₇ Br	B	B	B	B	A		A	B				B			B	B	B		A			A				
Propylene Glycol	C ₃ H ₈ O ₂	C	B	B	B	B	A	A	A	A		A	A	B		A	B	A	A	B	A		A		A		
Pyridine	C ₅ H ₅ N	B	B	B	B	B	A	A	C	B		B	B	B		D	B	D	A	B	B	D	A	A	A	A	B
Pyrolgalic Acid	-	B	B	B	B	B	A	A	A	A		A	A	B		A	B	A	A	D	A	A	A				A
Quench Oil	-	A	B	B	B	A		A		A						A		A		A			A				
Quinine Sulfate (dry)	C ₄₀ H ₅₀ N ₄ O ₈ S				A	A	B	A	B	A				B						A			A				

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Media	Chemical Formula	Metals													Elastomers				Polymers								
		Aluminum	Brass	Carbon Steel	Ductile Iron / Cast Iron	316/316Ti/321 S.S.T	17-4PH	Alloy20	Monel	Hastelloy C®	Inconel 625	Titanium	Bronze	304 Stainless Steel	Duplex	Buna N (Nitrile)	EPDM/EPR	Viton	Flexible Graphite	Delrin®	Peek®	PVDF	Teflon® and Reinforced Teflon	PCTFE	UHMWPE®	VespeL®	PFA
Resins & Rosins	-	A	A	A	A	A	A	A	A						B		A		A			A					
Resorcinal	C ₆ H ₆ O ₂	A	B	C	C	A	A	A	A		A	B	A		D		B		B			A					
Road Tar	C ₂ H ₄ O ₃	A	A	A	A	A		A	A						B		A		A			A					
Roof Pitch	-	A	A	B	B	A		A									A		A			A					
Rosin Emulsion	C ₁₅ H ₂₀ O ₆	A	A	A	A	A	A	A	A		A	A	A		D		C		C	A		A					
R P-1 Fuel	-	B	B	C	C	B		A	B	A					A	B	A		B			A	A				
Rubber Latex Emulsions	-	C	C	D	D	A	B	B	C	A		A	B	B	A	B	B	A	C	A	A	A					B
Rubber solvents	-	B	B	C	C	B		A	A			A	B	A		A		A			A	A					
Salad Oil	-	B	B		D	B	B	B	B	B		A	B	B	A	A	B	A	A		A	A					
Salicylic Acid	C ₇ H ₆ O ₃					B		B											C			A					
Salt (NaCl)	NaCl+H ₂ O	B	D	C	D	B	B	B	A	A	A	A	C	B	A	A	B	A	A		A	A	A	A		A	A
Salt Brine	NaCl	C	C	C	D	B	A	B	B	A			C	B	B	A	B		B	A		A					
Sauerkraut Brine	-	A	B	A	B	A	A	A	A	A			A	A		A	A	A	A		A	A					
Sea Water	-	B	B		B	B		B							B		B	A	A	A	A	A	A			A	
Sewage	-	D				C	C	A	B	A			D	D					D			A					A
Shellac	-	D	D	D	D	B		B	B	A			D				B		D			A					
Silicone Fluids	Si	D	D	D	D	A	B	A	D	A		A	D	B		C	A	A	A	A	A	A	A	A		A	A
Silver Bromide	AgBr	B				A		A		A					A	A	A					A					
Silver Cyanide	CAgN	C	B	B	B	A	A	A	B	A		A	B	A		A	A	A	A	A	B	A					
Silver Nitrate	CAgN	B	B	C	C	B	B	A	B	A		A	B	B		B	A	D	A	B	A	A					A
Silver Plating sol.	-	D	B	B	C	A	A	B	B	B		B	B	A		A	A	A	A	B	A						
Soap Solutions (Stearates)	C ₂₁ H ₄₂ O ₄	B				B		B	A	A		A	A		B		B	A	B	A	B	A		A			
Sodium Acetate	C ₂ H ₄ O ₂	C	B	C	C	B	A	A	A	A		A	B	A		A	A	A	A	A	A	A				D	A
Sodium Aluminate	AlNaO ₂	B				A	A	A	A	B			C		D			C	A	A		A					
Sodium Benzoate	C ₇ H ₆ O ₂	D	D	D	D	A	A	A	B	B		B	C	A		A	B	A	A	B		A	A				A
Sodium Bicarbonate	CHNaO ₃	C	B	D	D	A	B	B	C	B		A	B	B		A	B	A	A	C		A	A				
Sodium Bichromate	Cr ₂ Na ₂ O ₇	C	B	C	C	B	A	A	A	A		B	A	B		A	B	A		A		A	A		A		
Sodium Bisulfate 10%	H ₂ NaO ₄ S	D	B	C	D	B	B	B	B	B		A	B	C		A	B	A	A	A	A	B	A				B
Sodium Bisulfite 10%	HNaO ₃ S	D	B	D	D	A		B	B	B						A	B	A		D			A				
Sodium Borate	C ₁₅ H ₂₂ O ₂	B	B	C	C	B		B	B							A	B	A		A			A		A		
Sodium Bromide 10%	BrNa	B	B	C	D	B		B	B							A	B	A		A			A				

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Sodium Carbonate (Soda Ash)	CNa ₂ O ₃	D	B	B	B	B	A	A	B	A		A	B	A		A	B	A	A	B	A	A	A	A	A	D	A	A
Sodium Chlorate	ClNaO ₃	C	B	B	C	B	A	B	C	B		A	B	A		A	B	A	C	A	A	A	A					
Sodium Chloride	ClNa	B	C	B	C	B	B	B	B	A		A	B	B		A	A	A	A	B	A	A	A		A	A		A
Sodium Chromate	CrNa ₂ O ₄	B	C	B	B	A	A	A	A	B			B	B		A	B	A	B	D	A	A	A					A
Sodium Citrate	C ₆ H ₅ Na ₃ O ₇	D				A		B		A										A			A					
Sodium Cyanide	CNNa	D	D	B	B	A	B	A	B	A		A	D	A		A	A	A	A	A		A	A			A		A
Sodium Ferricyanide	C ₆ FeN ₆ Na ₃	B			C	B	B	A	B	B			C	B						A			A			A		
Sodium Fluoride	FNa	B	C	D	D	B	B	A	B	A		A	B	D		A	B	A	A	A	A	A	A					
Sodium Hydroxide 20% (cold)	NaOH	D	C	A	A	A	A	B	A	A	A	A	B	B		A	B	B	A	B	A	A	A		A	D		A
Sodium Hydroxide 20% (hot)	NaOH	D	C	B	B	A	B	B	B	A	A		B			B	B	C	A	C		A	A		A	D		
Sodium Hydroxide 50% (cold)	NaOH	D	D	A	B	A	A	B	A	A		A	D	B		A	B	C	A	C	A	A	A		A	D		B
Sodium Hydroxide 50% (hot)	NaOH	D	D	B	B	A	B	B	B	B			D			B	C	C	A	C		A	A		A	D		
Sodium Hydroxide 70% (cold)	NaOH	D	D	C	B	A	A	B	A	A		A	D	C		B	C	D	A	D	A	A	A		A	D		A
Sodium Hydroxide 70% (hot)	NaOH	D	D	C	B	A	B	B	B	B			D			D	C	D	A	D		A	A		A	D		
Sodium Hypochlorite (Bleach)	ClNaO	D	D	D	D	D	D	D	D	A		C	D	D		B	C	B	B	D	B	A	A		A	D		A
Sodium Hyposulfite	Na ₂ S ₂ O ₄	B				B		B	B											A			A					
Sodium Lactate	C ₃ H ₅ NaO ₃	D				A		A	B											A			A					
Sodium Metaphosphate	Na ₆ O ₁₈ P ₆	C	D	C	B	B	A	A	B	A			B	A		A	A	A	A	B	A	A	A					
Sodium Metasilicate (cold)	Na ₂ O ₃ Si	D	B	B	C	A	A	A	A	A			A	A		B	B	B		D	A		A					
Sodium Metasilicate (hot)	Na ₂ O ₃ Si	D	B	C	D	A	A	A	A	A										D			A					
Sodium Nitrate	NNaO ₃	B	B	B	B	A	B	A	B	B		A	B	B		C	A	A	C	A	A	A	A		A	A		A
Sodium Nitrite	NNaO ₂	A		B	B	B	A	A	B	B			B	A		C	A	B		B	A		A					
Sodium Perborate	BNaO ₃	C	D	B	C	C	A	A	A	A			B	B		C	A	A	C	B	A		A					A
Sodium Peroxide	Na ₂ O ₂	C	C	C	D	B	A	A	A	B			D	A		C	A	A	A	D	A	A	A	A	A	B		A
Sodium Phosphate (mono)	NaH ₂ PO ₄	D	C	B	D	B	A	A	B	A		A	C	B		B	A	A		B	A		A					
Sodium Phosphate Di-basic	Na ₂ HPO ₄	D	C	C	C	B	A	B	B	A		A	C	A		A	A	A	A	A	A		A					
Sodium Phosphate Tri-basic	Na ₃ PO ₄	D	C	C	C	B	A	B	B	A		A	C	A		B	A	A		A			A					
Sodium Polyphosphate	Na ₆ O ₁₈ P ₆	D	D		D	B	B	B	B	A		A	C	B		B	A	A	A	B		A	A					A
Sodium Salicylate	C ₇ H ₅ NaO ₃				A	A		A									A			C			A					
Sodium Silicate	Na ₂ O ₃ Si	B	C	B	B	B	A	A	A	A		A	D	A		A	A	A	A	C	A	A	A	A	A		A	A
Sodium Silicate (hot)	Na ₂ O ₃ Si	C	D	C	C	B	B	B	B	B			D			B		A	C			A		A		A		A

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Sodium Sulfate	Na ₂ O ₄ S	A	B	B	B	A	A	A	A	A	A	B	B		A	A	A	A	B	A	A	A				A	A
Sodium Sulfide	HNaS	D	D	C	B	B	A	A	A	B		A	D	B		A	A	A	A	B	A	A	A	A		A	B
Sodium Sulfite	NaO ₃ S-	C	C	B	A	A	A	A	C	A		A	B	B		A	A	B	A	A		A					A
Sodium Tetraborate	C ₁₅ H ₂₂ O ₂	C	D		A	A	A	A		B			B	A		A	A	A	A	B			A				
Sodium Thiosulfate	Na ₂ S ₂ O ₃	A	D	C	C	B	A	B	B	B		A	B	A		A	A	A	A	C	A	A	A				A
Soybean Oil	-	B	B	C	C	A	A	A	A	A		A	A	A		A	B	A		D			A				
Starch	C ₂₇ H ₄₈ O ₂₀	B	B	B	B	A	A	A	A	A			B	A		A	C	A		A	A	A	A	A		A	A
Steam (212°F)	-	B	B	A	A	A	A	A	A	A			B	A	A	D	B	C	A	D	A		A				
Stearic Acid	C ₁₈ H ₃₆ O ₂	B	C	C	C	B	A	A	A	A		A	B	B		A	B	A	A	A	A	A	A		A		
Styrene	C ₈ H ₈	A	A	B	B	A	A	A	A	A			B	A		D	D	B	A	A	A		A				
Sugar Liquids	-	A	A	B	B	A	A	A	A	A		A	A	A		A	A	A	A	A	A		A	A			
Sugar, Syrups & Jam	-	B	B	B	C		A	A	A	A		A	C	A			A		A	A	A	A	A	A		A	
Sulfate Black Liquor	H ₂ O ₄ S	D	C	C	C	B	A	B	B	B			D	B		C	A	B	A	D	A	A	A				
Sulfate Green Liquor	H ₂ O ₄ S	D	C	C	C	B	A	B	B	B			D	B		C	A	B	A	D	A	A	A				
Sulfate White Liquor	H ₂ O ₄ S	D	C	C	C	B	B	B	C	B			D	B		C	A	B	A	D	A	A	A	A			
Sulfur	S	C	C	C	C	B	A	A	B	A			D	A		D	C	B	A	B	A	A	A	A		A	
Sulfur Chloride	SCl	D	D	D	D	D	D	C	D	B		D	C	D		D	C	A	C	D	A	B	A				A
Sulfur Dioxide (dry)	SO ₂	B	B	B	B	A	A	B	B	A		A	B	C		D	B	A	A	B	A	A	A	A	A	A	A
Sulfur Dioxide (wet)	SO ₂	B	D			B	C	B	A	A		A	D	D		D	B		A	B	A	B	A	A	A	A	A
Sulfur Hexafluoride	SF ₆	A	B			A		A		C						B	B	B		D	A		A				
Sulfur, Molten	-	A	D	C	B	B	A	A	C	B				A		D	B	B		D			A				
Sulfur Trioxide	SO ₃	A	D	B	B	B	B	A	A	A		C	C	A		D	B	B	C	D	A	D		D		A	
Sulfur Trioxide (dry)	SO ₃	A	C	B	B	B	B	B	B	B		D	B	D		D	B	A	D	D			A		D		A
Sulfuric Acid 0 to 77%	H ₂ SO ₄	D	D	D	D	C	C	B	C	A		C	D	D		B	C	A	B	D	D	A	A	A	A	B	A
Sulfuric Acid 100%	H ₂ SO ₄	D	D	C	C	C	C	B	C	B		D	D	C		D	C	B	D	D	D	A	A	A	A	D	A
Sulfurous Acid	H ₂ O ₃ S	C	D	D	D	B	B	B	B	B		A	D	B		C	C	A	A	C	B	B	A		A		A
Tall Oil	-	C	B	B	B	A	A	A	A	A			B	A		B	D	A		A			A	A			
Tannic Acid (Tannin)	C ₂₇ H ₂₄ O ₁₈	C	B	C	C	B	B	B	B	B		A	B	B		B	A	A	A	B	A	B	A	A	A	A	A
Tanning Liquors	C ₂₇ H ₂₄ O ₁₈	A	A			A	A	A	A	A		A	A	A		B	B	A	A	B			A				
Tar & Tar Oils	C ₂ H ₄ O ₃	B	A	A	A	A	A	A	A	A			A	A		C	D	A		A	A		A	A			
Tartaric Acid	C ₄ H ₆ O ₆	B	D	D	D	A	A	A	A	B		A	B	C		C	B	A	A	B	A	B	A	A	A	A	A

Ratings: A-Excellent | B-Good | C-Poor | D-Do not use | Blank -No Information

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Media	Chemical Formula	Metals													Elastomers				Polymers									
		Aluminum	Brass	Carbon Steel	Ductile Iron / Cast Iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Hastelloy C®	Inconel 625	Titanium	Bronze	304 Stainless Steel	Duplex	Buna N (Nitrile)	EPDM/EPR	Viton	Flexible Graphite	Delrin®	Peek®	PVDF	Teflon® and Reinforced Teflon	PCTFE	UHMWPE®	Vespel®	PFA	KEL-F®
Tetraethyl Lead	C ₈ H ₂₀ Pb	B	B	B	C	B	A	A	A			A	A		B	D	A		A	A		A						
Toluol (Toluene)	C ₇ H ₈	A	A	A	A	A	A	A	A		A	A	A	A	D	D	B	A	C	A	B	A		B	A		B	
Tomato Juice	-	A	C	B	C	A	A	A	A			B	A		A	A	A	A	B	A	A	A					A	
Transformer Oil	-	A	B	A	B	A	A	A	A			A	A		A		A	A	A	A		A		A				
Tributyl Phosphate	C ₁₂ H ₂₇ O ₄ P	A	A	A	A	A	A	A	A			B	A	A	D	B	D		A			A		A				
Trichlorethylene	C ₂ HCl ₃	B	A	B	C	B	A	A	A		B	B	B		D	D	B	A	C	A	B	A			A	A	A	
Trichloroacetic Acid	C ₂ HCl ₃ O ₂	D	B		D	D	C	B	B	A		D	B	D		C	B	C	A	D	A	B	A		A		A	
Triethanolamine	C ₆ H ₁₅ NO ₃	B		C	C	B	A	A	A	A			C	A		C	A	D		A	A		A		A			
Triethylamine	C ₆ H ₁₅ NO ₃		B	A		B		B		A			A			B	A	C	A	D		B	A				A	
Trisodium Phosphate	Na ₃ O ₄ P	D		A	B	A	A	A	A	A			C	B		A	A	B	A	A	A	A			D			
Tung Oil	-	B	B	B	B	A	A	A	A	A			B	A		A	D	A		A	A		A					
Turpentine	C ₁₀ H ₁₆	A	C	B	B	B	A	A	A	A		B	B	A		B	D	A	A	A	A	A		A			A	
Urea	CH ₄ N ₂ O	B	B	C	C	B	A	A	B	B		A	C	B		C	B	C	A	A	A	A		A		A		
Uric Acid	C ₅ H ₄ N ₄ O ₃	C				A	B	A		B		A	B	B					A	B		A						
Varnish	-	A	B	C	C	A	A	A	A	A			A	A		C	D	B	A	A	A		A				A	
Vegetable Oils	-	A	B	A	B	A	A	A	A	A			B	A		A	C	A		A	A		A	A				
Vinegar	C ₂ H ₄ O ₂	D	C	D	D	A	A	A	A	A		A	C	A		C	A	C	A	B	A	B	A	A		A	A	
Vinyl Acetate	C ₄ H ₆ O ₂	B	B	A	B	B	A	B	B	A			C	B		D	B	C	A	C	A	B	A					
Water (distilled)	H ₂ O	A	B	C	D	A	A	A	A	A		A	A	A		A	A	B	A	B	A	A	A	A	A	B	A	A
Water (fresh)	H ₂ O	A	B	C	C	A	A	A	A	A	A	A	A	A		A	A	B	A	A	A	A	A	A		B	A	A
Water (acid mine)	-	D	D	D	D	B	A	A	B	B		A	C	B	B	A	A	D	A	A		A	A	A			A	
Waxes	-	A	A	A	A	A		A	A	A						A	C	A		A	A		A					
Whiskey & Wines	-	C	B	D	D	A	A	A	A	A		A	B	A		A	A	A	A	A	A	A					A	
Xylene, Xylol (dry)	C ₂₄ H ₃₀	A	A	B	B	A	A	A	A	A		A	A	B		D	D	B	A	A	A	A		B			A	
Zinc Bromide	Br ₂ Zn	D	B		D	B		B	B	A				D		B	B	B	A	A			A					
Zinc Hydrosulfite	ZnS ₂ O ₄	D	C	A	B	A		A	B	B			D	A		A	A	A		C			A					
Zinc Sulfate	ZnSO ₄	D	C	C	D	B	A	A	B	B		A	C	B		A	A	A	A	C	A	A	A		A		A	
Zinc	Zn	C				A				A				A		A	A						A					

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CHEMICAL COMPATIBILITY GUIDE

The information presented in this bulletin is intended as a guide to the chemical resistance of materials used in HABONIM Valves. The physical properties of a material are affected differently by each corrosive media. An "A" rating is associated with internal moving parts, in direct contact with the media. In some cases a "B" rating can be given to body material in direct contact with media if the corrosion rate is not such as to cause any serious problem.

Rating Explanation

A → Excellent B → Good C → Poor D → Do not use Blank → No information available

Ratings are based on media at room temperatures unless otherwise specified. We advise that ratings given be used as a guide to the selection of valve materials and not as an absolute recommendation.

Although most of the suggested ratings in the Chemical Compatibility Guide chart are based on experience, Habonim cannot accept responsibility for problems arising from use of this Information. We do however recommend that in critical applications, tests will be conducted to verify the rating.

This catalogue covers the standard materials supplied as part of Habonim valves series. Please contact the Habonim engineering team for assistance regarding the chemical compatibility of available materials not included in this catalogue.



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