

Technical information Chemical compatibility



Chemical compatibility

Introduction

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 that are in direct contact with the media. In some cases a "B" rating can be given to body material that comes into direct contact with media if the media's corrosion rate does not pose a 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. **The ratings given should 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 recommend that in critical applications, independent tests should be conducted to verify the rating.

This catalog covers the standard materials used in the Habonim valve series. Please contact the Habonim engineering team for assistance regarding the chemical compatibility of available materials not included in this catalog.

Media	Chemical formula	Metals											Elastomers				Polymers										
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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
Acetaldehyde	C2H4O	B	B	C	C	A	A	A	A	A	A	C	A	D	A	D	A	A	B	D	A	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						
Acetic Acid (aerated)	C2H4O2	C	D	D	C	A			A	A	A	C		C		C	A	D	A		A						
Acetic Acid (air free)	C2H4O2	C	D	D	C	A	A	A	A	A	A	C		C		D	A	D	A		A						
Acetic Acid (crude)	C2H4O2	C	D	D	D	A	A	A	A	A	A	C		D		D	A	D	A		A						
Acetic Acid Glacial	C2H4O2	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)	C2H4O2	C	D	D	D	A	A	A	A	A	A	C	D	D		D	A	D	A	C	A						
Acetic Acid 10%	C2H4O2	C	D	D	D	A	A	A	A	A	A	C	C	D	B	D	A	B	A	A	A	A	A	A	A	A	
Acetic Acid 80%	C2H4O2	C	D	D	D	A	A	A	A	A	A	C	D	D	C	D	A	D	A	C	A				B	A	
Acetic Acid Vapors	-	B	D			C	C	B	C	A				D				A				A					
Acetic Anhydride	C4H6O3	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	C3H6O	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	CH3COCl	C	B	A	C	A	A	A	A	A		D	C	D	D	D		D	B	B	A						
Acetylene	C2H2	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	C3H3N	B	A	A	C	A	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					
Alcohol, Amyl	C5H11OH	B	B	B	B	A	B	B	B	A		A	B	A	C	A	B	A	A	A	A	A	A			A	
Alcohol, Butyl	C4H9OH	A	B	B	C	A	B	A	A	A		B	B	A	B	B	A	A	A	A	A	A	A			A	
Alcohol, Diacetone	CH3C(O)CH2C(OH)(CH3)2	A	B	B	B	A	B	A	B	A		A	B	A	D	A	D	A	A	A	B	A	A			A	
Alcohol, Ethyl	C2H6O	B	B	B	B	A	B	A	B	A		A	B	A	A	A	A	A	B	A	A	A	A			A	
Alcohol, Fatty	-	B	B	B	B	A	B	A		A		B		B			A	A		A	A	A				A	
Alcohol, Isopropyl	C3H8O	B	B	B	B	B	B	A	B	A		B	B	B	C	A	A	A	A	A	A	A	A			A	
Alcohol, Methyl	CH4O	C	B	B	B	A	B	A	A	A		A	B	A	B	A	C	A	B	A	A	A	A			A	
Alcohol, Propyl	C3H8O	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(C2H3O2)3	C	C		C	B	B	A	B	B	A	C		D	A	D		D			A						
Aluminum Chloride (dry)	AlCl3	C	D	D	D	C	B	D	B	A		C	D	D	B	A	A	A	C	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			
Aluminum Fluoride	AlF3	C	D	D	D	C	C	B	A	B		C	C	D	A	A	A	A	C		A	A					
Aluminum Hydroxide	AlH6O3	B	D	D	D	A	A	A	B	A		B	D	A	A	A	A	A	B		A	A					
Aluminum Nitrate	AlN3O9	D	D	D	D	B	A	A	C	B		A	D	C	B	B	D	A	C		B	A					
Aluminum Oxalate	C6AlO12-3	B			B	A		A	B	A		D										A					
Aluminum Potassium Sulfate	AlKO8S2	B	B	C	D	B	C	B	B	C		A	C	C	B	A	B	A	C			A	A				
Aluminum Sulfate (Alum)	Al2O12S3	C	C	D	D	B	B	B	C	B		A	C	B	A	A	A	A	C	A	A	A	A		A	A	
Amines	R3-xNHx	C	B	B	C	A	A	A	B	A		B	C	A	A	D	C	D	A	D	A		A				
Ammonia Alum	AlH28NO20S2	C			C	A	B	A	B	A		B	C	B	B		A	C			A						
Ammonia, Anh. Liquid	NH3	A	D	A	B	A	A	A	A	B		B	D	B	B	B	D	A	D	A	B	A	A			A	
Ammonia Aqueous	H5NO	B	C	C	C	A		A	B	A		B	D	A	A	D	B	C	A		A	A	A			A	
Ammonia Gas (hot)	H3N	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					

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.

Chemical compatibility

A - B

Media	Chemical formula	Metals													Elastomers			Polymers								
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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®
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		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
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
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				
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				
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				
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				
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	A
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				
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	D	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
Aromatic Solvents	-	A	A	C	B	A		A	B						D	D	A		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				
Asphalt Liquid	-	C	B	B	B	A	A	A	B	A			A		C	D	A	A	B	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				
Barium Sulfate	BaSO ₄	C	B	B	C	B	A	A	A	A		A	C	C	A	A	A	A	B	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	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				
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	B	D	D	A	A	A	A	A	A	A	A	A	A
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
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		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		

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.

Media	Chemical formula	Metals											Elastomers				Polymers										
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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
Bordeaux Mixture	-					A	A	A							A							A					
Borax Liquors	-	C	A	C	C	B	A	B	A						A	A	A		B			A					
Boric Acid	BH3O3	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			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
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	A	D	A	
Bunker Oils (Fuel)	-	A	B	A	B	A		A	A	A			A	A		B	C	A		A		A					
Butadiene	C4H6	A	B	B	B	A	A	A	A	B		A	C	A		C	C	A	A	A	A	A	A				
Butane	C4H10	A	A	B	C	A	A	A	A	A		A	B	A	A	B	D	A	A	A	A	A	A		A		
Butter	-	A			D	A		A					D	C		B	A	A		A		A					
Buttermilk	-	A	D	D	D	A		A	D	A			D	A		A	B	A	A	A	A	A					
Butyl Acetate	C6H12O2	B	B	B	B	B	A	A	A	A		B	B	C		D	C	D		B	A	A	A	A	A	A	
Butylene	C4H8	A	A	A	A	A	A	A	A	A			A	A		D	D	D	A	A	A	A	A		A		
Butyric Acid	C4H8O2	B	B	D	D	B	A	A	A	A		A	C	C		C	C	C	A	B	A	A	A		A		
Calcium Bisulfite	CaH2O6S2	C	D	D	D	B	B	A	D	B		A	C	B		A	D	A	A	D	A	A	A				
Calcium Carbonate	CaCO3	C	D	C	D	B	A	A	A	A		A	C	A		B	B	A	A	A	A	A	A		A		
Calcium Chlorate	Ca(ClO3)2	B	C	B	C	B		A	A	B		B	B	B		B	B	B	B	C		A	A				
Calcium Chloride	CaCl2	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	
Calcium Nitrate	Ca(NO3)2	C	B	B	C	B	B	A	A	B		B	B	C		B	B	A	B	D	A	A	A		A	A	
Calcium Phosphate	Ca3(PO4)2	D	C		C	B		B								B	B	B		B			A				
Calcium Silicate	Ca2SiO4	D	C		C	B		B		A						B	B	B		A			A				
Calcium Sulfate	CaO4S	C	B	B	C	C	A	A	A	B	A	A	B	B		A	B	A	A	D	A	A	A			A	
Caliche Liquor	-			B		A		A								B				A			A				
Camphor	C10H16O	C	C	B	C	B	A	A	C				B			B	B	B		A	A		A		A		
Cane Sugar Liquors	C12H22O11	B	B	A	B	A	A	A	A	A			A	A		B	A	B		A		A	A				
Carbonated Beverages	-	B	B	D	B	B	B	B	C	A						B	B	B	A	A			A				
Carbonated Water	-	A	D	B	C	A	B	A	B				B	A		A	A	A	A	A			A				
Carbon Bisulfide	CS2	B	C	B	B	B	A	B	B	B			B	A		D	D	A		A			A				
Carbon Dioxide (dry)	CO2	B	B	B	B	A	A	A	A	A		A	B	A	A	C	B	B	A	A	A	A	A			A	
Carbonic Acid	CH2O3	A	D	B	D	B	A	A	A	B		B	C	A	B	B	B	A	A	B	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	
Carbon Tetrachloride (dry)	CCl4	C	B	C	C	A	A	A	A	A		A	B	B		D	D	B	B	B	A	A	A	A	B	A	
Carbon Tetrachloride (wet)	CCl4	D	C	D	D	B	A	B	B	A		A	C	A		D	D	B	B	B		A	A	A	B	A	
Casein	-	C	C		C	B		B	C	B						B	B	B		A			A				
Castor Oil	-	A	A	A	A	A	A	A	A	A			B	A		A	B	A	A	A	A		A		A		
Caustic Potash	HKO	C	C	B	B	A	A	A	A	A			C			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			
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	
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	

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.

Chemical compatibility

C - D

Media	Chemical formula	Metals													Elastomers				Polymers							
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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®
Chloroform (dry)	CHCl3	C	B	C	C	A	A	A	B						D	D	B	A	B	A	C	A	A	B	A	A
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	
Chrome Alum	CrK08S2	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
Chromic Acid>50%	CrH2O4	D	D	D	D	C	B	B	D	C		B	D	C	D	C	C	C	D	D	A	A	A	A	D	A
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
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		
Cresol	C7H8O	A	C	A	C	B	A	B	B	B		B	A	A	D	D	D	A	D	D	B	A		A		
Creosote Oil	-	B	B	B	B	A	A	A	B	A		A	B	A	C	D	A		D	A		A		A		
Cresylic Acid	C7H8O	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	CuN2O6	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	C6H12	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	C6H10O	A	B	B	B	A	A	A	B	B			B	A	D	B	D	A	A	A	C	A		A		
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	A
Dextrin	C18H32O16	B	A	B	B	B		A	B						B	B	B		A			A				
Dichloroethane	C2H4Cl2	B	B		C	A	B	B	B	A		B	D	B	D	D	B	A	B	A	A	A				
Dichloroethyl Ether	C4H8Cl2O	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	D	A	A	A	A	B	A	A	A		
Diethylamine	C4H11N	B	C	C	B	A	A	A	B	A		B	A	A	B	C	D	A	B	A	B	A				
Diethyl Benzene	-					B		B							D	D	A		C			A				
Diethylene Glycol	C4H10O3	B	B	A	A	A	B	A	B	B		A	A	B	A	A	B	A	B	A		A				
Diethyl Sulfate	(C2H5)2SO4	A	B	A	B	B		B	B	A			A		C	C	B		A	A		A				
Dimethyl Formamide	C3H7NO	B	B	B	B	A	A	A	A	A			C	A	B	B	D		C	A	A	A			D	
Dimethyl Phthalate	C10H10O4					A									B	B	D		C	A		A				
Dioxane	C4H8O2	B	A	A	B	B	A	B	A	A			A		D	C	D	A	C	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.

Media	Chemical formula	Metals											Elastomers				Polymers									
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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®
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		D	D	A	A	A	B		A				
Drilling Mud	-	B	B	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				
Ethane	C ₂ H ₆	A	B	B	A	A	A	B	B	A			A	A	A	A	D	A	A	B	A		A			
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	A
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	A
Ethyl Acrylate	C ₅ H ₈ O ₂	B	B	A	B	A	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			
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
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	A	B	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			
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			
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			
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	A
Ferric Hydroxide	FeH ₃ O ₃	C			D	A		A	A	B						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			
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
Ferrous Ammonium Citrate	C ₆ H _{(5+4y)Fe(x)N(y)O₇}	B				B		B												A			A			
Ferrous Chloride	Cl ₂ Fe	D	D	D	D	D	D	D	D	C		A	C	D		A	A	A	A	D	A	C	A			
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			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
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	
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
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
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			
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		
Freon 21, 31	CHCl ₂ F	B	A	B	C	A	A	A	B	A			B	C		D	D	D	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.

Chemical compatibility

F - H

Media	Chemical formula	Metals													Elastomers				Polymers							
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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®	Vespele®
Freon 22	CHClF2	D	A	B	C	A	A	A	B	A		B	B	A		D	D	D	A	A	A	A				
Freon 113, TF	C2Cl3F3	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	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
Fuel Oil	-	B	B	A	B	A	A	A	B	A		A	A	A		A	D	A	A	A	A	A	B			
Fumaric Acid	C4H4O4							A								B	B	A		A			A			
Furfural	C5H4O2	A	A	A	B	A	A	A	A	A		A	B	A		D	C	D	A	B	A	D	A			
Gallic Acid 5%	C7H6O5	B	C	D	D	B	B	B	B	A		B	B	B		B	C	A	B	A	B	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	
Gasoline (leaded)	-	A	A	A	A	A	A	A	B	A		A	A	A		C	D	A	A	A	A	B	A		A	
Gasoline (motor)	-	A	A	A	B	A	A	A	B	A						C	D	A	A	A			A		A	
Gasoline (refined)	C12H13N5O6S2	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	
Gelatine	-	A	C	D	D	A	A	A	B	A		A	B	A		A	A	A	A	B		A	A	A	A	A
Glucose	C6H12O6	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)	C3H8O3	A	B	B	B	B	A	A	A	A		A	A	A		C	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	C2H6O2	B	B	B	B	B	A	A	A	B			A	A	A	B	A	A		C	A	A	A	A	A	A
Graphite	C	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	C7H16	A	A	A	A	A	A	A	A	A		A	A	A		A	D	A	A	A	A	A	A			A
Hexane	C6H14	A	A	A	A	A	A	A	A	A		A	A	A		A	D	A	A	A	A	A	A			
Hexanol, Tertiary		A	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		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
Hydrocyanic Acid	CHN	C	D	D	C	A	B	A	B	A			B	D	B		B	B	A	A	C	D	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
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
Hydrofluoric Acid 75%	HF	D	D	D	D	D	D			C			D	C	D		D	D	B	A	D	D	B	A	A	C
Hydrofluoric Acid 100%	HF	D	D	D	D	D	D			B			D	C	D		D	D	B	A	D	D	A	A	A	C
Hydrofluosilicic Acid	H2SiF6	D	B	D	D	C	B	B	B	C			D	B	C		B	B	A	B	B		B	A		
Hydrogen Gas (cold)	H	A	A	B	A	A	A	A	A	A			A	A	A	A	B	B	A		A	A	B	A		
Hydrogen Gas (hot)	H	C		B		B		A		A						B	B			A			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
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
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
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
Hypo (Sodium Thiosulfate)	Na2S2O3	B	C	D	D	B	A	B	B				B	B		C	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.

Media	Chemical formula	Metals												Elastomers				Polymers											
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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		
illuminating Gas	-	A	A	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				
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				
JP-4 Fuel	-	A	A	A	A	A	A	A	A	A			A	A	A	A	D	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						
JP-6 Fuel	-	A	A	A	A	A	A	A	A	A			A	A	A	A	D	A	A	A	A	A	A						
Kerosene	-	B	A	B	B	A	A	A	A	A			A	A	A	A	D	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	A				
Laquer (and Solvent)	-	A	C	D	C	B	B	A	A	A			B	A	B	D	D	D	A	D	A		A						
Lactic Acid Concentrated (cold)	C3H6O3	C	D	D	D	A	A	A	A	B			A	D	B	B	B	A	A	C	A	B	A	A	A	A			
Lactic Acid Concentrated (hot)	C3H6O3	C	D	D	D	B	B			B			A	D	B	C	C	B	A	C	A	C	A	A	A	A			
Lactic Acid Dilute (cold)	C3H6O3	B	D	D	D	A	A	A	A	A			A	C	B	B	A	A	A	B	A	B	A		A	A			
Lactic Acid Dilute (hot)	C3H6O3	B	D	D	D	A	B			B			A	C	B	C	C	B	A	B	A	C	A		A	A			
Lactose	C12H22O11	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	A						
Lard Oil	-	B	B	C	C	B		A	B	A			C	A		A	B	A		A	A		A						
Lead Acetate	C4H6O4Pb	D	C	C	D	B	B	B	B	B			A	C	B	A	B	D	A	B	A	A	A				A		
Lead Sulfate	O4PbS	D	C	C	D	B	B	B	B	B					B	C	B	B	B	A	A		A						
Lecithin	C46H89NO8P+	B	C	C	C	B		B	B	A			A	A		D	D	B		A			A						
Linoleic Acid	C18H32O2	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)	C3H7NO2	A	A	A	B	B		B	B	A					A	A		A	D	A		A	A		A				
Lubricating Oil Petroleum Base	C6H6	A	A	A	A	A	A	A	A	A			A	A	A	A	D	A	A	A	A	A	A		A				
Ludox	O2Si	C	D	A	B	B	A	A	A	A					C		B	B	B		B		A						
Magnesium Bisulfate	HMgO4S+	D	B	B	B	A	A	A	B						A	A	B	B	B	B	A		A						
Magnesium Bisulfade	-	C	D		D	B		B	B							B	B	B		A			A						
Magnesium Carbonate	CMgO3	A	B	B	B	A	A	A	A	B			A	B	B	B	B	B		A	A	A	A						
Magnesium Chloride	Cl2Mg	D	C	C	D	C	D	C	B	A			A	B	D	A	A	A	A	A	B	A	A		A	A			
Magnesium Hydroxide	H2MgO2	D	B	B	B	A	A	A	B	A			A	B	B	A	A	A	A	A	A	A	A						
Magnesium Hydroxide (hot)	H2MgO2	D	C	B	B	A	A	A	A	B					B	B		A		A			A						
Magnesium Nitrate	MgN2O6	B	C	B	B	A		A	B	A			A	C	B	B	A	B		A	A	A	A						
Magnesium Sulfate	MgO4S	B	B	B	B	A	A	A	B	B			A	C	A	A	A	A	A	A	A	A	A						
Maleic Acid	C4H4O4	B	B	C	C	B	B	A	B	B			A	B	A	B	D	A	A	A	A	A	A	A	A	A	A		
Maleic Anhydride	C4H2O3	B	B		B	B	A	B	B	A					A	D	D	B		D		A	A						
Malic Acid	C4H6O5	B	B	D	D	B	A	B	B	B			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	MnO4S	B	D	B	D	A	B	A	A	A			A	A	B	B	B	B	A	B	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.

Chemical compatibility

M - N

Media	Chemical formula	Metals													Elastomers				Polymers							
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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®	Vespele®
Mayonnaise	-	D	D	D	A	B	A	B	A						A		A		A		A	A				
Meat Juices	-	B	D		A		A								B				A		A	A	A			A
Melamine Resins	C3H6N6		D	D	C	C	C		A			D	C		B	A	A	C	A			A				
Methanol	CH4O	A	A	A	A	A	A	A	A		B	A	A		B	D	B	A	A	A	A	A		A		
Mercuric Chloride	Cl2Hg	D	D	D	D	D	C	D	B		A	D	D		A	A	A	C	B	A	A	A	A	A	A	
Mercuric Cyanide	C2HgN2	D	D	D	D	B	C	A	D	A		A	D	C		A	B	A		A	B	A	B			
Mercurous Nitrate	HgNO3	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	
Methane	CH4	A	A	A	A	A	A	A	A			A	A	A		A	D	A	B	A	A	A	A			
Methyl Acetate	C3H6O2	A	A	B	B	A	A	A	A			B	A		D	B	D	A	B	A	C	A				
Methyl Acetone	C4H8O	A	A	A	A	A	A	A	A			A	A		D	A	D	B	D		D	A				
Methyl Amine	CH5N	B	C	B	B	A	A	A	C	B			D	A		D	B	D		A	A		A			
Methyl Bromide 100%	CH3Br	C	C	C	D	B	B	B	B	B			D	B		B	D	A	A	D	B	A				
Methyl Cellosolve	C3H8O2	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	CH3Cl	D	C	A	B	A	A	A	A	A		A	B	A		D	D	B	A	C		A	A		A	
Methyl Ethyl Ketone	C4H8O	B	A	A	A	A	A	A	A	A		A	A	A		D	B	D	A	B	B		A		A	
Methylene Chloride	CH2Cl2	C	B	B	B	A	A	A	A	A		B	B	B		D	D	C	A	B	A	C	A		B	
Methyl Formate	C2H4O2	B		C	B	A	A	A	A	A			A	A		D	B	D		A			A			
Methyl Isobutyle Ketone	C6H12O	B			B	B	A	A	A	A		A	A	A		D	C	D	A	C	B	D	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	
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			
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	
Molasses, Edible	-	A	B	A	C	A	A	A	A	A			A	A		A	B	A	A	A	A	B	A	A	A	
Molybdic Acid	H2MoO4					A		A												A			A			
Monochloro Benzene (dry)	C6H5Cl	B		B	A	A	A	A	A	A			B	B		D	D	B	A	C	B		A			
Morphine	C17H19NO3	B	B	B	B	A		A	B							D	B	D		A			A		A	
Mustard	C4H8Cl2S	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	
Napthalene	C10H8	A	B	A	B	A	A	A	A	A		A	A	A		D	D	A	A	B	A	A	A		A	
Natural Gas, Sour	-	B	A	A	B	A	A	A	B	A			A	A		A	D	A		B	A		A			
Nickel Ammonium Sulfate	H8N2NiO8S2	D	D	D	D	A		A	C				D			A	B	B		C	A		A	A		
Nickel Chloride	Cl2Ni	D	D	D	D	B	B	A	C	A		A	D	D		A	B	A	A	A	A	A	A	A		
Nickel Nitrate	N2NiO6	D	D	D	D	B	A	A	C	B		B	C	B		A	A	A	A	C	A	A	A	A		
Nickel Sulfate	NiO4S	D	D	D	D	B	B	A	B	C		B	C	B		A	B	A	A	B	A	A	A	A		
Nicotinic Acid	C6H5NO2	A	A	C	C	A		A	B				B			D	D	B		C			A		B	
Nitric Acid 10%	HNO3	C	D	D	D	B	A	A	D	B		A	D	A		C	B	A	A	D	A	A	A	A	D	
Nitric Acid 30%	HNO3	D	D	D	D	B	B	A	D	A		A	D	A		C	C	A	C	D	B	B	A	A	A	
Nitric Acid 80%	HNO3	D	D	D	D	B	C	A	D	B		B	D	A		D	D	B	D	D	D	B	A	A	B	
Nitric Acid 100%	HNO3	B	D	D	D	B	C	A	D	B		B	D	A		D	D	B	D	D	D	B	A	A	A	
Nitric Acid Anhydrous	-	B	D	D	C	B	D	A	D				D	B		D	D	A	C	D			A			
Nitrobenzene	C6H5NO2	B	D	A	B	A	B	A	B	B		A	B	B		D	C	C	B	B	D	B	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.

Media	Chemical formula	Metals											Elastomers					Polymers								
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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®
Nitrogen	N2	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Nitrous Acid 10%	HNO2	D	D	D	D	B	B	B	D	C									B	B	B	A				
Nitrous Gases	-	B	D	B	C	A		A	D										B			A		A		
Nitrous Oxide	N2O	B	B	B	C	B	B	B	D	B									B	A	A	D	A			
Oils&Fats	-	B				A		A											B	D		A	A	A		A
Oils&Animal	-	A	A	A	A	A		A	B	A									A	B	B	A	A	A		A
Oils, Petroleum (refined)	C6H6	A	B	A	B	A	A	A	A	A									C	A	A	A	A	D	B	A
Oils, Petroleum (sour)	C6H6	A	C	B	C	A	A	A	A	A									C	A	A	A	A	D	B	
Oils, Water Mixture	-	A	A	B	B	A	A	A		A									A	A		A	A	A	A	
Olaic Acid	-	B				B		B	A	A									C			D		A		
Oleic Acid	C18H34O2	B	D	C	C	B	A	A	B	B									B	C	A	B	D	C	A	C
Oleum	H2O4S	C	C	B	D	B	B	B	C	B									D	D	B	D	D	C	A	C
Oleum Spirits	-	D	D		D	B		B	D													C	D	A	D	C
Olive Oil	-	A	B	B	A	A	A	A	A	A									A	A	A	A	A	A	A	A
Oxalic Acid	C2H2O4	C	C	C	D	B	B	B	B	B									A	C	B	C	B	A	A	C
Oxygen	O2	A	A	A	A	A	A	A	A	A									A	A	A	A	D	A	A	A
Ozone (dry)	O3	A	A	A	A	A	A	A	A	A									A	B		D	A	B	C	C
Ozone (wet)	O3	B	B	B	C	A		A	A	A									B			D	B	B	C	A
Paints & Solvents	-	A	A	A	A	A		A	A										A	D	D	B		A		A
Palmitic Acid	C16H32O2	B	C	C	C	B	A	A	A	A									B	B		B	B	A	A	A
Palm Oil	-	A	B	C	C	B	A	A	A	A									A	C	A	B	D	A	D	A
Paper Pulp	-	C	B		B	A		A	B													B	B	B	A	
Paraffin	CnH2n+2	A	A	B	B	A	A	A	A	A									A	A	A	A	D	A	A	A
Paraformaldehyde	CH2O	B	B	B	B	B		B	B	A												B	C		A	
Paraldehyde	C6H12O3					B		B	A													B	D		A	A
Pentane	C5H12	A	A	B	B	B	A	A	A	B												B	B	A	D	A
Perchlorethylene (dry)	C2Cl4	B	C	B	B	A	A	A	B	A									A	B	B	D	D	A	A	B
Petrolatum (Vaseline Petr. Jelly)	-	B	B	C	C	B	A	A	A	A									A	A		A	A	A	A	B
Phenol	C6H6O	A	D	C	D	A	A	A	A	A									A	B	A	B	D	B	B	A
Phosphate Ester 10%	-	C	D	A	C	A		A	A	A									C			D	A		A	
Phosphate Acid 10%	-	C	D	D	D	C	B	B	D													B	B	A	A	D
Phosphoric Acid 50% (cold)	H3O4P	D	D	D	D	C	B	B	D	B									B	D	D	B	B	A	A	D
Phosphoric Acid 50% (hot)	H3O4P	D	D	D	D	C	C	B	D	B									C	D	D	C	D	D	B	B
Phosphoric Acid 85% (cold)	H3O4P	D	D	D	D	C	C	B	D	B									B	D	D	C	B	B	A	D
Phosphoric Acid 85% (hot)	H3O4P	D	D	D	D	C	D	B	D	B									C	D	D	C	B		A	D
Phosphoric Anhydride	P2O5	C		D		A	B	A											D	C	B	D	D	A	D	A
Phosphorus Trichloride	PCl3	C		B	C	A	A	A	A	B									A	A		D	B	B	A	D
Phthalic Acid	C8H6O4	C	B	D	C	B	A	A	B	A									A	B	B	C	C	A	B	C
Phthalic Anhydride	C8H4O3	B	B	D	C	B	A	B	A	A									B	A		C	B	A	A	C
Picric Acid	C6H3N3O7	C	D	D	D	B	B	B	D	B									A	C	B	C	B	A	A	B
Pineapple Juice	-	A	C	C	C	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
Pitch (Bitumen)	C6H6					A		A														C	D		A	
Polysulfide	-	C	D		B	B		A	B													B	B	B	C	

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.

Chemical compatibility

P - R

Media	Chemical formula	Metals												Elastomers			Polymers									
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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®	Vespele®
Polyvinyl Acetate	C6H12O2	B	B	C	B	B	B	B	A						B	A	A	A	A	A	A	A				
Polyvinyl Chloride	C2H3Cl	B	D		B	B	B	B							B				A			A				
Potassium Bicarbonate	CHKO3	C		A	D	A	B	A	B	B	A	C	B		B	A	A	A	B	A	B	A			D	
Potassium Bichromate	Cr2K2O7	B	B	B		A	A	A							B		B		B	C		A		A		
Potassium Bisulfate	HKO4S	B		C	C	A		A	C						B	B	A		A			A				
Potassium Bisulfite	HKO4S	C	C	D	D	B		B	D						A	B	A		A			A				
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	CK2O3	C	B	B	B	A	A	A	A	A		A	C	B		A	B	A	A	B	A		A		D	
Potassium Chlorate	ClKO3	B	B	B	B	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		
Potassium Chromate	CrK2O4	B	B	B	B	B	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	
Potassium Dichromate	Cr2K2O7	B	D	C	C	B	A	A	A	B		A	C	B		A	B	A	B	B	A	A	A		D	
Potassium Ferricyanide	C6FeK3N6	C	D	C	C	A	B	A	A	B		A	D	B		A	B	A	A	C	A	B	A			
Potassium Ferrocyanide	C6FeK4N6+4	C	C	C	C	B	A	A	A	B		A	C	B		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	
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	KNO3	B	B	B	B	B	A	A	A	A		A	B	B		A	B	A	B	B	A	A	A		A	
Potassium Oxalate	C2K2O4	B			A	B	B	A		A		A	A	B					B	A			A			
Potassium Permanganate	KMnO4	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)	KH2PO4	D	C		C	B	A	B	B	B				A		A	A	A		A			A			
Potassium Phosphate Di-basic	K2HPO4	B	B	A	A	A		A	B	B						A	B	A		A			A			
Potassium Phosphate Tri-basic	K3PO4	D		A	A	B		B	B							B	B						A			
Potassium Sulfate	K2O4S	B	C	B	B	A	A	A	A	A		A	B	B		A	A	A	A	B	A	A	A			
Potassium Sulfide	HK2S+	C	D	D	C	A	B	B	D	B		A	D	B		A	B	A	A	A	A	A	A			
Potassium Sulfite	K2O3S	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	C3H8	A	A	A	A	A	A	A	B	A		A	B	A	A	A	D	A	A	B	A	A	A			
Propyl Bromide	C3H7Br	B	B	B	B	A		A	B				B			B	B	B		A			A			
Propylene Glycol	C3H8O2	C	B	B	B	B	A	A	A	A		A	A	B		A	B	A	A	B	A		A		A	
Pyridine	C5H5N	B	B	B	B	B	A	A	C	B		B	B	B		D	B	D	A	B	B	D	A	A	A	A
Pyrolgalic Acid	-	B	B	B	B	B	A	A	A	A		A	A	B		A	B	A	A	D	A	A	A			
Quench Oil	-	A	B	B	B	A		A		A						A		A		A			A			
Quinine Sulfate (dry)	C40H50N4O8S				A	A	B	A	B	A				B					A			A				
Resins & Rosins	-	A	A	A	A	A		A	A						B		A		A			A				
Resorcinal	C6H6O2	A	B	C	C	A	A	A	A		A	B	A		D		B		B			A				
Road Tar	C2H4O3	A	A	A	A	A		A	A						B		A		A			A				
Roof Pitch	-	A	A	B	B	A		A									A		A			A				
Rosin Emulsion	C15H20O6	A	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			

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.

Media	Chemical formula	Metals											Elastomers				Polymers									
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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®
Rubber solvents	-	B	B	C	C	B	A	A							A	A	A		A		A	A				
Salad Oil	-	B	B		D	B	B	B	B		A	B	B		A	A	B	A	A		A	A				
Salicylic Acid	C7H6O3					B		B											C			A				
Salt (NaCl)	NaCl+H2O	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		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	A	A
Sewage	-	D				C	C	A	B	A			D	D					D			A				
Shellac	-	D	D	D	D	B		B	B	A			D		B		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	A
Silver Bromide	AgBr	B				A		A		A		A			A	A	A					A				
Silver Cyanide	C _{Ag} N	C	B	B	B	A	A	A	B	A		A	B	A	A	A	A	A	A	A	B	A				
Silver Nitrate	AgNO3	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		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 ₃ NaO ₂	C	B	C	C	B	A	A	A	A		A	B	A	A	A	A	A	A	A	A	A			D	
Sodium Aluminate	AlNaO ₂	B				A	A	A	A	B		C			D			C	A	A		A				
Sodium Benzoate	NaC ₇ H ₅ O ₂	D	D	D	D	A	A	A	B	B		B	C	A	A	B	A	A	B		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				
Sodium Bisulfite 10%	HNaO ₃ S	D	B	D	D	A		B	B	B					A	B	A		D			A				
Sodium Borate	Na ₂ B ₄ O ₇ .10(H ₂ O)	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				
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
Sodium Chlorate	CINaO ₃	C	B	B	C	B	A	B	C	B		A	B	A	A	B	A	C	A	A	A	A				
Sodium Chloride	CINa	B	C	B	C	B	B	B	B	A		A	B	B	A	A	A	A	B	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				
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	
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	D	
Sodium Hydroxide 20% (hot)	NaOH	D	C	B	B	A	B	B	B	A		A		B		B	B	C	A	C		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	
Sodium Hydroxide 50% (hot)	NaOH	D	D	B	B	A	B	B	B	B			D		B	C	C	A	C		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	
Sodium Hydroxide 70% (hot)	NaOH	D	D	C	B	A	B	B	B	B			D		D	C	D	A	D		A		A		D	
Sodium Hypochlorite (Bleach)	CINaO	D	D	D	D	D	D	D	A			C	D	D	B	C	B	B	D	B	A	A		A	D	
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				

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.

Chemical compatibility

S - T

Media	Chemical formula	Metals													Elastomers				Polymers							
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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®
Sodium Nitrate	NNaO3	B	B	B	B	A	B	A	B	B					C	A	A	C	A	A	A	A				
Sodium Nitrite	NNaO2	A		B	B	B	A	A	B	B			B	A	C	A	B		B	A	A	A				
Sodium Perborate	BNaO3	C	D	B	C	C	A	A	A	A		B	B	C	A	A	C	B	A		A					
Sodium Peroxide	Na2O2	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)	NaH2PO4	D	C	B	D	B	A	A	B	A		A	C	B	B	A	A	B	A		A					
Sodium Phosphate Di-basic	Na2HPO4	D	C	C	C	B	A	B	B	A		A	C	A	A	A	A	A	A		A					
Sodium Phosphate Tri-basic	Na3PO4	D	C	C	C	B	A	B	B	A		A	C	A	B	A	A	A			A					
Sodium Polyphosphate	Na6O18P6	D	D		D	B	B	B	B	A		A	C	B	B	A	A	A	B		A	A				
Sodium Salicylate	C7H5NaO3				A	A		A							A			C			A					
Sodium Silicate	Na2O3Si	B	C	B	B	B	A	A	A	A		A	D	A	A	A	A	C	A	A	A	A	A	A	A	
Sodium Silicate (hot)	Na2O3Si	C	D	C	C	B	B	B	B	B		D			B		A	C			A		A	A	A	
Sodium Sulfate	Na2O4S	A	B	B	B	A	A	A	A	A		A	B	B	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	B	A	A	A	A	A	A	A	
Sodium Sulfite	NaO3S-	C	C	B	A	A	A	A	C	A		A	B	B	A	A	B	A	A		A	A				
Sodium Tetraborate	C15H22O2	C	D		A	A	A	A		B		B	A		A	A	A	A	B			A				
Sodium Thiosulfate	Na2S2O3	A	D	C	C	B	A	B	B	B		A	B	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	C27H48O20	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	C18H36O2	B	C	C	C	B	A	A	A	A		A	B	B	A	B	A	A	A	A	A	A		A		
Styrene	C8H8	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	A		
Sugar, Syrups & Jam	-	B	B	B	C		A	A	A	A		A	C	A		A		A	A	A	A	A	A	A	A	
Sulfate Black Liquor	H2O4S	D	C	C	C	B	A	B	B	B			D	B	C	A	B	A	D	A	A	A	A			
Sulfate Green Liquor	H2O4S	D	C	C	C	B	A	B	B	B			D	B	C	A	B	A	D	A	A	A	A			
Sulfate White Liquor	H2O4S	D	C	C	C	B	B	B	C	B			D	B	C	A	B	A	D	A	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	A	
Sulfur Chloride	SCl	D	D	D	D	D	C	D	B			D	C	D	D	C	A	C	D	A	B	A				
Sulfur Dioxide (dry)	SO2	B	B	B	B	A	A	B	B	A		A	B	C	D	B	A	A	B	A	A	A	A	A	A	
Sulfur Dioxide (wet)	SO2	B	D			B	C	B	A	A		A	D	D	D	B		A	B	A	B	A	A	A	A	
Sulfur Hexafluoride	SF6	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	SO3	A	D	B	B	B	B	A	A	A		C	C	A	D	B	B	C	D	A	D	A		D	A	
Sulfur Trioxide (dry)	SO3	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%	H2SO4	D	D	D	D	C	C	B	C	A		C	D	D	B	C	A	B	D	D	A	A	A	B	A	
Sulfuric Acid 100%	H2SO4	D	D	C	C	C	C	B	C	B			D	D	C	D	C	B	D	D	D	A	A	A	D	A
Sulfurous Acid	H2O3S	C	D	D	D	B	B	B	B	B		A	D	B	C	C	A	A	C	B	B	A		A		
Tall Oil	-	C	B	B	B	A	A	A	A	A			B	A	B	D	A		A			A	A			
Tannic Acid (Tannin)	C27H24O18	C	B	C	C	B	B	B	B	B		A	B	B	B	A	A	A	B	A	B	A	A	A	A	
Tanning Liquors	C27H24O18	A	A			A	A	A	A	A		A	A	A	B	B	A	A	B			A				
Tar & Tar Oils	C2H4O3	B	A	A	A	A	A	A	A	A			A	A	C	D	A		A	A		A	A			
Tartaric Acid	C4H6O6	B	D	D	D	A	A	A	A	B			A	B	C	C	B	A	A	B	A	B	A	A	A	
Tetraethyl Lead	C8H20Pb	B	B	B	C	B	A	A	A				A	A	B	D	A		A	A		A				
Toluol (Toluene)	C7H8	A	A	A	A	A	A	A	A	A			A	A	A	A	A	D	D	B	A	C	A	B	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.

Media	Chemical formula	Metals													Elastomers				Polymers								
		Aluminum	Brass	Carbon steel	Ductile iron / Cast iron	316/316Ti/321 S.St	17-4PH	Alloy20	Monel	Alloy 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
Tomato Juice	-	A	C	B	C	A	A	A	A	A			B	A	A	D	B	D	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	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					
Trisodium Phosphate	Na ₃ O ₄ P	D		A	B	A	A	A	A	A			C	B		A	A	B	A	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	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	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				
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	
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
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	A	B	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			
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	A		B		
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		
Zinc	Zn	C				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.



www.habonim.com

Habonim ISRAEL

Tel: +972-4-6914911

Fax: +972-4-6914935

sales_international@habonim.com

Habonim EUROPE

Tel: +34 640 384 759

sales_eu@habonim.com

Habonim UK

Tel: +44-1633-484554

Fax: +44-1633-482252

sales_uk@habonim.com

Habonim USA

Toll Free Phone: 1-866-261-8400

Toll Free Fax: 1-866-243-9959

sales_usa@habonim.com

Habonim CHINA

Tel: + 86 21 64453190 *146

sales_china@habonim.com

Habonim AUSTRALIA

Tel: +61 3 9556 5428

sales_au@habonimau.com



www.habonim.com

MAXMARK Technical Information-Chemical compatibility 02/17 REV2.03

MAXMARK

