PureFlex® PTFE Hoses
Chemical Resistance Data Chart

This chart is designed to serve as a guideline for evaluating the compatibility of various chemicals with PureFlex® PTFE hoses and other materials. Our goal is to assist engineers, material scientists, and industry professionals in making informed decisions for safe and effective material selection for demanding applications.

Chemical Resistance Data

Service	Polypro	PVDF	PTFE/ PFA	EPDM	CSM (Hypalon)	Silicone	PVC	Derakane 470 glass	Derakane 470 graphite	Z-Core glass	Z-Core graphite	316 s.s.	Monel 400	Hast. C276	Titanium
Acetaldehyde	75	C	450	A		A	C	C	C	100	100	A	A	A	A
Acetamide	150	75	450	A		B	C			100	100	A	A	A	
Acetic acid (5%)	200	225	450	A	B	B	120	210	210	210	210	A	A	A	A
Acetic acid (10%)	200	225	450	A	B	B	120	210	210	210	210	A	A	A	A
Acetic acid (50%)	200	200	450	A	C	B	70	180	180	120	120	B	A	A	A
Acetic acid (80%)	125	175	450	B	C	B	70	C	C	75	75	B		A	A
Acetic acid, glacial	125	125	450	B	C	B	C	C	100	C	C	B		A	A
Acetic anhydride	75	C	450	B	A	C	C	75	110	100	100	B	B	A	
Acetone (10%)	125	125	450	A	B	C	C	180	200	200	200	A	A	A	A
Acetone (100%)	125	C	450	A	B	C	C	C	C	125	125	A	A	A	A
Acetonitrile	75	125	450	B		C	C			100	100	A		B	
Acetophenone	75	C	450	A		C						B			
Acetyl Chloride	C	125	450	C		B	C					B	A	A	
Acetylene	C	250	450	A	B	B	C					A	A	A	A
Acetylene Tetrabromide	C	250	450	A											
Acetylene Tetrachloride	C	250	450	C		C									
Acrylic acid		150	450				C	100	100	100	120				
Acrylonitrile	125	75	450	C		C	C	C	C	100	100	A	A	B	
Adipic acid	150	150	450				150	180	180	250	250	B to 200	B	A	
Allyl Alcohol	150	125	450	A			C	C	C	120	120	A	A	A	
Allyl Chloride	75	175	450	C			C	80	80	150	180			A	A
Alum	200	275	450	A		A	150	225	250	275	275	A		A	A
Aluminum Acetate		275	450				B	200	210			B	B		
Aluminum Chloride, aq.	200	275	450	A	A	B	100	210	250	275	275	C	A	A	C
Aluminum Flouride	200	275	450	A	A	B	150	80	100	100	100	C	A	B	C
Aluminum Hydroxide	200	275	450	A			150	175	175	200	240	A	B		A
Aluminum Nitrate	200	275	450	A		B	150	180	180	250	250	A	C		
Aluminum Oxychloride	125	275	450												
Alum. Pot. Sulfate	150	280	450	A	A	A		225	250	275	275	A	A		
Ammonia, anhydrous (liquid)	200	C	450	A		C	C					A	A	A	B
Ammonia, anhydrous (dry gas)	150	C	450	A	A	C	120	100	100	275	275	A	A	A	A
Ammonia liquid	73	C	450	A		C	C	C	C	C	C	A	A	B	

Chemical Resistance Data

Service	Polypro	PVDF	PTFE/ PFA	EPDM	CSM (Hypalon)	Silicone	PVC	Derakane 470 glass	Derakane 470 graphite	Z-Core glass	Z-Core graphite	316 s.s.	Monel 400	Hast. C276	Titanium
Acetaldehyde	75	C	450	A		A	C	C	C	100	100	A	A	A	A
Acetamide	150	75	450	A		B	C			100	100	A	A	A	
Acetic acid (5%)	200	225	450	A	B	B	120	210	210	210	210	A	A	A	A
Acetic acid (10%)	200	225	450	A	B	B	120	210	210	210	210	A	A	A	A
Acetic acid (50%)	200	200	450	A	C	B	70	180	180	120	120	B	A	A	A
Acetic acid (80%)	125	175	450	B	C	B	70	C	C	75	75	B		A	A
Acetic acid, glacial	125	125	450	B	C	B	C	C	100	C	C	B		A	A
Acetic anhydride	75	C	450	B	A	C	C	75	110	100	100	B	B	A	
Acetone (10%)	125	125	450	A	B	C	C	180	200	200	200	A	A	A	A
Acetone (100%)	125	C	450	A	B	C	C	C	C	125	125	A	A	A	A
Acetonitrile	75	125	450	B		C	C			100	100	A		B	
Acetophenone	75	C	450	A		C						B			
Acetyl Chloride	C	125	450	C		B	C					B	A	A	
Acetylene	C	250	450	A	B	B	C					A	A	A	A
Acetylene Tetrabromide	C	250	450	A											
Acetylene Tetrachloride	C	250	450	C		C									
Acrylic acid		150	450				C	100	100	100	120				
Acrylonitrile	125	75	450	C		C	C	C	C	100	100	A	A	B	
Adipic acid	150	150	450				150	180	180	250	250	B to 200	B	A	
Allyl Alcohol	150	125	450	A			C	C	C	120	120	A	A	A	
Allyl Chloride	75	175	450	C			C	80	80	150	180			A	A
Alum	200	275	450	A		A	150	225	250	275	275	A		A	A
Aluminum Acetate		275	450				B	200	210			B	B		
Aluminum Chloride, aq.	200	275	450	A	A	B	100	210	250	275	275	C	A	A	C
Aluminum Flouride	200	275	450	A	A	B	150	80	100	100	100	C	A	B	C
Aluminum Hydroxide	200	275	450	A			150	175	175	200	240	A	B		A
Aluminum Nitrate	200	275	450	A		B	150	180	180	250	250	A	C		
Aluminum Oxychloride	125	275	450												
Alum. Pot. Sulfate	150	280	450	A	A	A		225	250	275	275	A	A		
Ammonia, anhydrous (liquid)	200	C	450	A		C	C					A	A	A	B
Ammonia, anhydrous (dry gas)	150	C	450	A	A	C	120	100	100	275	275	A	A	A	A
Ammonia liquid	73	C	450	A		C	C	C	C	C	C	A	A	B	

Isopropyl Alcohol	200	150	450	A		A	140	120	120	150	150	A	A		
Isopropyl Chloride		100	450	C		C									
Isopropyl Ether	C	125	450	C		C	B			150	150	A	A	A	
JP-3 Fuel			450	C		C	B	180	180	275	275	A	A	A	
JP-4 Fuel	75	200	450	C		C	B	180	180	275	275	A	A	A	
JP-5 Fuel	75	200	450	C		C	B	180	180	275	275	A	A	A	
JP-6 Fuel			450	C		C	B	180	180	275	275	A	A	A	
Kerosene	75	275	450	C	B	C	150	180	180	275	275	A	A	A	
Ketchup			250									A	A		
Ketones			200	A			C					A	A		
Kraft Liquors			250									A			
Lactic Acid (80%)	150	125	450	B	A	A	75	210	210	275	275	A	A	B	A
Lard Oil	125	275	450	C		B	A					A	B		
Lauric Acid	200	225	450					175	175	275	275				
Lauryl Chloride	200	250	450					120	120	75	75	B		A	A
Lead Acetate	200	275	450	A		C	140	225	230	225	230	A	A		
Lead Nitrate	180	250	300	A		B	140			225	225	A			
Lead Sulfate	150	250	300	A			140					B	B		
Lemon Oil	75	250	450												
Lime Sulphur solution	150	200	450			A									
Linoleic Acid	125	250	450	C		B	B	200	200			B	A	A	
Linseed Oil	150	275	450	B	A	B	140	225	225	275	275	A	A	A	
Lithium Bromide (sat.)		225	450				140	225	250	275	275				
Lubricating Oil	125	275	450	C	B	C	150	210	210						
ASTM #1 Oil		280	350	C								A	A	A	
ASTM #2 Oil		280	350	C								A	A	A	
ASTM #3 Oil	75	280	350	C								A	A	A	A
Magnesium Carbonate	200	275	450	B			140	180	180	225	225	A		B	
Magnesium Chloride	200	275	450	A	A	A	100	225	250	275	275	B		A	A
Magnesium Hydroxide	200	275	450	A	A	B	140	210	210	225	225	A	A	A	A
Magnesium Nitrate	200	275	450	B			150	210	210	275	275	A	B	A	A
Magnesium Sulfate (10% sat.)	200	275	450	A	A	A	140	210	250	275	275	A	A	C	B
Maleic Acid (10%)	150	250	450	C		A	100	250	250	175	175	A	B	A	A
Maleic Anhydride	75	75	450	C						175	175			A	
Malic Acid	125	250	450	C		B	A					A	A	A	A
Manganese Sulfate	75		450			A	C	210	210			A		B	A

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Mercuric Chloride	175	250	450	B	A	A	150	210	210	275	275	C	C	B	A
Mercuric Cyanide	150	250	450	B		A	140					A	C		
Mercuric Nitrate	175	275	450												
Mercuric Sulfate		230	300				140								
Mercurous Nitrate		230	300	B			A					A	C		
Mercury	150	275	450	A	A	A	140	225	250			A	B	A	A
Methacrylic Acid		125	450	B		C									
Methane	75	275	450	C		C	100			150	150	A	A	A	
Methane Sulfonic Acid	125	200	450												
Methyl Acetate		100	300	B		C	C	C	C	150	150	A	A	A	
Methyl Acetone		C	450									A	A		
Methyl Alcohol (Methanol)	200	275	450	A	A	A	70	80	100	150	150				
Methyl Amine	C	C	300	A			C					A	C		
Methyl Bromide	C	275	450	B			C	C	C			B	B		
Methyl Cellosolve ethers	75	200	450	B		C	C	C	C			A	A		
Methyl Chloride	C	275	450	B	C	C	C			75	75	A	A	A	A
Methyl Chloroform	C	125	450												
Methyl Ethyl Ketone	125	C	450	A	B	C	C	70	70	175	175	A		A	A
Methyl Isobutyl Ketone	75	C	450	B		C	C	100	100	175	175	A	A	A	A
Methyl Methacrylate	200	125	450	C		B	A								
Methyl Salicylate	125	150	450	C											
Methylene Bromide		175	450												
Methylene Chloride	C	125	450	C		C	C	C	C	100	100	A	A	A	A
Methylene Iodide		200	450												
Milk	200	250	450	A	A	A	120	225	225			A	A		
Mineral Oil	125	275	450	C	B	B	B	225	250	275	275	A	A	A	
Molasses	200	150	450	A		A	A					A	A	A	
Monochloroacetic Acid	75	150	200				70	C	C	75	75	C	B		
Monochlorobenzene	75	180	200	C		C		100	100	200	200	A	A		
Monoethanolamine	175	C	450	B		B	C			100	100	A	B		
Morpholine	150	75	450					80	80			A			
Motor Oil	75		450				B	225	250	275	275	A	A	A	
Naptha	125	275	450	C		C	A	210	210	275	275	A	A	B	A

Napthalene	200	200	450	C		C	C	210	210	225	225	B	A	A	A
Nickel Chloride	200	275	450	A	A	A	140	210	210	275	275	C	C	A	A
Nickel Nitrate	200	275	450	B			A	210	210	275	275	A	A		
Nickel Sulfate	200	275	450	A	A	A	140	210	210	275	275	B		A	B
Nicotinic Acid	125	250	450												
Nitric Acid (5-10%)	175	175	450	B	A	B	100	150	180	150	150	A	C	A	A
Nitric Acid (30%)	150	125	450	B	A	C	100	C	C	75	75	A			
Nitric Acid (50%)	75	125	450	C	A	C	B	C	C	C	C	A			
Nitric Acid (70% fuming)	C	C	450	C	B	C	C	C	C	C	C	A	C		
Nitrobenzene	125	75	450	C	C	C	C	80	80	200	200	A	A	A	A
Nitrogen Gas	200	275	450			A						A	A		
Nitrogen Dioxide		175	450												
Nitroglycerin		125	450									A	B		
Nitromethane	125	125	450	B		C	B								
Nitrous Acid (10%)	C	200	450									C	C		
Nitrous Oxide	75	C	450				140					C	C	C	
n-Octane	75	275	450	C		C		200	200			A	A	A	
Oleic Acid	150	250	450	C	C	C	100	200	200	275	275	A	A	A	C
Oleum	C	C	450	C		C	C	C	C	100	100	A	C	A	A
Olive Oil		250	350	B		C	150	225	250	275	275	A	A		
Oxalic Acid	125	125	450	A	A	B	140	210	210	225	225	A	A	A	C
Oxygen Gas	125	275	450				70					A	A	A	
Ozone	C	225	450	A		A	B	200	220			A	A	A	
Palmitic Acid	175	250	450	B	B	C	B	225	250			A	A		
Paraffin		250	250	C		C	70					A	A	A	
n-Pentane			100	C		C	A					A	A	A	
Perchloric Acid (10%)	150	200	450	B		C	100	150	150			A	A		
Perchloric Acid (70%)	75	125	450	B		C	B					B	A		
Perchloroethylene	C	275	450	C	C	C	C	100	120	150	150	A			
Petroleum Oils	125	250	450	C	B	C	A					A			
Phenol (5%)	200	175	450	C		C	B	120	120	175	175	A	A	A	B
Phenol (90%-100%)	150	125	450	C		C	B	C	C	100	100	A	A		
Phenolsulfonic Acid		125	450					C	C						
o-Phenylphenol		175	450												
Phosphoric Acid (10%-50%)	200	275	450	A	A	C	150	225	225	150	150	A	C	A	B
Phosphoric Acid (50%-85%)	200	225	450	B	A	C	100	210	210	120	120	B	C	A	C

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Phosphorous Oxychloride	C	C	450												
Phosphorous - red	75	75	450												
Phosphorous Trichloride	C	200	450	A			C	C	C			A			
Phosphorous - yellow	75		450				70								
Photographic solutions	150	275	450				150					A	A		
Phthalic Acid	75	200	450				C	210	210			A	B	A	A
Picric Acid	75	75	450	B		C	C	100	100	100	100	A	C	A	
Plating Sol. - Brass	150	200	450				140					A		A	A
Plating sol. - Cadmium	150	200	450				150					A		A	A
Plating sol. - Chrome	125	200	450	B		C	100					B		A	A
Plating Sol. - Copper	150	200	450				150					C		A	A
Plating sol. - Gold	150	200	450				150					B		A	A
Plating Sol. - Iron	150	200	450				C					B		C	A
Plating Sol. - Lead	150	200	450				140					B		A	C
Plating Sol. - Nickel	150	200	450				C					B		A	A
Plating Sol. - Rhodium	150	200	450				150					C		C	C
Plating Sol. - Silver	150	200	450				A					A		A	A
Plating Sol. - Speculum	150	200	450												
Plating Sol. - Tin	150	200	450				100					B	A	A	C
Plating Sol. - Zinc	150	200	450									C		C	A
Polyglycol	175	200	450				140								
Polyvinyl Acetate	125	275	450	A		C		120	120	250	250	B	B		
Polyvinyl Alcohol	125	275	450				140			175	175				
Potash (Potassium Carbonate)		275	400	A			140	180	180	225	225	A		A	
Potassium Acetate	125	275		A		C	70	200	210			B			
Potassium Aluminum Chloride	200	275	450												
Potassium Aluminum Sulfate (50%)	200	275	450	A			140	225	225	275	275				
Potassium Bicarbonate	200	200	450			A	180	150	180	225	225	B		B	B
Potassium Bichromate		230	450	A		A	150					A			
Potassium Bisulfate		275	400				140					A	C		

Potassium Borate	200	275	450	A			140								
Potassium Bromate	200	275	450				140								
Potassium Bromide	200	275	450	A		A	150	120	120	275	275	B	A	B	A
Potassium Carbonate	200	275	450	A			140	150	180	275	275	A	A	B	A
Potassium Chlorate (aq.)	200	200	450	A		B	100					A		B	A
Potassium Chloride	200	275	450	A	A	A	150	200	210	275	275	A	A	B	A
Potassium Chromate	200	275	450				100					A	A	B	
Potassium Cyanide	200	275	450	A	A	A	140					A	A	A	A
Potassium Dichromate	200	275	450	A		A	150	210	210			A	A	B	A
Potassium Fluoride	175	275	450				70				150				
Potassium Hydroxide (10%)	200	C	450	A	A	A	150	180	180	240	240	A	A		B
Potassium Hydroxide (50%)	175	C	450	B	A	B	100	150	150	240	240				
Potassium Hydroxide (60-90%)	150	C	450	B	A	C	70	150	150	225	225	B		B	B
Potassium Hypochlorite	175	200	450				B					A	C		A
Potassium Iodide	125	225	450	A			140	150	150			A	A		A
Potassium Nitrate	175	275	450	A		A	140	210	210	275	275	A	A	A	A
Potassium Perborate	200	275	450				140								
Potassium Perchlorate	150	200	450				140								
Potassium Permanganate	150	250	450	A			100	200	210			A	A	B	B
Potassium Persulfate		125	450				70	200	210	275	275				
Potassium Sulfate	200	275	450	A	A	A	140	200	210	275	275	A	A	A	A
Potassium Sulfide	175	275	450	A		A	A					B	C	A	
Potassium Sulfite			300	A		A						A	B		
Propane	75	275	450	X	B	C	70	200	200	100	100	A	A	A	
Propyl Acetate		100	140	B		C		80	80			A	A		
Propyl Alcohol	175	150	450	A		A	100	100	100			A	A	A	
n-Propyl Bromide			300									A	B		
Propylene Chlorohydrin	175	C	450												
Propylene Dibromide	75	200	450												
Propylene Dichloride	75	200	450	C									A		

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Propylene Glycol	125	150	450	A		A	B	200	200	275	275	A			
Propylene Oxide	125	C	450	B		C						A			
n-Propyl Nitrate			200			C						A			
Pyridine	150	C	450	B		C	C	C	C	125	125	B	B	A	
Pyrogallic Acid		150	150				A					A	A	B	
Pyrrole			450									B	B		
Rosin			200			A	B	200	210			A	A	B	
Salicylaldehyde	75	125	450												
Salicylic Acid	125	200	450	A			B	175	175			A	B		
Selenic Acid (aq.)	75	150	450												
Silicone Oil	150	250	450	A		B	140					A	A	A	
Silver Cyanide	200	275	450				140					A to 100	A		
Silver Nitrate	225	275	450	A		A	140	210	210	275	275	A	C		
Soaps	75		450	A	A	A	150	210	210	275	275	A	B	A	
Soap Solutions (sat.)	175	125	450	A	A	A	150	210	210	275	275				
Sodium Acetate	200	275	450	A		C	100	210	210	225	225	A	A	A	
Sodium Aluminate			300				140	120	120	225	225	A	A	A	
Sodium Benzoate	200	275	450				140	180	180	250	250		A		
Sodium Bicarbonate	225	275	450	A	A	A	150	180	180	275	275	A	A	A	
Sodium Bichromate	140	250	450	A			120					A	A		
Sodium Bisulfate	225	275	450	A	A	A	150	210	210	225	225	A	A		
Sodium Bisulfite	225	275	450	A		A	140	C	210	C	250	A	C	A	
Sodium Borate (Borax)	175	275	450	A		A	A	C	210	C		A	A		
Sodium Bromide	225	275	450				140	210	210	275	275	B	A	A	
Sodium Carbonate	225	275	450	A		A	140	180	180	225	225	A	A	A	A
Sodium Chlorate	200	250	450	A		B	140	210	210	200	200	A	C		
Sodium Chloride	225	275	450	A	A	A	140	210	210	275	275	B	A	A	A
Sodium Chlorite solutions	175	250	450				100	120	120						
Sodium Chromate		200	200					210	210			A	A		
Sodium Cyanide (sat.)	175	275	450	A	A	A	140	200	210			A	A		B
Sodium Dichromate	225	200	450	A				210	210			A	B		B
Sodium Dodecyl Benzene (30%)		250	450												
Sodium Ferricyanide	150	275	450				100	200	210	275	275	A			

Sodium Ferrocyanide	150	275	450				100	200	210	275	275	A	A		
Sodium Fluoride (sat.)	175	275	450	A			140	C	C	C		A	A		B
Sodium Hydroxide (<10%)	200	100	450	A	A	A	150	C	C	C	250	A	A	A	A
Sodium Hydroxide (10-50%)	200	75	450	A	A	A	150	C	C	C	250	A	A		
Sodium Hydroxide (50%)	200	C	450	A	B	B	140	C	100	C	250	A	A		
Sodium Hydroxide (>50%)	150	C	450	B	B	B	70	C	100	C	250	A	A		
Sodium Hypoch lorite (5%)	125	250	450	A	A	B	140	C	C	C	C	C		B	A
Sodium Hypochlo-rite (5-15%)	125	175	450	B	A	B	70	C	C	C	C				
Sodium Hypochlo-rite (>15%)	125	125	450	C	A	B	B	C	C	C	C	C		B	A
Sodium Iodide	175	275	450												
Sodium Metaphosphate	75	280	300	A	B	A	A					A	B		
Sodium Nitrate	175	275	450	A	A	C	150	210	210	275	275	A	A	A	
Sodium Nitrite	175	275	450				100			275	275	A	A		
Sodium Perborate	75		350	A	A	B	A					A	A	A	
Sodium Perchlorate		250	350				100								
Sodium Peroxide	125	200	450	B	A	C	100					A	A	B	
Sodium Phosphate (10%)	175	275	450	A	A	C	140	210	210			A	B	A	
Sodium Silicate	225	275	450	A	A	A	A	210	210	225	225	A	A	A	
Sodium Sulfate	225	275	450	A	A	A	A	210	210	275	275	A	A	A	
Sodium Sulfide	150	275	450	A	A	A	A	210	210	250	250	A	A		
Sodium Sulfite	150	275	450	A		A	A	C	210			A	C	A	
Sodium Thiosulfate	150	275	450	A	A	A	A	180	180	200	200	A	A		
Sour Crude Oil	150	275	450					225	225	275	275	A	A	A	
Soybean Oil		250	450	C	A		100					A	A		
Stannic Chloride	225	275	450	B	A	B	140	210	210	225	225	C	C	C	B
Stannous Chloride (50%)	175	275	450	A		B	140	210	210	225	225	A	C		
Starch		200	300	A			150			225	225	A	B	A	
Steam (low pres-sure)	C	275	450	A	A							A	A	A	
Steam (med. pres-sure)				B	C							A	B	A	
Steam (high pres-sure)				C	C							A	C	A	

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Stearic Acid	175	275	450	B	B	B	100	210	210	275	275	A	A	A	
Stoddard's Solvent	125	250	450	C		C	C					A	A	A	
Styrene Monomer		175	350	C		C	C	C	C	185	185	A	A	A	
Succinic Acid	150	150	450				140	200	200			A	A	A	
Sugar Syrup	200	275	450	A		A		180	180	275	275	A	A		
Sulfamic Acid	175	125	450				C	150	150	150	150	A	B		
Sulfate Liquors	75		200			A	B	200	200			A	A		
Sulfite Liquors			350	B		C	140	200	200			A			A
Sulfur	150	250	450	A	A	B	110					A	A	A	A
Sulfur Chloride	75	75	450	C	A	C	C					C	C		
Sulfur Dichloride	75	75	450												
Sulfur Dioxide (wet or dry gas)	125	175	450	A	B	B	100	225	225			A	A	A	
Sulfur Dioxide (liquid)		175	450	A	B	B	100	225	225	150	150	A	A	A	C
Sulfur Trioxide (liquid or gas)	C	C	450	B	B	B	C					B	A	A	
Sulfuric Acid (10%)	225	250	450	A	A	C	150	210	210	200	200	A	A	A	C
Sulfuric Acid (16%)	200	250	450	A	A	C	150	200	200	175	175	A	A	A	C
Sulfuric Acid (30%)	200	250	450	B	A	C	150	190	190	175	175	B	B	A	C
Sulfuric Acid (60%)	200	250	450	B	A	C	150	150	150	175	175	C	C	A	C
Sulfuric Acid (85%)	175	200	450	B	A	C	70	C	C	120	120	C	C	A	C
Sulfuric Acid (93%)	C	200	450	B	A	C	70	C	C	120	120	C	C	A	C
Sulfuric Acid (96%)	C	150	450	C	B	C	B	C	C	120	120	C	C	A	C
Sulfuric Acid (98%)	C	150	450	C	B	C	C	C	C	120	120	C	C	A	C
Sulfuric Acid (>98%-fuming)	C	C	450	C	C	C	C	C	C	100	100	C	C	B	C
Sulfurous Acid	175	200	450	C	A	C	150					A	A	B	A
Sulfuryl Fluoride	C	75	450												
Tall Oil	175	275	450	C				220	220	225	225	A	B	A	
Tallow	150	275	450	A		B						A			
Tannic Acid	150	225	450	A	A	B	70	210	210			B	A	A	A
Tar		250	250	C	B		C					A	A	A	
Tartaric Acid	150	250	450	B	A	A	100	210	210	275	275	A	A	A	
Tetrachloroethane		250	400	C		C	C	100	100	150	150	A		A	A
Tetrachloroeth-ylene		275	350	C		C	C	C	C	175	175	A			
Tetraethyl Lead	75	275	450	C									A		
Tetrahydrofuran	C	C	450	B		C	C			100	100	A			
Thread Cutting Oils	125	200	450									A	A	A	
Thionyl Chloride	C	C	450	C				C	C	120	120				

Titanium Tetra-chloride	C	150	450	C		C						B	B		
Toluene (Toluol)	C	175	450	C	C	C	C	120	120	200	200	A	A	A	
Tomato Juice	225	200	450				140			250	250	A	A		
Transformer Oil	120		300	C		B		225	225	275	275	A	A	A	
Tributyl Phosphate	125	75	450	A								A	A	A	
Trichloroacetic Acid (10%)	150	200	450	B		C	B					B			
Trichloroacetic Acid (100%)	125	125	450	B		C	B					C			
1,1,2-Trichlo-roethane	C	150	450	C		C	C	120	120	175	175	A		A	A
Trichloroethylene	C	275	450	C	C	C	C	C	C	150	150	A	A	A	A
2,4,5-Trichloroph-enol	75	150	450							100	100				
Tricresyl Phosphate	125	C	450	A		B	C	150	150			A		A	B
Triethanolamine	150	125	450					120	120	150	150	A	A		
Triethylamine	75	125	450				B	100	100						
Trimethylamine		150	450												
Trimethyl Propane	75	200	450												
Trisodium Phosphate	175	275	450	A		A	A	225	225	225	225	A	A		
Turpentine	C	275	450	C	C	C	C	150	160	150	150	A	A	A	
Urea	225	250	450			B	C	120	120	225	225		B	C	B
Urine	200	275	450				140					A	A		
Varnish		250	350	C		C	C					A	A	A	
Vaseline	150		300	C		C	150					A	A	A	
Vegetable Oil	125	275	450	B		A	70	210	225	275	275	A	A		
Vinegar	200	225	450	A	A	A	100	210	210	120	120	A	A	A	A
Vinyl Acetate	75	250	450				C	C	C	120	120	A	B		
Vinyl Chloride monomer	C	200	450	C			C	C	C						
Vinylidene Chlo-ride monomer	C	200	450	C		B		C	C						
Water, acid mine	212	212	212	A	A	B	B	212	212	212	212	A	B	B	
Water, deionized	212	212	212	A	A	A		212	212	212	212	A	A	A	
Water, demineral-ized	212	212	212	A	A	A		212	212	212	212				
Water, distilled	212	212	212	A	A	B	150	212	212	212	212	A	A	A	
Water, fresh	212	212	212	A	A	A	150	212	212	212	212				
Water, potable	180	212	212	A	A	A	150	212	212	212	212	A	A	A	
Water, salt	212	212	212	A	A	A	100	212	212	212	212	A	A	A	
Water, sea	75	212	212	A	A	A	140	212	212	212	212	B	A	A	

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Water, sewage	212	212	212	A	A		140	212	212	212	212				
Water, soft		200	212	A	A			212	212	212	212	A	A	A	
Water, waste	180	212	212	A	A	A		212	212	212	212	A	A	A	
Whiskey	225	225	450		A	A	100					A	A	A	
White Liquor		230	250	A		A	100	180	180	275	275	A	A		
Wine	200	225	450	A		A	100					A	A		
Xylene	C	200	450	C	C	C	C	120	120	200	200	A	A	A	
Zinc Acetate		250	250	A		C	140					A	A		
Zinc Chloride	175	275	450	A	A	A	140	200	225	250	250	B	A	C	A
Zinc Hydrosulfite (10%)		200	450												
Zinc Nitrate	200	275	450				140	210	210	250	250	A			
Zinc Sulfate	200	275	450	A	A	A	140	210	225	275	275	A	A	C	A

A = Little / No Effect B = Some Effect, Testing is recommended C= Serve Effect, Not recommended

This resource is intended as a guideline to be used with all available information to determine suitability of material selection. We suggest thorough research which should include known applications when determining material. The information contained herein is provided only as a guide for the use of PureFlex products.
The information is based on technical data and testing that PureFlex believes to be reliable. It is intended for use by persons having technical skill, at theis own discretion and risk. PureFlex makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information.

Although recommended for thermoplastics, some services, specifically halogenated liquids / gases, are known to permeate through thermoplastic linings.

Ammonium Acetate (saturated)	125	175	450				150	C	80	275	275	B	B		
Ammonium Bifluoride	200	150	450				100	C	150			C	B	B	
Ammonium Bisulfide		280	450				A								
Ammonium Bromide (50%)		250	450					160	160						
Ammonium Carbonate (saturated)	200	275	450	A		C	125	150	160	225	250	B	B	B	A
Ammonium Chloride (saturated)	200	275	450	A	A	C	150	210	210	225	250	B	B	B	B
Ammonium Dichromate	125	250	450	A			A								
Ammonium Fluoride (10%)	200	275	450				70	C	150			C		A	B
Ammonium Flouride (25%)	200	275	450				C	C	150			C			
Ammonium Flouride (saturated)	200	275	450				C	C	150	C	120				
Ammonium Hydroxide (1%)	200	225	450	A	A	A	175	150	180	200	200	A	B	A	
Ammonium Hydroxide (10%)	200	225	450	A	A	A	150	150	160	200	200	A		A	
Ammonium Hydroxide (30%)	200	225	450	A	A	A	150	100	100	200	200	A		A	A
Ammonium Metaphosphate	150	275	450	A			130								
Ammonium Nitrate (saturated)	150	275	450	A		C	B	225	250	210	210	A	A	A	
Ammonium Persulfate	150	75	450	A			A	180	180	100	120	A	C	A	A
Ammonium Phosphate	200	275	450	A	A	A	150	210	210	225	250	A	B	A	
Ammonium Sulfate (saturated)	200	275	450	A	A	A	175	230	250	275	275	B	B	B	A
Ammonium Sulfide	150	125	450				70	120	120	100		B	B		
Ammonium Thiocyanate	150	275	450	A			A	100	120			A	B	A	
Amyl Acetate	75	125	450	A	C	C	C	80	80	150	180	A	A	A	C
Amyl Alcohol	75	275	450	A	A	C	175	150	150	175	175	A		A	A
n-Amyl Chloride	C	275	450	C		C	C	120	120	100		B	A	B	C
Aniline	125	125	450	B	C	C	B	C	C	150	180	A	B	B	B
Aniline Hydrochloride (10%)	C	75	450	B		C	B	180	200	100	100	C	A		

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Antimony Trichloride	150	75	450	A			100	200	200	150		C	A		
Aqua Regia	C	75	450	C		C	C					C		C	B
Argon			450	A		B						A	A	A	
Arsenic Acid	200	275	450	A		A	B	100	120			B	A	A	
Aryl Sulfonic Acid	150		450												
Barium Carbonate	200	275	450	A			150	250	250	275	275	A	A	A	A
Barium Chloride	200	275	450	A	A	A	150	210	210	275	275	C	A	A	A
Barium Hydroxide	200	275	450	A	A	A	125	150	160	225	250	A	A	A	A
Barium Nitrate		275	450			B	150					A			B
Barium Sulfate	200	275	450	A		A	175	230	250	275	275	A	A	A	A
Barium Sulfide	200	275	450	A	A	B	140	180	180	275	275	A	A		
Beer	200	225	450	A	A	A	175	200	200	250	275	A	A	A	A
Beet Sugar Liquors	150	225	450	A	A	A	150	160	180			A	A		
Benzaldehyde	75	75	450	B		C	C	70	70	200		A	B	A	A
Benzene	C	150	450	C	C	C	C	C	C	180	200	B	A	B	A
Benzene Sulfonic Acid	75	125	450	C		C	C	125	125	70	70	B	A		
Benzoic Acid	150	225	450			B	75	210	210	200	200	A	A	A	A
Benzoyl Chloride		150	450	C		C									
Benzyl Alcohol	125	250	450	B				100	100	150	180	A	A		
Benzyl Chloride	75	275	450	C		C		80	80	150	180				
Bismuth Carbonate	200	275	450	A											
Black Liquor		175	450	C	C	B	100	180	200	230	250	A	B		
Blood			300					220	250			A	A	A	
Borax	200	275		A	A	B	150	210	210			A	A	A	A
Boric Acid	200	275	450	A	A	A	150	210	210	250	250	B	A	A	B
Brine (acid)	200	275	450	A	A			210	210	275		C	C	B	B
Brine (basic)	200	275	450	A	A			250	250	275					
Bromine (dry gas)	C	150	450	C	C	C	C	80	80	C	C	C	C	B	C
Bromine (water-3% saturated)	75	200	450	C	B	C	C	100	100	75	75	C	A	B	B
Bromine (liquid)	C	150	450	C	C	C	C	C	C	C	C	C	C	B	C
mono-Bromoben-zene	C	150	450	C		C									
Bromoform	C	150	450							185	200				
m-Bromotoluene	C	175	450												
Butadiene	C	250	450	C		C	B			200	200	A	A	A	
Butane	C	250	450	C	A	C	B	100	120	100	100	A	A	B	
Butanediol	200	250	450												

Butanol (Butyl Alcohol)	200	250	450	B		B	B	120	130	200	200	A		A	
Butyl Acetate	C	75	450	C	C	C	C	C	C	175	175	B	A	B	
Butyl Acrylate	C	125	450	C			C	C	C						
Butyl Bromide	C	275	450												
n-Butyl Chloride	C	275	450									B	B		
Butyl Mercaptan		275	450												
Butyl Phenol	C	225	450												
Butyl Phthalate	125	C	450			A		200	210	125	125				
Butyraldehyde		150	450	B		B		100	100			B		A	A
Butyric Acid	200	225	450	B		C	C	120	120	100	100	B	A	A	A
Calcium Bisulfide	200	275	450			C	150								
Calcium Bisulfite	200	275	450	C		A	100	180	180	100	100	A	C	A	A
Calcium Carbonate	200	275	450	A		A	120	180	180	275	275	A	A	A	A
Calcium Chlorate	200	275	450	B			100	230	250	200	200	A	A	B	
Calcium Chloride	200	275	450	A	A	A	75	230	250	275	275	C	A	A	B
Calcium Chlorite	150	200	450												
Calcium Hydroxide	200	275	450	A	A	A	100	150	210			B	B	A	A
Calcium Hypochlorite	200	200	450	A	B	B	75	150		C	C	C	C	B	A
Calcium Nitrate	200	275	450	A		B	150	210	210	275	275	A	A		
Calcium Oxide	200	250	450	A		A	B								
Calcium Sulfate	200	275	450	A			100	230	250	275	275	A		B	A
Calcium Sulfide		225	450	A		B	125					B			
Cane Sugar Liquors	75	275	450	A	A	A	175	160	180	250	250	A	A	A	
Caprylic Acid	125	175	450					200	210	100	100				
Carbon Bisulfide	C	75	450	C		C	C					B			A
Carbon Dioxide	200	275	450	B	A	B	175	250	275	275	275	A	A	A	A
Carbon Disulfide	200	75	450	C	C	C	C	C	C	150	175	A	A	A	
Carbon Monoxide	200	275	450	A	B	A	175	250	275	250	250	A	A	A	
Carbon Tetrachloride	C	275	450	C	C	C	C	150	180	175	175	A		B	A
Carbonic Acid	200	275	450	A		A	150	225	225			A	A	A	A
Castor Oil	125	175	450	B	A	A	150	160	160	250	250	A	A	A	
Cellosolve		280	300	B		C				150	150	A			
Chloral Hydrate	C	75	450												
Chloramine			450									B	B		
Chloric Acid			450				100					C	C	C	
Chlorinated Phenol		150	450												
Chlorine Dioxide	C	150	450	C	C	C	70	200	210			C		A	

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Chlorine, gas (dry)	C	200	300	C	C	C	100	230	250	C	C	A	A	A	C
Chlorine, gas (wet)	C	200	300	C	C	C	70	200*	C	C	C	C			
Chlorinated Water, 10 ppm		230	230			C	100	200*	C	275	275	A	A	A	A
Chlorinated Water, sat.		230	230			C	B	200*	C	C	C	C	B	B	A
Chloroacetic Acid	125	C	450	C	A	C	B	C	C	100	100	C	C		A
Chloroacetyl Chloride	C	125	450												
Chlorobenzene	C	175	450	C		C	C	C	100	200	200	A	A	A	
Chlorobenzyl Chloride	C	125	450												
Chloroform	C	125	450	C		C	C	C	C	185	185	A	A		
Chlorohydrin	C	125	450												
Chloropicrin	C	150	450												
Chlorosulfonic Acid	C	C	450	C	C	C	C	C	C	75	75	C	A	B	B
Chlorox bleach (5.5% NaOCl)	150	275	450	B		B	A	110	110				A		A
Chromic Acid, 10%	150	175	450	A	A	C	150	150	150	75	75	A to 70	B	A	A
Chromic Acid, 30%	150	175	450	A	A	C	100	C	C	C	C	B to 70	C	A	A
Chromic Acid, 40%	150	175	450	B	B	C	B	C	C	100	100	B to 70	C	A	A
Chromic Acid, 50%	150	150	450	B	B	C	C	C	C	100	100	C	C	B	A
Chromium Plating solution	125	175	450			B		130	130			C		A	
Chromium Potassium Sulfate	140	200	450	A		A						B	B		
Chromyl Chloride	125	125	450												
Citric Acid	200	275	450	A	A	A	100	210	210	225	225	A	A	A	A
Coal Gas	150	225	450		A										
Coconut Oil	125	275	450	B		A	A	200	200	275	275	A	B		
Coke Oven Gas	70	230	450	C		B						A	B		
Copper Acetate	70	250	250	A		C	A	200	210	200	200	A	B	A	
Copper Carbonate	200	275	450				A			200	200	A	A		
Copper Chloride	200	275	450	A	B	A	A	225	225	225	225	B	B	A	A
Copper Cyanide	200	275	450	A		A	A	200	200	225	225	A	A	A	A
Copper Fluoride	200	275	450				100	175	175	225	225				
Copper Nitrate	200	275	450	A			100	210	210	150	150	B	C	B	B
Copper Sulfate	200	275	450	A	A	A	150	200	250	250	250	B	C	A	A
Corn Oil	200	275	450	C	B	A	70	210	210	275	275	A	B		
Cottonseed Oil	150	275	450	C	B	A		210	210	275	275	A	B		

Cresol	C	150	450	C	B	C				120	120				
Creosote			300	C		C	C					A	A	A	
Cresylic Acid (50%)	C	150	450	C		C	C			100	100	A	A	B	A
Crotonaldehyde	C	125	450												
Crude Oil	150	275	450	C		C	100	225	250	275	275	A	B		
Cupric Chloride	200	275	450	A		A						C		C	B
Cyanoacetic Acid			450												
Cyclohexane	C	275	450	C		C	C	150	150	175	175	A	A	A	
Cyclohexanol	75	150	450	C		C	C	130	150			A			
Cyclohexanone	C	75	450	B		C	C			125	125	A	B	A	
Detergents	150		250	A		A	A	180	180	275	275	A	A		
Dextrose	200	275	450	A		A									
Diacetone Alcohol	125	75	450	A		C	C					A	A	A	
Diazo Salts	200	275	450												
1,2-Dibromo Propane		200	450												
Dibutyl Phthalate	125	C	450	A		B		210	210			A			
Dibutyl Sebacate		C	450	B		B		150	150			A			
Dichloroacetic Acid	125	125	450							100	100				
o-Dichlorobenzene	C	150	450	C		C	C	100	120	180	180	A			
Dichloroethane	75	175	450	B		C	C	C	C	185	185	A	A	C	A
Dichloroethylene (Ethylene Dichloride)	125	225	450	C				C	C	185	185	B	A	B	A
Dichloropropionic acid		125	450					75	75						
Diesel fuels	75	275	450	C		C	A	225	250	275	275	A	A		
Diethanol Amine	150	C	450					100	120	150	150				
Diethyl Amine (aq.)	75	75	450	B		B	C	C	C	100	100	A	B		
Diethyl Ether	C	125	450	C		C	C								
Diethylene Glycol Ethers	150	200	450	A		B				275	275				
Di-isobutylene	125	275	450	C		C		80	80	225	225	B			
Di-isobutylketone	75	125	450												
Dimethyl Amine (aq.)	75	75	450	C			C								
Dimethyl Aniline	C	75	450	C		C									
Dimethyl Forma-mide	125	C	450	B		B	C	C	C	100	100	A	A		
Dimethyl Phthalate	75	75	450	B				150	180	175	175	B			
Dimethyl Sulfate		75	450												
Disodium Phos-phate	200	200	450				A								

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Dowtherm A			450	C		C		130	150			A	A		
Epichlorohydrin	125	C	450	B		C	C	C	C	100	100				
Ether	75	125	450	C	B	C	C					A	A		
Ethyl Acetate	125	C	450	B	C	B	C	80	80	150	175	A	A	B	
Ethyl Acetoacetate	C	75	450	B		B									
Ethyl Acrylate	75	75	450			B				150	175	A	A	A	
Ethyl Alcohol (Ethanol)	200	275	450	A	A	A	100	100	100	175	175	A	A	A	
Ethyl Benzene	C	125	450	C		C		100	100	185	185	A	A	A	
Ethyl Chloride	C	275	450	B	B	C	C			100	100	A	A	A	A
Ethyl Chloroac-etate	125	75	450												
Ethyl Cyanoacetate	125	75	450												
Ethyl Ether	C	125	450	C		C	C	C	C	120	120	A			
Ethyl Formate		75	450	B								B			
Ethylene Bromide	C	275	450	C		C	C					A	A	A	
Ethylene Chlorohydrin	125	75	450	A		B	C	100	100						
Ethylene Diamine	150	75	450	A		A	C								
Ethylene Dibro-mide	75	225	450	C		C									
Ethylene Dichloride	75	175	450	B		C	C	C	C	185	185	A	A	C	
Ethylene Glycol	125	275	450	A	A	A	100	210	210	275	275	A	A	A	A
Ethylene Oxide (5% aq.)	C	200	450	B		C	C					A	B	A	A
Ethylene Trichloride	C	275	450	C		C						A			
Fatty Acids	150	275	450	C		B	150	225	250	275	275	A	A	A	A
Ferric Chloride, Aq.	200	275	450	A	A	B	A	225	250	275	275	C	C	A to 175	B
Ferric Chloride + HCl	200	275	450	A		B		150	180	275	275				
Ferric Hydroxide	180	250	450				140					A	A		
Ferric Nitrate	200	275	450	A		B	140	210	210	275	275	A	C	A	A
Ferric Sulfate	200	275	450	A	A	B		210	210	275	275	C	C	B	B
Ferrous Chloride	200	275	450	A			A	225	225	275	275	C		B	A
Ferrous Chloride + HCl	200	275	450	A				210	210	275	275				
Ferrous Hydroxide	200	250	250				150					A			
Ferrous Nitrate	200	275	450	B			140	210	210	275	275	A			
Ferrous Sulfate	200	275	450	A			150	210	210	275	275	C	A	B	A
Fish Solubles	75	150	450												

Flourine Gas, Dry	C	C		C		C	C	80	75			A	A	A	
Flourine Gas, Wet				C		C	C	75	75			A	A		
Fluoboric Acid	150	275	450			C	100	C	210	C	75	C		A	C
Fluosilicic Acid	150	275	450	A		C	B	C		C	75	B	A	A	C
Formaldehyde (37%)	175	125	450	A	A	B	100	75	75	150	180	A	A	A	A
Formaldehyde (50%)	175	125	450	A	A	B	A			150	180	A	A	A	A
Formic Acid	125	250	450	A	A	B	75	100	100	100	120	C	A	A	C
Freon1 Fluorocar-bons	C	200	450			C	A	100	100	75	75	A	A		
Fructose	200	200	450				140								
Fruit Juices Pulp	200	200	450			A	A								
Fuel Oil	75	275	450	C	B	C	A	200	210	275	275	B		A	A
Furfural	C	75	450	B	B	C	C	C	C	100	100	A	A	B	
Gallic Acid	200	75	450	B		C	B	100	100			A	A	A	
Gas (manufactured)	150	275	450	C	C	C									
Gas (Natural)	150	275	450	C	C	C	A	200	200	275	275				
Gasoline, Leaded	75	275	450	C	C	C	B			250	250	A	A	A	C
Gasoline, Unleaded	75	275	450	C	C	C	C			250	250	A	A	A	C
Gasahol	C	280	280	C	C			110	110			A	A	A	
Gasoline, Sour	C	280	280	C	C	C	A					A	C	A	C
Gelatin	200	250	450	A	A	A	100	200	210			C			
Gin	200	200	450				100								
Glucose	200	275	450	A	A	A	150	220	250	275	275	A	A	A	
Glue		250	250	B	A	A						A	A	A	
Glycerin	200	275	450	A	A	A	140	210	210	275	275	A	A	A	A
Glycol		280	300	A		A		210	210			A	A	A	
Glycolic Acid	150	75	450			A	B	100	100	100	100	A	B		
Gypsum		275	350									A	A	A	
Heptane	C	275	450	C		C	B	210	210	225	225	A	A	A	
n-Hexane	75	275	450	C		C	B	160	160	175	180	A	A		
Hexanol		175	300			B						A	A	A	
Hydraulic Oil			300	C		B	A	100	100	250	250	A	A		
Hydrazine Dihydrochloride		75	450									A	A		
Hydriodic Acid (40%)	200	275	450					150	150						
Hydrobromic Acid (10%)	200	275	450	A	A	C	80	180	180	150	150	C	C	A	A
Hydrobromic Acid (50%)	200	275	450	A	A	C	80	150	150	100	100	C	C	B	C

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Hydrochloric Acid (10%)	200	275	450	A	A	C	140	225	225	200	200	C	C	A	C
Hydrochloric Acid (20%)	200	275	450	A	A	C	140	225	225	200	200	C	C	A	C
Hydrochloric Acid (35%)	200	275	450	C	B	C	100	180	180	150	150	C	C	B	C
Hydrocyanic Acid	150	275	450	B	A	B	140	210	210	100	100	C	A	C	A
Hydrofluoric Acid (20%)	200	250	450	C	A	C	100	C	100	C	C	C	A	B	C
Hydrofluoric Acid (30%)	200	250	450	C	A	C	B	C	C	C	C	C	C	B	C
Hydrofluoric Acid (37%)	200	250	450	C	A	C	C	C	C	C	C	C	C	B	C
Hydrofluoric Acid (48%)	200	225	450	C	B	C	C	C	C	C	C	C	C	B	C
Hydrofluoric Acid (60%)	200	200	450	C	B	C	C	C	C	C	C	C	C	C	C
Hydrofluoric Acid (100%)	C	200	450	C	B	C	C	C	C	C	C	C	C	C	C
Hydrofluosilicic Acid	150	275	450	A		C	A	C	180	C	C	B	A	C	
Hydrogen	175	275	450	A			140					A	A	A	
Hydrogen Chloride (dry gas)	175	275	450					225	250	150	150				
Hydrogen Cyanide	C	C	450			B									
Hydrogen Fluoride (gas)	75	200	450	A						C	C				
Hydrogen Peroxide (3-8%)	C	200	450	B	B	A	100	75	75	75	75	A	A	A	B
Hydrogen Peroxide (30%)	C	200	450	B	B	B	70	C	C	75	75	A	B	B	B
Hydrogen Peroxide (90%)	C	70	450	C	A	B	B	C	C						
Hydrogen Sulfide (dry)	175	275	450	A	A	B	150	210	210	150	150	A	A	A	
Hydrogen Sulfide (wet)	175	225	450	A	A	B	A	175	175	150	150	A	B	B	A
Hydroquinone	150	250	450	C			100					B			
Hypochlorous Acid	150	75	450	B			140			C	C	C			
Iodine (gas)		150	450	B			B	180	180			C	A	A	
Iodine (10%)	75	150	450	B			B								
Iodoform	75	200	450	A		C	A								
Isobutane			140									A	A	A	
Isobutyl Alcohol		250	450	A		A		100	120			A			
Isooctane	75	250	300	C		C	A	180	180			A	A	A	

Isopropyl Alcohol	200	150	450	A		A	140	120	120	150	150	A	A		
Isopropyl Chloride		100	450	C		C									
Isopropyl Ether	C	125	450	C		C	B			150	150	A	A	A	
JP-3 Fuel			450	C		C	B	180	180	275	275	A	A	A	
JP-4 Fuel	75	200	450	C		C	B	180	180	275	275	A	A	A	
JP-5 Fuel	75	200	450	C		C	B	180	180	275	275	A	A	A	
JP-6 Fuel			450	C		C	B	180	180	275	275	A	A	A	
Kerosene	75	275	450	C	B	C	150	180	180	275	275	A	A	A	
Ketchup			250									A	A		
Ketones			200	A			C					A	A		
Kraft Liquors			250									A			
Lactic Acid (80%)	150	125	450	B	A	A	75	210	210	275	275	A	A	B	A
Lard Oil	125	275	450	C		B	A					A	B		
Lauric Acid	200	225	450					175	175	275	275				
Lauryl Chloride	200	250	450					120	120	75	75	B		A	A
Lead Acetate	200	275	450	A		C	140	225	230	225	230	A	A		
Lead Nitrate	180	250	300	A		B	140			225	225	A			
Lead Sulfate	150	250	300	A			140					B	B		
Lemon Oil	75	250	450												
Lime Sulphur solution	150	200	450			A									
Linoleic Acid	125	250	450	C		B	B	200	200			B	A	A	
Linseed Oil	150	275	450	B	A	B	140	225	225	275	275	A	A	A	
Lithium Bromide (sat.)		225	450				140	225	250	275	275				
Lubricating Oil	125	275	450	C	B	C	150	210	210						
ASTM #1 Oil		280	350	C								A	A	A	
ASTM #2 Oil		280	350	C								A	A	A	
ASTM #3 Oil	75	280	350	C								A	A	A	A
Magnesium Carbonate	200	275	450	B			140	180	180	225	225	A		B	
Magnesium Chloride	200	275	450	A	A	A	100	225	250	275	275	B		A	A
Magnesium Hydroxide	200	275	450	A	A	B	140	210	210	225	225	A	A	A	A
Magnesium Nitrate	200	275	450	B			150	210	210	275	275	A	B	A	A
Magnesium Sulfate (10% sat.)	200	275	450	A	A	A	140	210	250	275	275	A	A	C	B
Maleic Acid (10%)	150	250	450	C		A	100	250	250	175	175	A	B	A	A
Maleic Anhydride	75	75	450	C						175	175			A	
Malic Acid	125	250	450	C		B	A					A	A	A	A
Manganese Sulfate	75		450			A	C	210	210			A		B	A

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Mercuric Chloride	175	250	450	B	A	A	150	210	210	275	275	C	C	B	A
Mercuric Cyanide	150	250	450	B		A	140					A	C		
Mercuric Nitrate	175	275	450												
Mercuric Sulfate		230	300				140								
Mercurous Nitrate		230	300	B			A					A	C		
Mercury	150	275	450	A	A	A	140	225	250			A	B	A	A
Methacrylic Acid		125	450	B		C									
Methane	75	275	450	C		C	100			150	150	A	A	A	
Methane Sulfonic Acid	125	200	450												
Methyl Acetate		100	300	B		C	C	C	C	150	150	A	A	A	
Methyl Acetone		C	450									A	A		
Methyl Alcohol (Methanol)	200	275	450	A	A	A	70	80	100	150	150				
Methyl Amine	C	C	300	A			C					A	C		
Methyl Bromide	C	275	450	B			C	C	C			B	B		
Methyl Cellosolve ethers	75	200	450	B		C	C	C	C			A	A		
Methyl Chloride	C	275	450	B	C	C	C			75	75	A	A	A	A
Methyl Chloroform	C	125	450												
Methyl Ethyl Ketone	125	C	450	A	B	C	C	70	70	175	175	A		A	A
Methyl Isobutyl Ketone	75	C	450	B		C	C	100	100	175	175	A	A	A	A
Methyl Methacrylate	200	125	450	C		B	A								
Methyl Salicylate	125	150	450	C											
Methylene Bromide		175	450												
Methylene Chloride	C	125	450	C		C	C	C	C	100	100	A	A	A	A
Methylene Iodide		200	450												
Milk	200	250	450	A	A	A	120	225	225			A	A		
Mineral Oil	125	275	450	C	B	B	B	225	250	275	275	A	A	A	
Molasses	200	150	450	A		A	A					A	A	A	
Monochloroacetic Acid	75	150	200				70	C	C	75	75	C	B		
Monochlorobenzene	75	180	200	C		C		100	100	200	200	A	A		
Monoethanolamine	175	C	450	B		B	C			100	100	A	B		
Morpholine	150	75	450					80	80			A			
Motor Oil	75		450				B	225	250	275	275	A	A	A	
Naptha	125	275	450	C		C	A	210	210	275	275	A	A	B	A

Napthalene	200	200	450	C		C	C	210	210	225	225	B	A	A	A
Nickel Chloride	200	275	450	A	A	A	140	210	210	275	275	C	C	A	A
Nickel Nitrate	200	275	450	B			A	210	210	275	275	A	A		
Nickel Sulfate	200	275	450	A	A	A	140	210	210	275	275	B		A	B
Nicotinic Acid	125	250	450												
Nitric Acid (5-10%)	175	175	450	B	A	B	100	150	180	150	150	A	C	A	A
Nitric Acid (30%)	150	125	450	B	A	C	100	C	C	75	75	A			
Nitric Acid (50%)	75	125	450	C	A	C	B	C	C	C	C	A			
Nitric Acid (70% fuming)	C	C	450	C	B	C	C	C	C	C	C	A	C		
Nitrobenzene	125	75	450	C	C	C	C	80	80	200	200	A	A	A	A
Nitrogen Gas	200	275	450			A						A	A		
Nitrogen Dioxide		175	450												
Nitroglycerin		125	450									A	B		
Nitromethane	125	125	450	B		C	B								
Nitrous Acid (10%)	C	200	450									C	C		
Nitrous Oxide	75	C	450				140					C	C	C	
n-Octane	75	275	450	C		C		200	200			A	A	A	
Oleic Acid	150	250	450	C	C	C	100	200	200	275	275	A	A	A	C
Oleum	C	C	450	C		C	C	C	C	100	100	A	C	A	A
Olive Oil		250	350	B		C	150	225	250	275	275	A	A		
Oxalic Acid	125	125	450	A	A	B	140	210	210	225	225	A	A	A	C
Oxygen Gas	125	275	450				70					A	A	A	
Ozone	C	225	450	A		A	B	200	220			A	A	A	
Palmitic Acid	175	250	450	B	B	C	B	225	250			A	A		
Paraffin		250	250	C		C	70					A	A	A	
n-Pentane			100	C		C	A					A	A	A	
Perchloric Acid (10%)	150	200	450	B		C	100	150	150			A	A		
Perchloric Acid (70%)	75	125	450	B		C	B					B	A		
Perchloroethylene	C	275	450	C	C	C	C	100	120	150	150	A			
Petroleum Oils	125	250	450	C	B	C	A					A			
Phenol (5%)	200	175	450	C		C	B	120	120	175	175	A	A	A	B
Phenol (90%-100%)	150	125	450	C		C	B	C	C	100	100	A	A		
Phenolsulfonic Acid		125	450					C	C						
o-Phenylphenol		175	450												
Phosphoric Acid (10%-50%)	200	275	450	A	A	C	150	225	225	150	150	A	C	A	B
Phosphoric Acid (50%-85%)	200	225	450	B	A	C	100	210	210	120	120	B	C	A	C

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Phosphorous Oxychloride	C	C	450												
Phosphorous - red	75	75	450												
Phosphorous Trichloride	C	200	450	A			C	C	C			A			
Phosphorous - yellow	75		450				70								
Photographic solutions	150	275	450				150					A	A		
Phthalic Acid	75	200	450				C	210	210			A	B	A	A
Picric Acid	75	75	450	B		C	C	100	100	100	100	A	C	A	
Plating Sol. - Brass	150	200	450				140					A		A	A
Plating sol. - Cadmium	150	200	450				150					A		A	A
Plating sol. - Chrome	125	200	450	B		C	100					B		A	A
Plating Sol. - Copper	150	200	450				150					C		A	A
Plating sol. - Gold	150	200	450				150					B		A	A
Plating Sol. - Iron	150	200	450				C					B		C	A
Plating Sol. - Lead	150	200	450				140					B		A	C
Plating Sol. - Nickel	150	200	450				C					B		A	A
Plating Sol. - Rhodium	150	200	450				150					C		C	C
Plating Sol. - Silver	150	200	450				A					A		A	A
Plating Sol. - Speculum	150	200	450												
Plating Sol. - Tin	150	200	450				100					B	A	A	C
Plating Sol. - Zinc	150	200	450									C		C	A
Polyglycol	175	200	450				140								
Polyvinyl Acetate	125	275	450	A		C		120	120	250	250	B	B		
Polyvinyl Alcohol	125	275	450				140			175	175				
Potash (Potassium Carbonate)		275	400	A			140	180	180	225	225	A		A	
Potassium Acetate	125	275		A		C	70	200	210			B			
Potassium Aluminum Chloride	200	275	450												
Potassium Aluminum Sulfate (50%)	200	275	450	A			140	225	225	275	275				
Potassium Bicarbonate	200	200	450			A	180	150	180	225	225	B		B	B
Potassium Bichromate		230	450	A		A	150					A			
Potassium Bisulfate		275	400				140					A	C		

Potassium Borate	200	275	450	A			140								
Potassium Bromate	200	275	450				140								
Potassium Bromide	200	275	450	A		A	150	120	120	275	275	B	A	B	A
Potassium Carbonate	200	275	450	A			140	150	180	275	275	A	A	B	A
Potassium Chlorate (aq.)	200	200	450	A		B	100					A		B	A
Potassium Chloride	200	275	450	A	A	A	150	200	210	275	275	A	A	B	A
Potassium Chromate	200	275	450				100					A	A	B	
Potassium Cyanide	200	275	450	A	A	A	140					A	A	A	A
Potassium Dichromate	200	275	450	A		A	150	210	210			A	A	B	A
Potassium Fluoride	175	275	450				70				150				
Potassium Hydroxide (10%)	200	C	450	A	A	A	150	180	180	240	240	A	A		B
Potassium Hydroxide (50%)	175	C	450	B	A	B	100	150	150	240	240				
Potassium Hydroxide (60-90%)	150	C	450	B	A	C	70	150	150	225	225	B		B	B
Potassium Hypochlorite	175	200	450				B					A	C		A
Potassium Iodide	125	225	450	A			140	150	150			A	A		A
Potassium Nitrate	175	275	450	A		A	140	210	210	275	275	A	A	A	A
Potassium Perborate	200	275	450				140								
Potassium Perchlorate	150	200	450				140								
Potassium Permanganate	150	250	450	A			100	200	210			A	A	B	B
Potassium Persulfate		125	450				70	200	210	275	275				
Potassium Sulfate	200	275	450	A	A	A	140	200	210	275	275	A	A	A	A
Potassium Sulfide	175	275	450	A		A	A					B	C	A	
Potassium Sulfite			300	A		A						A	B		
Propane	75	275	450	X	B	C	70	200	200	100	100	A	A	A	
Propyl Acetate		100	140	B		C		80	80			A	A		
Propyl Alcohol	175	150	450	A		A	100	100	100			A	A	A	
n-Propyl Bromide			300									A	B		
Propylene Chlorohydrin	175	C	450												
Propylene Dibromide	75	200	450												
Propylene Dichloride	75	200	450	C									A		

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Propylene Glycol	125	150	450	A		A	B	200	200	275	275	A			
Propylene Oxide	125	C	450	B		C						A			
n-Propyl Nitrate			200			C						A			
Pyridine	150	C	450	B		C	C	C	C	125	125	B	B	A	
Pyrogallic Acid		150	150				A					A	A	B	
Pyrrole			450									B	B		
Rosin			200			A	B	200	210			A	A	B	
Salicylaldehyde	75	125	450												
Salicylic Acid	125	200	450	A			B	175	175			A	B		
Selenic Acid (aq.)	75	150	450												
Silicone Oil	150	250	450	A		B	140					A	A	A	
Silver Cyanide	200	275	450				140					A to 100	A		
Silver Nitrate	225	275	450	A		A	140	210	210	275	275	A	C		
Soaps	75		450	A	A	A	150	210	210	275	275	A	B	A	
Soap Solutions (sat.)	175	125	450	A	A	A	150	210	210	275	275				
Sodium Acetate	200	275	450	A		C	100	210	210	225	225	A	A	A	
Sodium Aluminate			300				140	120	120	225	225	A	A	A	
Sodium Benzoate	200	275	450				140	180	180	250	250		A		
Sodium Bicarbonate	225	275	450	A	A	A	150	180	180	275	275	A	A	A	
Sodium Bichromate	140	250	450	A			120					A	A		
Sodium Bisulfate	225	275	450	A	A	A	150	210	210	225	225	A	A		
Sodium Bisulfite	225	275	450	A		A	140	C	210	C	250	A	C	A	
Sodium Borate (Borax)	175	275	450	A		A	A	C	210	C		A	A		
Sodium Bromide	225	275	450				140	210	210	275	275	B	A	A	
Sodium Carbonate	225	275	450	A		A	140	180	180	225	225	A	A	A	A
Sodium Chlorate	200	250	450	A		B	140	210	210	200	200	A	C		
Sodium Chloride	225	275	450	A	A	A	140	210	210	275	275	B	A	A	A
Sodium Chlorite solutions	175	250	450				100	120	120						
Sodium Chromate		200	200					210	210			A	A		
Sodium Cyanide (sat.)	175	275	450	A	A	A	140	200	210			A	A		B
Sodium Dichromate	225	200	450	A				210	210			A	B		B
Sodium Dodecyl Benzene (30%)		250	450												
Sodium Ferricyanide	150	275	450				100	200	210	275	275	A			

Sodium Ferrocyanide	150	275	450				100	200	210	275	275	A	A		
Sodium Fluoride (sat.)	175	275	450	A			140	C	C	C		A	A		B
Sodium Hydroxide (<10%)	200	100	450	A	A	A	150	C	C	C	250	A	A	A	A
Sodium Hydroxide (10-50%)	200	75	450	A	A	A	150	C	C	C	250	A	A		
Sodium Hydroxide (50%)	200	C	450	A	B	B	140	C	100	C	250	A	A		
Sodium Hydroxide (>50%)	150	C	450	B	B	B	70	C	100	C	250	A	A		
Sodium Hypoch lorite (5%)	125	250	450	A	A	B	140	C	C	C	C	C		B	A
Sodium Hypochlo-rite (5-15%)	125	175	450	B	A	B	70	C	C	C	C				
Sodium Hypochlo-rite (>15%)	125	125	450	C	A	B	B	C	C	C	C	C		B	A
Sodium Iodide	175	275	450												
Sodium Metaphosphate	75	280	300	A	B	A	A					A	B		
Sodium Nitrate	175	275	450	A	A	C	150	210	210	275	275	A	A	A	
Sodium Nitrite	175	275	450				100			275	275	A	A		
Sodium Perborate	75		350	A	A	B	A					A	A	A	
Sodium Perchlorate		250	350				100								
Sodium Peroxide	125	200	450	B	A	C	100					A	A	B	
Sodium Phosphate (10%)	175	275	450	A	A	C	140	210	210			A	B	A	
Sodium Silicate	225	275	450	A	A	A	A	210	210	225	225	A	A	A	
Sodium Sulfate	225	275	450	A	A	A	A	210	210	275	275	A	A	A	
Sodium Sulfide	150	275	450	A	A	A	A	210	210	250	250	A	A		
Sodium Sulfite	150	275	450	A		A	A	C	210			A	C	A	
Sodium Thiosulfate	150	275	450	A	A	A	A	180	180	200	200	A	A		
Sour Crude Oil	150	275	450					225	225	275	275	A	A	A	
Soybean Oil		250	450	C	A		100					A	A		
Stannic Chloride	225	275	450	B	A	B	140	210	210	225	225	C	C	C	B
Stannous Chloride (50%)	175	275	450	A		B	140	210	210	225	225	A	C		
Starch		200	300	A			150			225	225	A	B	A	
Steam (low pres-sure)	C	275	450	A	A							A	A	A	
Steam (med. pres-sure)				B	C							A	B	A	
Steam (high pres-sure)				C	C							A	C	A	

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Stearic Acid	175	275	450	B	B	B	100	210	210	275	275	A	A	A	
Stoddard's Solvent	125	250	450	C		C	C					A	A	A	
Styrene Monomer		175	350	C		C	C	C	C	185	185	A	A	A	
Succinic Acid	150	150	450				140	200	200			A	A	A	
Sugar Syrup	200	275	450	A		A		180	180	275	275	A	A		
Sulfamic Acid	175	125	450				C	150	150	150	150	A	B		
Sulfate Liquors	75		200			A	B	200	200			A	A		
Sulfite Liquors			350	B		C	140	200	200			A			A
Sulfur	150	250	450	A	A	B	110					A	A	A	A
Sulfur Chloride	75	75	450	C	A	C	C					C	C		
Sulfur Dichloride	75	75	450												
Sulfur Dioxide (wet or dry gas)	125	175	450	A	B	B	100	225	225			A	A	A	
Sulfur Dioxide (liquid)		175	450	A	B	B	100	225	225	150	150	A	A	A	C
Sulfur Trioxide (liquid or gas)	C	C	450	B	B	B	C					B	A	A	
Sulfuric Acid (10%)	225	250	450	A	A	C	150	210	210	200	200	A	A	A	C
Sulfuric Acid (16%)	200	250	450	A	A	C	150	200	200	175	175	A	A	A	C
Sulfuric Acid (30%)	200	250	450	B	A	C	150	190	190	175	175	B	B	A	C
Sulfuric Acid (60%)	200	250	450	B	A	C	150	150	150	175	175	C	C	A	C
Sulfuric Acid (85%)	175	200	450	B	A	C	70	C	C	120	120	C	C	A	C
Sulfuric Acid (93%)	C	200	450	B	A	C	70	C	C	120	120	C	C	A	C
Sulfuric Acid (96%)	C	150	450	C	B	C	B	C	C	120	120	C	C	A	C
Sulfuric Acid (98%)	C	150	450	C	B	C	C	C	C	120	120	C	C	A	C
Sulfuric Acid (>98%-fuming)	C	C	450	C	C	C	C	C	C	100	100	C	C	B	C
Sulfurous Acid	175	200	450	C	A	C	150					A	A	B	A
Sulfuryl Fluoride	C	75	450												
Tall Oil	175	275	450	C				220	220	225	225	A	B	A	
Tallow	150	275	450	A		B						A			
Tannic Acid	150	225	450	A	A	B	70	210	210			B	A	A	A
Tar		250	250	C	B		C					A	A	A	
Tartaric Acid	150	250	450	B	A	A	100	210	210	275	275	A	A	A	
Tetrachloroethane		250	400	C		C	C	100	100	150	150	A		A	A
Tetrachloroeth-ylene		275	350	C		C	C	C	C	175	175	A			
Tetraethyl Lead	75	275	450	C									A		
Tetrahydrofuran	C	C	450	B		C	C			100	100	A			
Thread Cutting Oils	125	200	450									A	A	A	
Thionyl Chloride	C	C	450	C				C	C	120	120				

Titanium Tetra-chloride	C	150	450	C		C						B	B		
Toluene (Toluol)	C	175	450	C	C	C	C	120	120	200	200	A	A	A	
Tomato Juice	225	200	450				140			250	250	A	A		
Transformer Oil	120		300	C		B		225	225	275	275	A	A	A	
Tributyl Phosphate	125	75	450	A								A	A	A	
Trichloroacetic Acid (10%)	150	200	450	B		C	B					B			
Trichloroacetic Acid (100%)	125	125	450	B		C	B					C			
1,1,2-Trichlo-roethane	C	150	450	C		C	C	120	120	175	175	A		A	A
Trichloroethylene	C	275	450	C	C	C	C	C	C	150	150	A	A	A	A
2,4,5-Trichloroph-enol	75	150	450							100	100				
Tricresyl Phosphate	125	C	450	A		B	C	150	150			A		A	B
Triethanolamine	150	125	450					120	120	150	150	A	A		
Triethylamine	75	125	450				B	100	100						
Trimethylamine		150	450												
Trimethyl Propane	75	200	450												
Trisodium Phosphate	175	275	450	A		A	A	225	225	225	225	A	A		
Turpentine	C	275	450	C	C	C	C	150	160	150	150	A	A	A	
Urea	225	250	450			B	C	120	120	225	225		B	C	B
Urine	200	275	450				140					A	A		
Varnish		250	350	C		C	C					A	A	A	
Vaseline	150		300	C		C	150					A	A	A	
Vegetable Oil	125	275	450	B		A	70	210	225	275	275	A	A		
Vinegar	200	225	450	A	A	A	100	210	210	120	120	A	A	A	A
Vinyl Acetate	75	250	450				C	C	C	120	120	A	B		
Vinyl Chloride monomer	C	200	450	C			C	C	C						
Vinylidene Chlo-ride monomer	C	200	450	C		B		C	C						
Water, acid mine	212	212	212	A	A	B	B	212	212	212	212	A	B	B	
Water, deionized	212	212	212	A	A	A		212	212	212	212	A	A	A	
Water, demineral-ized	212	212	212	A	A	A		212	212	212	212				
Water, distilled	212	212	212	A	A	B	150	212	212	212	212	A	A	A	
Water, fresh	212	212	212	A	A	A	150	212	212	212	212				
Water, potable	180	212	212	A	A	A	150	212	212	212	212	A	A	A	
Water, salt	212	212	212	A	A	A	100	212	212	212	212	A	A	A	
Water, sea	75	212	212	A	A	A	140	212	212	212	212	B	A	A	

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Water, sewage	212	212	212	A	A		140	212	212	212	212				
Water, soft		200	212	A	A			212	212	212	212	A	A	A	
Water, waste	180	212	212	A	A	A		212	212	212	212	A	A	A	
Whiskey	225	225	450		A	A	100					A	A	A	
White Liquor		230	250	A		A	100	180	180	275	275	A	A		
Wine	200	225	450	A		A	100					A	A		
Xylene	C	200	450	C	C	C	C	120	120	200	200	A	A	A	
Zinc Acetate		250	250	A		C	140					A	A		
Zinc Chloride	175	275	450	A	A	A	140	200	225	250	250	B	A	C	A
Zinc Hydrosulfite (10%)		200	450												
Zinc Nitrate	200	275	450				140	210	210	250	250	A			
Zinc Sulfate	200	275	450	A	A	A	140	210	225	275	275	A	A	C	A

A = Little / No Effect B = Some Effect, Testing is recommended C= Serve Effect, Not recommended

This resource is intended as a guideline to be used with all available information to determine suitability of material selection. We suggest thorough research which should include known applications when determining material. The information contained herein is provided only as a guide for the use of PureFlex products.
The information is based on technical data and testing that PureFlex believes to be reliable. It is intended for use by persons having technical skill, at theis own discretion and risk. PureFlex makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information.

Although recommended for thermoplastics, some services, specifically halogenated liquids / gases, are known to permeate through thermoplastic linings.

Ammonium Acetate (saturated)	125	175	450				150	C	80	275	275	B	B		
Ammonium Bifluoride	200	150	450				100	C	150			C	B	B	
Ammonium Bisulfide		280	450				A								
Ammonium Bromide (50%)		250	450					160	160						
Ammonium Carbonate (saturated)	200	275	450	A		C	125	150	160	225	250	B	B	B	A
Ammonium Chloride (saturated)	200	275	450	A	A	C	150	210	210	225	250	B	B	B	B
Ammonium Dichromate	125	250	450	A			A								
Ammonium Fluoride (10%)	200	275	450				70	C	150			C		A	B
Ammonium Flouride (25%)	200	275	450				C	C	150			C			
Ammonium Flouride (saturated)	200	275	450				C	C	150	C	120				
Ammonium Hydroxide (1%)	200	225	450	A	A	A	175	150	180	200	200	A	B	A	
Ammonium Hydroxide (10%)	200	225	450	A	A	A	150	150	160	200	200	A		A	
Ammonium Hydroxide (30%)	200	225	450	A	A	A	150	100	100	200	200	A		A	A
Ammonium Metaphosphate	150	275	450	A			130								
Ammonium Nitrate (saturated)	150	275	450	A		C	B	225	250	210	210	A	A	A	
Ammonium Persulfate	150	75	450	A			A	180	180	100	120	A	C	A	A
Ammonium Phosphate	200	275	450	A	A	A	150	210	210	225	250	A	B	A	
Ammonium Sulfate (saturated)	200	275	450	A	A	A	175	230	250	275	275	B	B	B	A
Ammonium Sulfide	150	125	450				70	120	120	100		B	B		
Ammonium Thiocyanate	150	275	450	A			A	100	120			A	B	A	
Amyl Acetate	75	125	450	A	C	C	C	80	80	150	180	A	A	A	C
Amyl Alcohol	75	275	450	A	A	C	175	150	150	175	175	A		A	A
n-Amyl Chloride	C	275	450	C		C	C	120	120	100		B	A	B	C
Aniline	125	125	450	B	C	C	B	C	C	150	180	A	B	B	B
Aniline Hydrochloride (10%)	C	75	450	B		C	B	180	200	100	100	C	A		

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Antimony Trichloride	150	75	450	A			100	200	200	150		C	A		
Aqua Regia	C	75	450	C		C	C					C		C	B
Argon			450	A		B						A	A	A	
Arsenic Acid	200	275	450	A		A	B	100	120			B	A	A	
Aryl Sulfonic Acid	150		450												
Barium Carbonate	200	275	450	A			150	250	250	275	275	A	A	A	A
Barium Chloride	200	275	450	A	A	A	150	210	210	275	275	C	A	A	A
Barium Hydroxide	200	275	450	A	A	A	125	150	160	225	250	A	A	A	A
Barium Nitrate		275	450			B	150					A			B
Barium Sulfate	200	275	450	A		A	175	230	250	275	275	A	A	A	A
Barium Sulfide	200	275	450	A	A	B	140	180	180	275	275	A	A		
Beer	200	225	450	A	A	A	175	200	200	250	275	A	A	A	A
Beet Sugar Liquors	150	225	450	A	A	A	150	160	180			A	A		
Benzaldehyde	75	75	450	B		C	C	70	70	200		A	B	A	A
Benzene	C	150	450	C	C	C	C	C	C	180	200	B	A	B	A
Benzene Sulfonic Acid	75	125	450	C		C	C	125	125	70	70	B	A		
Benzoic Acid	150	225	450			B	75	210	210	200	200	A	A	A	A
Benzoyl Chloride		150	450	C		C									
Benzyl Alcohol	125	250	450	B				100	100	150	180	A	A		
Benzyl Chloride	75	275	450	C		C		80	80	150	180				
Bismuth Carbonate	200	275	450	A											
Black Liquor		175	450	C	C	B	100	180	200	230	250	A	B		
Blood			300					220	250			A	A	A	
Borax	200	275		A	A	B	150	210	210			A	A	A	A
Boric Acid	200	275	450	A	A	A	150	210	210	250	250	B	A	A	B
Brine (acid)	200	275	450	A	A			210	210	275		C	C	B	B
Brine (basic)	200	275	450	A	A			250	250	275					
Bromine (dry gas)	C	150	450	C	C	C	C	80	80	C	C	C	C	B	C
Bromine (water-3% saturated)	75	200	450	C	B	C	C	100	100	75	75	C	A	B	B
Bromine (liquid)	C	150	450	C	C	C	C	C	C	C	C	C	C	B	C
mono-Bromoben-zene	C	150	450	C		C									
Bromoform	C	150	450							185	200				
m-Bromotoluene	C	175	450												
Butadiene	C	250	450	C		C	B			200	200	A	A	A	
Butane	C	250	450	C	A	C	B	100	120	100	100	A	A	B	
Butanediol	200	250	450												

Butanol (Butyl Alcohol)	200	250	450	B		B	B	120	130	200	200	A		A	
Butyl Acetate	C	75	450	C	C	C	C	C	C	175	175	B	A	B	
Butyl Acrylate	C	125	450	C			C	C	C						
Butyl Bromide	C	275	450												
n-Butyl Chloride	C	275	450									B	B		
Butyl Mercaptan		275	450												
Butyl Phenol	C	225	450												
Butyl Phthalate	125	C	450			A		200	210	125	125				
Butyraldehyde		150	450	B		B		100	100			B		A	A
Butyric Acid	200	225	450	B		C	C	120	120	100	100	B	A	A	A
Calcium Bisulfide	200	275	450			C	150								
Calcium Bisulfite	200	275	450	C		A	100	180	180	100	100	A	C	A	A
Calcium Carbonate	200	275	450	A		A	120	180	180	275	275	A	A	A	A
Calcium Chlorate	200	275	450	B			100	230	250	200	200	A	A	B	
Calcium Chloride	200	275	450	A	A	A	75	230	250	275	275	C	A	A	B
Calcium Chlorite	150	200	450												
Calcium Hydroxide	200	275	450	A	A	A	100	150	210			B	B	A	A
Calcium Hypochlorite	200	200	450	A	B	B	75	150		C	C	C	C	B	A
Calcium Nitrate	200	275	450	A		B	150	210	210	275	275	A	A		
Calcium Oxide	200	250	450	A		A	B								
Calcium Sulfate	200	275	450	A			100	230	250	275	275	A		B	A
Calcium Sulfide		225	450	A		B	125					B			
Cane Sugar Liquors	75	275	450	A	A	A	175	160	180	250	250	A	A	A	
Caprylic Acid	125	175	450					200	210	100	100				
Carbon Bisulfide	C	75	450	C		C	C					B			A
Carbon Dioxide	200	275	450	B	A	B	175	250	275	275	275	A	A	A	A
Carbon Disulfide	200	75	450	C	C	C	C	C	C	150	175	A	A	A	
Carbon Monoxide	200	275	450	A	B	A	175	250	275	250	250	A	A	A	
Carbon Tetrachloride	C	275	450	C	C	C	C	150	180	175	175	A		B	A
Carbonic Acid	200	275	450	A		A	150	225	225			A	A	A	A
Castor Oil	125	175	450	B	A	A	150	160	160	250	250	A	A	A	
Cellosolve		280	300	B		C				150	150	A			
Chloral Hydrate	C	75	450												
Chloramine			450									B	B		
Chloric Acid			450				100					C	C	C	
Chlorinated Phenol		150	450												
Chlorine Dioxide	C	150	450	C	C	C	70	200	210			C		A	

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Chlorine, gas (dry)	C	200	300	C	C	C	100	230	250	C	C	A	A	A	C
Chlorine, gas (wet)	C	200	300	C	C	C	70	200*	C	C	C	C			
Chlorinated Water, 10 ppm		230	230			C	100	200*	C	275	275	A	A	A	A
Chlorinated Water, sat.		230	230			C	B	200*	C	C	C	C	B	B	A
Chloroacetic Acid	125	C	450	C	A	C	B	C	C	100	100	C	C		A
Chloroacetyl Chloride	C	125	450												
Chlorobenzene	C	175	450	C		C	C	C	100	200	200	A	A	A	
Chlorobenzyl Chloride	C	125	450												
Chloroform	C	125	450	C		C	C	C	C	185	185	A	A		
Chlorohydrin	C	125	450												
Chloropicrin	C	150	450												
Chlorosulfonic Acid	C	C	450	C	C	C	C	C	C	75	75	C	A	B	B
Chlorox bleach (5.5% NaOCl)	150	275	450	B		B	A	110	110				A		A
Chromic Acid, 10%	150	175	450	A	A	C	150	150	150	75	75	A to 70	B	A	A
Chromic Acid, 30%	150	175	450	A	A	C	100	C	C	C	C	B to 70	C	A	A
Chromic Acid, 40%	150	175	450	B	B	C	B	C	C	100	100	B to 70	C	A	A
Chromic Acid, 50%	150	150	450	B	B	C	C	C	C	100	100	C	C	B	A
Chromium Plating solution	125	175	450			B		130	130			C		A	
Chromium Potassium Sulfate	140	200	450	A		A						B	B		
Chromyl Chloride	125	125	450												
Citric Acid	200	275	450	A	A	A	100	210	210	225	225	A	A	A	A
Coal Gas	150	225	450		A										
Coconut Oil	125	275	450	B		A	A	200	200	275	275	A	B		
Coke Oven Gas	70	230	450	C		B						A	B		
Copper Acetate	70	250	250	A		C	A	200	210	200	200	A	B	A	
Copper Carbonate	200	275	450				A			200	200	A	A		
Copper Chloride	200	275	450	A	B	A	A	225	225	225	225	B	B	A	A
Copper Cyanide	200	275	450	A		A	A	200	200	225	225	A	A	A	A
Copper Fluoride	200	275	450				100	175	175	225	225				
Copper Nitrate	200	275	450	A			100	210	210	150	150	B	C	B	B
Copper Sulfate	200	275	450	A	A	A	150	200	250	250	250	B	C	A	A
Corn Oil	200	275	450	C	B	A	70	210	210	275	275	A	B		
Cottonseed Oil	150	275	450	C	B	A		210	210	275	275	A	B		

Cresol	C	150	450	C	B	C				120	120				
Creosote			300	C		C	C					A	A	A	
Cresylic Acid (50%)	C	150	450	C		C	C			100	100	A	A	B	A
Crotonaldehyde	C	125	450												
Crude Oil	150	275	450	C		C	100	225	250	275	275	A	B		
Cupric Chloride	200	275	450	A		A						C		C	B
Cyanoacetic Acid			450												
Cyclohexane	C	275	450	C		C	C	150	150	175	175	A	A	A	
Cyclohexanol	75	150	450	C		C	C	130	150			A			
Cyclohexanone	C	75	450	B		C	C			125	125	A	B	A	
Detergents	150		250	A		A	A	180	180	275	275	A	A		
Dextrose	200	275	450	A		A									
Diacetone Alcohol	125	75	450	A		C	C					A	A	A	
Diazo Salts	200	275	450												
1,2-Dibromo Propane		200	450												
Dibutyl Phthalate	125	C	450	A		B		210	210			A			
Dibutyl Sebacate		C	450	B		B		150	150			A			
Dichloroacetic Acid	125	125	450							100	100				
o-Dichlorobenzene	C	150	450	C		C	C	100	120	180	180	A			
Dichloroethane	75	175	450	B		C	C	C	C	185	185	A	A	C	A
Dichloroethylene (Ethylene Dichloride)	125	225	450	C				C	C	185	185	B	A	B	A
Dichloropropionic acid		125	450					75	75						
Diesel fuels	75	275	450	C		C	A	225	250	275	275	A	A		
Diethanol Amine	150	C	450					100	120	150	150				
Diethyl Amine (aq.)	75	75	450	B		B	C	C	C	100	100	A	B		
Diethyl Ether	C	125	450	C		C	C								
Diethylene Glycol Ethers	150	200	450	A		B				275	275				
Di-isobutylene	125	275	450	C		C		80	80	225	225	B			
Di-isobutylketone	75	125	450												
Dimethyl Amine (aq.)	75	75	450	C			C								
Dimethyl Aniline	C	75	450	C		C									
Dimethyl Formamide	125	C	450	B		B	C	C	C	100	100	A	A		
Dimethyl Phthalate	75	75	450	B				150	180	175	175	B			
Dimethyl Sulfate		75	450												
Disodium Phosphate	200	200	450				A								

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Dowtherm A			450	C		C		130	150			A	A		
Epichlorohydrin	125	C	450	B		C	C	C	C	100	100				
Ether	75	125	450	C	B	C	C					A	A		
Ethyl Acetate	125	C	450	B	C	B	C	80	80	150	175	A	A	B	
Ethyl Acetoacetate	C	75	450	B		B									
Ethyl Acrylate	75	75	450			B				150	175	A	A	A	
Ethyl Alcohol (Ethanol)	200	275	450	A	A	A	100	100	100	175	175	A	A	A	
Ethyl Benzene	C	125	450	C		C		100	100	185	185	A	A	A	
Ethyl Chloride	C	275	450	B	B	C	C			100	100	A	A	A	A
Ethyl Chloroac-etate	125	75	450												
Ethyl Cyanoacetate	125	75	450												
Ethyl Ether	C	125	450	C		C	C	C	C	120	120	A			
Ethyl Formate		75	450	B								B			
Ethylene Bromide	C	275	450	C		C	C					A	A	A	
Ethylene Chlorohydrin	125	75	450	A		B	C	100	100						
Ethylene Diamine	150	75	450	A		A	C								
Ethylene Dibro-mide	75	225	450	C		C									
Ethylene Dichloride	75	175	450	B		C	C	C	C	185	185	A	A	C	
Ethylene Glycol	125	275	450	A	A	A	100	210	210	275	275	A	A	A	A
Ethylene Oxide (5% aq.)	C	200	450	B		C	C					A	B	A	A
Ethylene Trichloride	C	275	450	C		C						A			
Fatty Acids	150	275	450	C		B	150	225	250	275	275	A	A	A	A
Ferric Chloride, Aq.	200	275	450	A	A	B	A	225	250	275	275	C	C	A to 175	B
Ferric Chloride + HCl	200	275	450	A		B		150	180	275	275				
Ferric Hydroxide	180	250	450				140					A	A		
Ferric Nitrate	200	275	450	A		B	140	210	210	275	275	A	C	A	A
Ferric Sulfate	200	275	450	A	A	B		210	210	275	275	C	C	B	B
Ferrous Chloride	200	275	450	A			A	225	225	275	275	C		B	A
Ferrous Chloride + HCl	200	275	450	A				210	210	275	275				
Ferrous Hydroxide	200	250	250				150					A			
Ferrous Nitrate	200	275	450	B			140	210	210	275	275	A			
Ferrous Sulfate	200	275	450	A			150	210	210	275	275	C	A	B	A
Fish Solubles	75	150	450												

Flourine Gas, Dry	C	C		C		C	C	80	75			A	A	A	
Flourine Gas, Wet				C		C	C	75	75			A	A		
Fluoboric Acid	150	275	450			C	100	C	210	C	75	C		A	C
Fluosilicic Acid	150	275	450	A		C	B	C		C	75	B	A	A	C
Formaldehyde (37%)	175	125	450	A	A	B	100	75	75	150	180	A	A	A	A
Formaldehyde (50%)	175	125	450	A	A	B	A			150	180	A	A	A	A
Formic Acid	125	250	450	A	A	B	75	100	100	100	120	C	A	A	C
Freon1 Fluorocar-bons	C	200	450			C	A	100	100	75	75	A	A		
Fructose	200	200	450				140								
Fruit Juices Pulp	200	200	450			A	A								
Fuel Oil	75	275	450	C	B	C	A	200	210	275	275	B		A	A
Furfural	C	75	450	B	B	C	C	C	C	100	100	A	A	B	
Gallic Acid	200	75	450	B		C	B	100	100			A	A	A	
Gas (manufactured)	150	275	450	C	C	C									
Gas (Natural)	150	275	450	C	C	C	A	200	200	275	275				
Gasoline, Leaded	75	275	450	C	C	C	B			250	250	A	A	A	C
Gasoline, Unleaded	75	275	450	C	C	C	C			250	250	A	A	A	C
Gasahol	C	280	280	C	C			110	110			A	A	A	
Gasoline, Sour	C	280	280	C	C	C	A					A	C	A	C
Gelatin	200	250	450	A	A	A	100	200	210			C			
Gin	200	200	450				100								
Glucose	200	275	450	A	A	A	150	220	250	275	275	A	A	A	
Glue		250	250	B	A	A						A	A	A	
Glycerin	200	275	450	A	A	A	140	210	210	275	275	A	A	A	A
Glycol		280	300	A		A		210	210			A	A	A	
Glycolic Acid	150	75	450			A	B	100	100	100	100	A	B		
Gypsum		275	350									A	A	A	
Heptane	C	275	450	C		C	B	210	210	225	225	A	A	A	
n-Hexane	75	275	450	C		C	B	160	160	175	180	A	A		
Hexanol		175	300			B						A	A	A	
Hydraulic Oil			300	C		B	A	100	100	250	250	A	A		
Hydrazine Dihydrochloride		75	450									A	A		
Hydriodic Acid (40%)	200	275	450					150	150						
Hydrobromic Acid (10%)	200	275	450	A	A	C	80	180	180	150	150	C	C	A	A
Hydrobromic Acid (50%)	200	275	450	A	A	C	80	150	150	100	100	C	C	B	C

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Hydrochloric Acid (10%)	200	275	450	A	A	C	140	225	225	200	200	C	C	A	C
Hydrochloric Acid (20%)	200	275	450	A	A	C	140	225	225	200	200	C	C	A	C
Hydrochloric Acid (35%)	200	275	450	C	B	C	100	180	180	150	150	C	C	B	C
Hydrocyanic Acid	150	275	450	B	A	B	140	210	210	100	100	C	A	C	A
Hydrofluoric Acid (20%)	200	250	450	C	A	C	100	C	100	C	C	C	A	B	C
Hydrofluoric Acid (30%)	200	250	450	C	A	C	B	C	C	C	C	C	C	B	C
Hydrofluoric Acid (37%)	200	250	450	C	A	C	C	C	C	C	C	C	C	B	C
Hydrofluoric Acid (48%)	200	225	450	C	B	C	C	C	C	C	C	C	C	B	C
Hydrofluoric Acid (60%)	200	200	450	C	B	C	C	C	C	C	C	C	C	C	C
Hydrofluoric Acid (100%)	C	200	450	C	B	C	C	C	C	C	C	C	C	C	C
Hydrofluosilicic Acid	150	275	450	A		C	A	C	180	C	C	B	A	C	
Hydrogen	175	275	450	A			140					A	A	A	
Hydrogen Chloride (dry gas)	175	275	450					225	250	150	150				
Hydrogen Cyanide	C	C	450			B									
Hydrogen Fluoride (gas)	75	200	450	A						C	C				
Hydrogen Peroxide (3-8%)	C	200	450	B	B	A	100	75	75	75	75	A	A	A	B
Hydrogen Peroxide (30%)	C	200	450	B	B	B	70	C	C	75	75	A	B	B	B
Hydrogen Peroxide (90%)	C	70	450	C	A	B	B	C	C						
Hydrogen Sulfide (dry)	175	275	450	A	A	B	150	210	210	150	150	A	A	A	
Hydrogen Sulfide (wet)	175	225	450	A	A	B	A	175	175	150	150	A	B	B	A
Hydroquinone	150	250	450	C			100					B			
Hypochlorous Acid	150	75	450	B			140			C	C	C			
Iodine (gas)		150	450	B			B	180	180			C	A	A	
Iodine (10%)	75	150	450	B			B								
Iodoform	75	200	450	A		C	A								
Isobutane			140									A	A	A	
Isobutyl Alcohol		250	450	A		A		100	120			A			
Isooctane	75	250	300	C		C	A	180	180			A	A	A	