



DEACON INDUSTRIAL SUPPLY COMPANY, INC.

BUTTERFLY VALVES MATERIAL SELECTION GUIDE

This chemical resistance guide has been compiled to assist in selecting chemical resistant materials. The information given is intended as a **guide only**. Many conditions can affect the material choices. Careful consideration must be given to temperature, pressure and chemical concentrations before a final material can be selected.

CHEMICALS	STEM & DISC MATERIAL										SEAT MATERIAL					
	NICKEL PLATED DUCTILE IRON	416 SS	316 SS	MONEL	MANGANESE BRONZE	ALUMINUM BRONZE	LEAD	ALLOY 20	HASTELLOY C	PVF	BUNA-N	NEOPRENE	HYPALON	VITON	EPT	NATURAL RUBBER
Acetaldehyde	U	U	E	E	U	U	E	E	E	G	G	F	U	F	E	U
Acetic Acid - Crude	U	U	E	F	U	U	F	E	E		G	E	E			
Acetic Acid - Pure	U	U	E	F	F	F	F	E	E	E	G	E	E			
Acetic Acid - 10%	U	U	E	F	U	U	F	E	E		G	E	E			
Acetic Acid - 80%	U	U	E	F	U	U	F	E	E		G	E	E			
Acetic Acid - Anhydride	U	U	E	F	U	U	F	E	E	U	U	E	E	U	F	F
Acetone	G	G	E	E	E	E	G	E	E	U	U	U	U	U	E	F
Acetophenone	U	U	G	E	U	U	E			F	U				E	
Acetylene	G	E	E	E	E	E	G	E	U		G	F	F	E		F
Acrylonitrile	G	G	E	E	E	E	E			U	U	F	F	U	U	U
Air (Dry)	E	E	E	E	E	E					E	E	E	E	E	
Alcohol - Amyl	F	G	E	E	E	E	G	E	E	E	F	F	G	G	E	G
Alcohol - Butyl	F	G	E	E	E	E	G	E	E	E	F	G	G	E	F	F
Alcohol - Ethyl	U		E	E	E	E	G	E	E	E	G	G	G	G	G	G
Alcohol - Methyl	U		E	E	E	E	G	E	E		F	E	E	F	E	G
Alum - Ammonium	U		G								G	G	F	G		F
Alum - Chrome	U		G								G	G	G	G		F
Alum - Potassium	U	G				G					G					
Alumina	G	G	G	G	G	G	U	E	E		E	F	G	G	E	E
Aluminum Chloride	U	U	F	G	U	U	U	E		E	G	G	G	E	E	G
Aluminum Fluoride	U		G	G			G	E		E	G	G	G	G	E	G
Aluminum Hydroxide	U		G	G	G	G	G			E	G	G		G	G	
Aluminum Sulphate	U	G	G		U	U	U	G	E		E	E	E	E	E	E
Amines	U	F	E	G	G			E	U		U	U	U	U	F	
Ammonia Anhydrous	F		E	E	U	U	U		E	E	G	G	U	U	G	U

E - Excellent

G - Good

F - Fair

U - Unsatisfactory

CHEMICALS	STEM & DISC MATERIAL										SEAT MATERIAL						
	NICKEL PLATED	DUCTILE IRON	G-416 SS	316 SS	MONEL	MANGANEZE BRONZE	ALUMINUM BRONZE	LEAD	ALLOY 20	HASTELLOY C	PVF	BUNA-N	NEOPRENE	HYPALON	VITON	SEPT	NATURAL RUBBER
Ammonia Solutions	U	F	G	F	G	U	U	F	F	F	F	G	U	F	F	F	
Ammonium Chloride 50% 180 F	F	G	F	F	F	U	U	F	F	F	F	F	F	F	F	F	
Ammonium Hydroxide	F	G	F	F	F	U	U	F	F	F	F	F	F	F	F	F	
Ammonium Nitrate 5% 60 F	F	G	F	F	U	U	U	F	F	F	F	F	G	F	F	G	
Ammonium Phosphate	U	G	F	F	G	U	U	F	F	F	F	F	F	F	F	G	
Ammonium Sulfate 90% 180 F	U	F	G	G	G	U	U	G	G	F	F	F	F	F	F	G	
Amyl Acetate	F	G	F	F	G	G	F	F	F	F	U	U	U	U	G	U	
Amyl Chloride	F	G	F	F	G	F	F	F	F	F	U	U	U	U	U	U	
Aniline 90% 70 F	F	G	G	G	G	U	U	F	F	F	U	U	U	F	F	U	
Aniline Dyes	F	G	F	F	F	F	F	F	F	F	U	U	F	G	F	U	
Antimony Chloride	U				G			F	F	F	G	G	G	F			
Arsenic Acid	U	G	G	G	G	U	U	F	F	F	F	F	F	F	G	G	
ASTM Oil #1	F	F	F	F	F	F	F	G	F	F	F	G	G	F	F	U	
ASTM Oil #3	F	F	F	F	F	F	F	G	F	F	F	U	U	F	U	U	
ASTM Ref. Fuel A	F	F	F	F	F	G	G	G	F	F	F	G	G	F	U	U	
ASTM Ref. Fuel B	F	F	F	F	F	G	G	G	F	F	F	G	F	F	U	U	
ASTM Ref. Fuel C	F	F	F	F	F	G	G	G	F	F	F	G	F	F	U	U	
Asphalt	E	E	E	E	E	E	E	E	F	F	G	F	F	F	U	U	
Barium Carbonate 60 F	U		G	G	G	G	G		F	F	F	F	F	F	F	F	
Barium Chloride	U		G	G	G	F	G		F	F	F	F	F	F	F	F	
Barium Hydroxide	F	E	E	G	U	U		F	F	F	F	F	F	F	F	G	
Barium Sulphate 60 F	U		E	G	G	G	U		F	F	F	F	F	F	F	F	
Barium Sulphide	F	E	G	F	U	U	U	F		F	F	F	U			U	
Beer (Beverage)	U	E	E	E	F	U	U	F	F	F	G	G	E	E	E	G	
Beet Sugar Liquors	F	E	E	E	F	F	U	F	F	F	E	E	G	E	E	G	
Benzaldehyde	F	E	E	E	G	E	E	U	F	F	U	U	U	U	E	U	
Benzene (Benzol) 70 F	F	E	E	E	G	E	E	E	F	F	G	U	U	U	G	U	
Benzoic Acid 5% 70 F	U	G	E	G	G	G	U	F	F	F	E	U	U	U	E	U	
Black Sulphate Liquor	F	G	E		F	F		F			G	G	G	E	G	F	
Bleaching Powder-Wet	U	G	G		U	U		F			G	E	F			F	
Borax (Sodium Borate)	U	F	E	E	E	U	U	F	F	F	E	E	E	E	E	G	
Boric Acid 5% 200 F	U	F	E	G	F	F	F	F	F	F	F	E	E	E	F	G	
Brine (Acid)	U		G	G	G	G	G				F	E	G	G	F	U	
Brine-Chlorinated			U	G	G	G								G	G		
Bromine-Gas	U	U	U	F	G			U	F	F	U	U	U	E	U	U	
Bromine-Water	U	U	U	F				U	F	F	U	G	G	E	U	U	
Butadiene	F	G	E	E	G	G	F	F	F	F	F	F	G	G	U	U	
Butane-Butylene	G	E	E	E	E	E	F	F	F	F	G	G	G	E	U	U	
Butyl Acetate	G	E	E	E	E	E	F	F	F	F	U	U	U	U	U	U	
Butyric Acid 5% 70 F	U	G	E	G	F	G	U	F	F	F	U	U	U	G	G	U	
Calcium Bisulfite	U	G	E	U	U	U		G			F	E	E	E	U	U	
Calcium Carbonate 60 F	F		G	E	G	G	F	F	F	F	F	F	F	F			
Calcium Chlorate 20% 160 F		G	E	G	U	U		F	F	F	F	E	E				
Calcium Chloride	F	G	G	G	F	E	U	G	F	F	E	E	E				
Calcium Hydroxide 50% 175 F	F	E	E	E	U	U	G	F	F	F	G	E	E	E			
Calcium Hypochloride		G	G				G	G			U	U	E	E		U	
Calcium Sulphate 90% 60 F	F	E	E	G	E	E		F			F	F		E			
Calgon	F							F			F	E	E	E			
Caliche Liquor	U		E					F			E	E	E	E	E	E	
Cane Sugar Liquors	F	E	E	G	E	E		F			E	E					

E - Excellent G - Good F - Fair U - Unsatisfactory

CHEMICALS	STEM & DISC MATERIAL									SEAT MATERIAL						
	NICKEL PLATED DUCTILE IRON	4-16 SS	3-16 SS	MONEL	MANGANEZE BRONZE	ALUMINIUM BRONZE	LEAD	ALLOY 20	HASTELLOY C	PVF	BUNA-N	NEOPRENE	HYPALON	VITON	EPT	NATURAL RUBBER
Carbon Dioxide (Dry)	U	F	F	F	G	F	F	F	F	F	F	G	G	F	U	G
Carbon Disulfide	U	F	F	F	G	F	F	F	F	F	F	U	U	F	U	G
Carbon Tetrachloride (Dry)	U	G	G	F	G	G	F	F	F	F	F	U	U	F	U	G
Carbonic Acid	U	G	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Castor Oil	G	G	F	F	G	G	G	F	F	F	F	F	F	F	G	G
Caustic Solutions 34% 200 F	U	G	F	F	F	U	U	F	F	F	F	F	F	F	G	U
China Wood Oil (Lung)	F	F	F	F	F	F	F	F	F	F	F	G	F	F	U	U
Chlorine Gas-Dry 70 F	U	F	G	G	G	G	U	G	F	F	U	U	G	F	F	U
Chlorobenzene 90% 70 F	F	F	G	G	G	G	F	F	F	F	U	U	U	G	U	U
Chloroform 70 F	F	G	F	F	G	G	F	F	F	F	U	U	U	F	U	U
Chlorosulfonic Acid 10%	U	U	G	F	U	G	F	U	E	F	U	U	U	U	U	U
Chocolate	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Chromic Acid 5% 70 F	U	G	G	F	U	U	U	F	F	F	U	U	F	F	U	U
Citric Acid 5% 150 F	U	F	F	G	F	F	F	F	F	F	F	F	F	F	F	F
Coconut Oil (Food)	U	U	F	G	G	G	U	F	F	F	F	F	F	F	F	U
Coffee (Food)	U	U	F	G	F	F	F	F	F	F	F	F	F	F	F	F
Copper Chromate	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Copper Sulfate 80% 175 F	F	G	F	F	U	U	F	F	F	F	F	F	F	F	F	F
Corn Syrup	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Cottonseed Oil	G	F	F	F	F	F	F	F	F	F	F	F	G	G	F	U
Creosol	U	F	F	F	F	F	F	F	F	F	U	U	U	F	U	U
Creosota	F	F	F	F	F	G	G	F	F	F	G	U	U	F	U	U
Cresylic Acid	U	G	F	F	G	F	G	F	F	F	G	U	U	F	U	U
Crude Oil	G	G	F	F	F	F	F	F	F	F	F	U	U	F	U	U
Cyclonexane	F	F	F	G	G	G	F	F	F	F	U	U	U	F	U	U
Dextrose (Food)	U	U	F	F	F	F	F	F	F	F	F	F	F	F	F	F
Diacetone	U	F	F	F	F	F	F	F	F	U	U	U	U	F	U	U
Diamylamine	F	F	F	F	F	F	F	F	F	F	U	U	F	U	U	G
Dichlorethene	U	F	G	G	F	G	F	G	F	F	U	U	F	G	U	F
Diesel Fuels	F	F	F	F	G	G	F	F	F	F	F	F	F	F	U	F
Diethyl Amine	F	F	F	G	F	F	F	F	F	U	G	F	F	U	F	U
Dimethane Sulfide	F	F	F	F	F	F	F	F	F	F	F	F	F	U	G	F
Dowtherms	G	F	F	F	F	G	F	F	F	F	U	G	G	F	F	F
Drilling Mud	G	F	F	F	F	G	G	F	F	F	F	F	F	F	F	G
Ethers	U	F	G	G	G	G	F	F	F	F	U	U	U	F	F	U
Ethyl Acetate	F	G	F	F	G	G	F	F	F	F	U	U	U	U	G	U
Ethyl Chloride 5% 60 F	F	G	F	G	F	F	F	F	F	F	F	G	G	G	G	G
Ethyl Dichloride	U	F	G	G	G	G	F	F	F	F	U	U	U	F	U	F
Ethyl Glycol	G	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F
Ethylene Oxide	G	G	G	G	U	U	F	F	F	U	U	U	U	F	F	U
Ferric Chloride	U	U	U	U	U	U	U	F	U	F	F	G	G	F	F	F
Ferric Nitrate (pH7+) 5% 60 F	U	F	G	F	U	U	F	F	F	F	F	F	F	F	F	F
Ferric Suphate 5% 60 F	U	F	F	F	U	U	F	F	F	F	F	F	F	F	F	F
Ferrous Sulphate	F	G	G	F	U	U	F	F	F	F	F	F	F	F	F	F
Fluorine 70 F	U	U	F	G	U	U	G	G	F	F	G	F	G	F	F	F
Fluosilicic Acid	U	F	G	G	F	F	F	F	F	F	G	F	F	F	F	G
Formaldehyde 70 F	U	G	F	G	F	F	F	F	F	G	F	F	F	F	F	F
Formic Acid 5% 150 F	U	G	F	G	G	G	F	F	F	F	G	F	F	F	F	F
Freon 11	F	F	F	F	F	F	F	F	F	G	G	F	G	U	U	U
Freon 12	F	F	F	F	F	F	F	F	F	F	G	U	U	U	U	U

E - Excellent G - Good F - Fair U - Unsatisfactory

CHEMICALS	STEM & DISC MATERIAL										SEAT MATERIAL						
	NICKEL PLATED DUCTILE IRON	416 SS	316 SS	MONEL	MANGANEZE BRONZE	ALUMINUM BRONZE	LEAD	ALLOY 20	HASTELLOY C	PVF	BUNA-N	NEOPRENE	HYPALON	VITON	EPT	NATURAL RUBBER	
Freon 22	F	F	F	F	F	F	F	F		F	U	F	F	F	F		
Freon 113	F	F	F	F	F	F	F	F									
Freon 114	F	F	F	F	F	F	F	F		G					U		
Fructose			F											F			
Fruit Juices (Food) 70 F	U	U	F	F	U	U		F	F	F	F	F	F	F	G		
Fuel Oil	F	F	F	F	F	F	F	F	F	F	D	D	F	F	U		
Furfural	F	F	F	G	G	G		F	F	U	U	U	U	F	U		
Gallic Acid 5% 200 F	U		F	G				F	F	G	G	F	F	G	F		
Gasohol	F	G	F		G	G			F	U			G	U			
Gasoline - Regular	G	F	F	F	F	F		F	F	G		G	F	U	U		
Gasoline - Unleaded	F	F	F	F	F	F		F	F	U			F	U	U		
Gelatin (Food)	U	U	F	G	G	G		F		F	F	F	F	F	F		
Glucose	U	F	F		F	F		F		F	F	F	F	F	F		
Glycenn/Glycerol 70 F	F	F	F	G	G	G		F	F	F	F	F	F	F	F		
Heptane	F	G	F	G	F	F		F	F	F	G	G	F	U	U		
Hexane	F	G	F	G	F	F		F	F	F	G	G	F	U	U		
Hydraulic Oils	F	G	F	F	F	F		F	F	G	F	F	F	U	U		
Hydrobromic Acid 200 F	U	U	U	U	U	U	G	U	F	U	U	F	F	F	F		
Hydrochloric Acid 10% 60 F	U	U	U	F	U	U	G	U	F	F	G	G	F	G			
Hydrochloric Acid 20% 60 F	U	U	U	U	U	U	G	U	F	F	G	G	F				
Hydrochloric Acid 35% 60 F	U	U	U	U	U	U	F	U	G	F	G	G	F				
Hydrocyanic Acid	U		G	F	U	U	U	F	F	G	G	F	F	G	G		
Hydrofluoric Acid 48%	U	F	U	F	U	U	U	F	F	U	U	F	F	F			
Hydrofluoric Acid 60%	U	U	U	U	U	U	U	F	F	G	U	G	G	F	G		
Hydrofluoric Acid 100%	U	U	U	U	U	U	U	F	F	U	U	U	F				
Hydrofluosilicic Acid 5% 70 F	U	G	G	G	F	U	G	F	F	G	G	F	F	F	F		
Hydrogen	F	G	F	F	F	F	F	F	F	F	F	F	F	F	G		
Hydrogen Peroxide 90%	U	F	G	G	U	U	U	G	F	U	U	G	G	F	U		
Hydrogen Sulfide - Dry	F	F	F	G	F	F	F	F	F	F		G	G	F	G		
Hydrogen Sulfide - Wet	F	F	G	F	F	F	G	F	F			G	G	G	U		
Iodine Solution	U	U	U	U	U	U	F	U	F	F	U	G	F	G	F		
Iso-Octane	F	F	F	F	F	F		F	F	F	F	G	G	F	U		
Isopropyl Alcohol	F	F	F	F	F	F		F	F	G	F	F	F	F	F		
Isopropyl Ether	F	F	F	F	F	F		F	F	G	F	F	U	U	U		
Kerosene	F	F	F	F	F	F		F	F	F	G	U	F	U	U		
Lacquer Solution	F	F	F	F	F	F		F	F	U	U	U					
Lactic Acid 5% 70 F	U	F	G	G	U	U	F	F	F	U	G	F	F	G	G		
Lard Oil 70 F	G		F	G	G	G		F	F	F	F	U	F	U	U		
Lemon Oil	U	F	F	F	G	F	U	F	F	G	F						
Linseed Oil	F	F	F	F	F	F	F	F	F	F	F	G	F	U	U		
Lubricating Oil	F	F	F	F	F	F		F	F	F	F	G	F	U	U		
Magnesium Chloride 4% 75 F	F	F	G	G	F	F	U	F	F	F	F	F	F	F	F		
Magnesium Hydroxide	F	F	F	G	G	G		F	F	G	F	F	F	F	G		
Magnesium Sulphate 5% 120 F	F	G	F	F	F	F		F	F	F	F	F	F	F	G		
Mercuric Chloride 3% 60 F	U	U	F	U	U	U		F	F	F	F	F	F	F			
Mercuric Cyanide	U		F	U	U	U		F	F	F	F			G			
Mercurous Nitrate (pH7+)	U		G	U	U	U		F	F	F	F						
Mercury	F	F	F	F	U	U	F	F	F	F	F	F	F	F	F		
Methyl Acetate	F	G	F					F	F	U	U	U	U	G	U		
Methyl Acetone	F	F	F		F	F		F		U	U	U			U		

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CHEMICALS	STEM & DISC MATERIAL										SEAT MATERIAL							
	NICKEL PLATED	DUCTILE IRON	416 SS	316 SS	MONEL	MANGANEZE BRONZE	ALUMINUM BRONZE	LEAD	ALLOY 20	HASTELLOY C	PVF	BUNA-N	NEOPRENE	HYPALON	VITON	SEPT	NATURAL RUBBER	
Methyl Cellosolve	F																	
Methyl Chloride	G	G			G	F									G	F		
Methyl Ethyl Ketone (MEK)	F																	
Milk (Food)	U	U			F	U	U								F	U		
Mineral Oil	F					G	U						G		F	U		
Molasses (Food)	U	U				U	U					G			F	U		
Naptha	F	F			G	G	G					G	U	U	F	U	U	
Napthalene	F				G	G	G	U					U	U	F	U	U	
Natural Gas (Methane)	G																	
Nickel Ammonium Sulphate	U				F	U	U											
Nickel Chloride	U				G	G	U								F	U		
Nickel Sulphate 10% 60 F	U				E	G	G	G							F	U		
Nitric Acid 10% 70F	U				G	U	U	U					G	F	F	G	U	
Nitric Acid 30% 70 F	U				G	U	U	U					G	F	F	G	U	
Nitric Acid 60% 175 F	U				G	U	U	U					G	F	F	G	U	
Nitric Acid 70%	U	U			G	U	U	U					G	F	F	G	U	
Nitrobenzene	U				E	G									G	U		
Oils and Fats	E	E			E	G	F	F							U	U		
Oils, Fish	U	G			E	F	F					G	E	F	U	U		
Oleic Acid 100 F	U	F			G	G	G	U				F	G	G	G		U	
Oleum (Fuming Sulfuric Acid)	U	U			F							U	U	U	E	U	U	
Oxalic Acid	U	F			G	F	F	F	G	G		F	G	G	F	G	G	
Oxygen	E	E			E	E	E	E					G	E	E	E		
Ozone	U	G			E										F	E	U	
Palmitic Acid	U	G			E	G	G	G							F	G	F	
Perchloroethylene	F	G			E	G	G	G					F	U	U	E	U	
Petroleum - Refined	G				E	E	E	E							E	U	U	
Petroleum - Sour	U	G			G	G	F	F	G	E					E	U		
Phenol	U				E	E	G	G					U	U	U	G	U	
Phosgene					E								G	U	U	G	U	
Phosphoric Acid 10% 70 F	U	F			G	F	U	U	U	G	E	E	G	G	G	E	F	
Phosphoric Acid 25% 70 F	U	U			G	F	U	U	U	G	G	E	F	G	G	E	U	
Phosphoric Acid 75% 70 F	U	U			G	F	U	U	U	F	E	E	U	G	G	E	U	
Phosphorous Oxychloride	U																	
Pickling Sol. (20% Nitric - 4HF)	U				G	G							U	U	U	G	U	
Picric Acid 80% 70 F	U				G	U							G	E	E	G	G	
Polyethylene Gly. Dimeth. Ether																		
Potassium Chloride	U				G	G	F	F							U	G	U	
Potassium Cyanide	F	G			G	G	U	U							E	E	E	
Potassium Hydroxide 5% 70 F	F	G			E	E	U	U							E	E	E	
Potassium Nitrate 6% 68 F	F	G			E	G	F	F							E	E	E	
Potassium Phosphate	U				G	G	F	F							E	E		
Potassium Sulphate 7% 180 F	F	G			E	E	G	E							E	E		
Potassium Sulfide	U	G			E	F	U	U							G	G	G	
Potassium Sulfite	U				E										E	E	G	
Propane	F	E			E	E	E	E							E	U	U	
Resins and Rosins	U	E			E	G	E	E							E	U	F	
SAE #10 oil	G																	
Sea Water 70 F	U	F			G	E	G	E							E	G	F	
Sewage	U	G			E	G	G	G							E	G	F	

E - Excellent G - Good F - Fair U - Unsatisfactory

CHEMICALS	STEM & DISC MATERIAL										SEAT MATERIAL						
	MICHEL PLATED	DUCTILE IRON	416 SS	316 SS	MONEL	MANGANEZE BRONZE	ALUMINIUM BRONZE	LEAD	ALLOY 20	HASTELLOY C	PVF	BUNA-N	NEOPRENE	HYALON	VITON	CEPT	NATURAL RUBBER
Silicate Ester Synthetic Oil																	
Skydrol 500	G	E	E	E	E	E	E	E	E	E	U	U	U	U	E	U	
Soap Solution (Stearate) 70 F	U	F	E	E	E	E	E	E	E	E	E	E	E	E	E	E	
Sodium Acetate 5% 75 F	U	F	E	E	G	G	G	E	E	E	E	G	E	U	E	E	
Sodium Aluminate	U		E	E	G	G	G	E	E	E	E	E	E	E	G	G	
Sodium Bisulfate	U	F	E	E	E	E	E	E	E	E	E	E	E	E	E	E	
Sodium Carbonate 80% 60 F	U	G	E	E	E	G	G	U	E	E	E	E	E	E	E	E	
Sodium Chloride 30% 180 F	U	F	E	E	E	F	F	E	E	E	E	E	E	E	E	E	
Sodium Cyanide	U		G	U	U	U	U	E	E	E	E	E	E	E	E	E	
Sodium Fluoride 5% 60 F	U		G	G	G	F	F	U	E	E	E	E	G	E	G	G	
Sodium Hydroxide 5%	U	G	E	E	G	F	F	U	E	E	G	G	F	E	G	E	
Sodium Hydroxide 20%	U	F	E	E	E	F	F	U	E	E	G	G	U	E	G	E	
Sodium Hydroxide 50%	U	F	G	G	G	U	U	U	E	E	E	G	U	G	F	G	
Sodium Hydroxide 70%	U	U	F	F	F	U	U	U	G	G	G	F	U	U	U	F	
Sodium Hypochlorite 5% 60 F	U		G	G	G	U	U	E	G	G	F	U	E	E	G	F	
Sodium Nitrate 30% 60 F	U	G	E	E	G	G	G	E	E	E	E	G	G	E	E	G	
Sodium Perborate	U	G	G	G	G	G	G	E	E	E	E	G	G	G	E	G	
Sodium Peroxide	U	G	E	E	G	U	U	E	E	E	E	G	G	G	E	G	
Sodium Phosphate 5% 60 F	U	G	E	E	G	F	F	E	E	E	E	E	G	E	E	E	
Sodium Silicate	U	G	E	E	G	G	G	E	E	E	E	E	E	E	E	E	
Sodium Sulphate 80% 60 F	U	G	E	E	G	G	G	U	E	E	E	E	E	E	E	G	
Sodium Sulfide 70% 70 F	U	G	E	E	E	U	U	F	E	E	E	E	E	E	E	G	
Sodium Sulfite 5% 70 F	U		E	E	G	U	U	E	E	E	E	E	E	E	E	G	
Steam 225 F	U	U	E	E	E	E	E	U	E	E	E	U	U	U	G	U	
Steam 300 F	U	U	E	E	E	G	G	U	E	E	E	U	U	U	U	U	
Stearic Acid 90% 200 F	U	G	E	E	G	F	F	U	E	E	E	G	G	G	E	G	
Steep Water													G	G		U	
Styrene (Fumes)			E								U			E	G	U	
Sulfamic Acid										E			E		G		
Sulphur (Molten)	U	F	G	U	U	U	U	E	E	E	U	F	U	G	F	U	
Sulphur Dioxide 60 F	U	G	E	E	F	F	U	E	E	E	E	U	G	F	E	G	
Sulphur Trioxide	U	G	E	E							U	U	U	E	G	G	
Sulfuric Acid 7-7% 70 F	U	F	G	F	U	U	U	E	E	E	E	U	G	E	U	U	
Sulfuric Acid 7-40% 70 F	U	U	U	U	U	U	U	E	G	G	E	U	U	E	U	U	
Sulfuric Acid 40-75% 70 F	U	U	U	U	U	U	U	E	G	G	E	U	U	G	G	U	
Sulfuric Acid 75-95%	U	U	U	U	U	U	U	G	U	U	E	U	U	U	G	U	
Sulfuric Acid 95-100%	U	U	U	U	U	U	U	G	U	U	E	U	U	G	G	U	
Sulphurous Acid 80% 100 F	U	U	G	F	U	U	U	E	E	E	G	U	U	E	E	U	
Tall Oil	G	G	E	G				E	E	E	E	G	G		E	E	
Tannic Acid 150 F	U	F	E	E	G	G	G	E	E	E	G	E	G	G	E	E	
Tar	F	E	E	E	E	E	E	E	E	E	F	F	F	E	E	U	
Tartaric Acid 150 F	U	G	E	E	G	F	G	E	E	E	G	G	G	E	E	G	
Toluol and Toluolene	G	E	E		E	E	E	E	E	E	G	U	U	U	E	U	
Toluene Sulfomic Acid			U								U			G			
Transformer Oil											U			E	U		
Tributyl Phosphate	G	F	E					E			E	U	U	U	E	G	
Trichloroacetic Acid	U	U	U	G	U	G					F	G	U	U	F	G	
Trichloroethylene	F	U	E	G	F	G		E			G	U	U	U	E	U	
Triethinolamine	U	U	E	G							G	F	E	E	U	G	
Trisodium Phosphate	U	U	G	G	F	F	E				E	F	F				

E - Excellent G - Good F - Fair U - Unsatisfactory

CHEMICALS	STEM & DISC MATERIAL									SEAT MATERIAL							
	NICKEL PLATED	DUCTILE IRON	416 SS	316 SS	TITANUM	MANGANESE BRONZE	ALUMINUM BRONZE	LEAD	ALLOY 20	HASTELLOY C	PVF	BUNA-N	NEOPRENE	HYPALON	VITON	CEPT	NATURAL RUBBER
Tung Oil	C	C	C	E	T	E			E	E	E	E	E	E	E	E	C
Turpentine	C	C	C	E	T	E			E	E	E	E	E	E	E	E	C
Vinegar 70 F	C	C	C	E	T	E			E	E	E	E	E	E	E	E	C
Water, Acid-Mine	U			E	T	E			E	E	E	E	E	E	E	E	C
Water - Deionized				E	T	E			E	E	E	E	E	E	E	E	C
Water - Demineralized	U			E	T	E			E	E	E	E	E	E	E	E	C
Water - Fresh 180 F	G	E	E	E	T	E			E	E	E	E	E	E	E	E	C
Water - Fresh 225 F	G	E	E	E	T	E			E	E	E	E	E	E	E	E	C
Water - Salt 180 F	U	U	G	E	T	E			E	E	E	E	E	E	E	E	C
Water - Sewage 80 F	U	G	E	E	T	E			E	E	E	E	E	E	E	E	C
Whiskey and Wines	U	U	E	E	T	E			E	E	E	E	E	E	E	E	C
White Liquor	U			E	T	E			E	E	E	E	E	E	E	E	C
Xylene, Xylol	F	E	E			E			E	E	E	E	E	E	E	E	C
Zinc Chloride 5% 160 F	U	U	F	G	U	U	U	G	G	E	E	E	E	E	E	E	C
Zinc Phosphate			G							E	E	E	E	E	E	E	C
Zinc Sulphate 25% 180 F	U	G	E	G	G	G	E	E	E	E	E	E	E	E	E	E	C

This chemical resistance guide has been compiled to assist in selecting chemical resistant materials. The information given is intended as a **guide only**. Many conditions can affect the material choices. Careful consideration must be given to temperature, pressure and chemical concentrations before a final material can be selected.