

MATERIAL DATA



VICTREX™ PEEK

CHEMICAL RESISTANCE



Chemical 23°C 100°C 200°C

ETHERS			
Diethylether	A	A	
Dioxane	A		
Ether	A	A	
Ethylene Oxide (EtO)	A		
Tetrahydrofuran (THF)	A		
HALOGENATED ORGANICS			
1,1,1 Trichloroethane (Genklene ¹)	A		
1,2 Dichloroethane	A		
Carbon Tetrachloride	A	A	
Chorobenzene	A	A	
Chloroform	A	A	
Dibromoethane	A		
Dichlorobenzene	A		
Dichloroethane	A		
Ethylene Dichloride	A		
Freon ² 11 Trichlorofluoromethane	A		
Freon 113 Trichlorotrifluoroethane	A		
Freon 114 1,1 Dichloro 1,2,2,2 Tetrafluoroethane	A		
Freon 12 Dichlorodifluoromethane	A		
Freon 22 Chlorodifluoromethane	A	A	
Freon 134a	A		
Freon 502	A	A	
Methylene Chloride	A		
Perchloroethylene	A	A	
Trichloroethylene	A	A	
HYDROCARBONS			
Acetylene	A	A	
Aromatic Solvents	A	A	
Aviation Hydraulic Fluid	A		
Benzene	A	A	
Brake Fluid (Mineral)	A	A	A
Brake Fluid (Polyglycol)	A	A	A
Butane	A		
Crude Oil	A		
Cyclohexane	A	A	
Diesel Oil	A		
Dowtherm ³ A			C
Dowtherm G			B
Dowtherm HT			B
Dowtherm LF			B
Ethane	A		
Fuel Oil	A		
Gas (Manufactured)	A		
Gas (Natural)	A		
Gasoline	A	A	
Heptane	A		
Hexane	A		
Hydraulic Fluid	A		
Iso-Octane	A		

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HYDROCARBONS (CONT.)			
Kerosene	A		
Lubricating Oil	A		
Methane (Gas)	A	A	A
Motor Oil	A	A	A
Naphtha	A	A	
Naphthalene	A	A	
Oils (Petroleum)	A	A	
Oils (Vegetable)	A	A	
Pentane	A		
Petroleum Ether	A		
Propane	A		
Skydrol ⁴ Hydraulic Fluid	A		
Styrene (Liquid)	A		
Toluene	A		
Transformer Oil	A	A	
Vaseline ⁵	A		
Xylene	A		
INORGANICS			
Aluminum Chloride	A	A	
Aluminum Sulfate	A	A	
Alum, Saturated	A	A	
Ammonium Chloride, 10% Conc.	A	A	
Ammonium Nitrate	A	A	
Antimony Trichloride	A	A	
Barium Salts (Chloride, Sulfide)	A		
Bleach	A	A	
Brine	A	A	
Bromine	C	C	C
Bromine (Dry)	C	C	C
Bromine (Wet)	C	C	C
Bromine Water, Saturated	A	A	
Calcium Bisulfide	A	A	
Calcium Carbonate	A		
Calcium Chloride	A	A	
Calcium Hypochlorite	A	A	
Calcium Nitrate	A		
Calcium Sulfate	A	A	
Carbon Dioxide (Dry)	A		
Carbon Monoxide (Gas)	A	A	A
Chlorine	C	C	C
Copper Acetate	A	A	
Copper Carbonate	A	A	
Copper Chloride	A	A	
Copper Cyanide	A	A	
Copper Fluoride	A	A	
Copper Nitrate	A	A	
Copper Sulfate	A	A	
Cupric Fluoride	A	A	
Cupric Sulfate	A	A	
Cuprous Chloride	A	A	

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INORGANICS (CONT.)			
Ethylene Nitrate	A		
Ferric Chloride	B	B	
Ferric Nitrate	A		
Ferric Oxide	A	A	
Ferric Sulfate	A		
Ferrous Chloride	A		
Ferrous Nitrate	A		
Ferrous Sulfate	A	A	
Fluorine	C	C	C
Hydrogen Peroxide	A	A	
Hydrogen Sulfide (Gas)	A	A	A
Iodine	B		
Lead Acetate	A	A	
Lime	A	A	
Magnesium Chloride	A	A	
Magnesium Sulfate	A	A	
Mercuric Chloride	A	A	
Mercurous Chloride	A		
Mercury	A	A	
Nickel Acetate	A	A	
Nickel Chloride	A	A	
Nickel Nitrate	A	A	
Nickel Salts	A		
Nickel Sulfate	A	A	
Nitrogen	A		
Nitrous Oxide	A		
Oxygen	A		
Ozone	A	B	
Phosphorous Chlorides	A	A	
Phosphorous Pentoxide	A	A	
Potassium Aluminum Sulfate	A	A	
Potassium Bicarbonate	A		
Potassium Bromide	A	A	
Potassium Carbonate	A		
Potassium Chlorate	A	A	
Potassium Chloride	A	A	
Potassium Dichromate	A		
Potassium Ferricyanide	A		
Potassium Ferrocyanide	A		
Potassium Hydroxide	A	A	
Potassium Nitrate	A	A	
Potassium Permanganate	A		
Potassium Sulfate	A	A	
Potassium Sulfide	A		
Silicone Fluids	A	A	
Silver Nitrate	A	A	
Sodium Acetate	A		
Sodium Bicarbonate	A		
Sodium Carbonate	A	A	
Sodium Chlorate	A	A	

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INORGANICS (CONT.)			
Sodium Chloride	A	A	
Sodium Hypochlorite	A	A	
Sodium Nitrate	A	A	
Sodium Nitrite	A		
Sodium Peroxide	A	A	
Sodium Salts	A		
Sodium Silicate	A	A	
Sodium Sulfate	A	A	
Sodium Sulfide	A	A	
Sodium Sulfite	A	A	
Sodium (Hot)	C	C	C
Stannic Chloride	A	A	
Stannous Chloride	A	A	
Steam	A	A	A
Sulfites	A	A	
Sulfur	A	A	
Sulfur Chloride	A	A	
Sulfur Dichloride	A	A	
Sulfur Dioxide	A	A	A
Sulfur Hexafluoride (Gas)	A		
Sulfur Trioxide	A	A	
Tar	A		
Tetraethyl Lead	A		
Water, Distilled	A	A	
Water	A	A	A
Water, Sea / Salt	A	A	
Zinc Chloride	A	A	
Zinc Sulfate	A	A	
MISCELLANEOUS			
Adhesives (not cyanoacrylates)	A		
Apple Juice	A		
Aviation Spirit	A		
Beer	A	A	
Cooking Oil	A		
Creosote	A		
Detergent Solutions (non-phenolic)	A	A	
Edible Fats and Oils	A		
Fatty Acids	A	A	
Fruit Juice	A	A	
Gelatin	A	A	
Ketchup	A		
Linseed Oil	A		
Milk	A	A	
Mineral Oil	A		
Molasses	A	A	
Olive Oil	A	A	
Peanut Oil	A	A	
Paraffin	A	A	
Sewage	A	A	

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MISCELLANEOUS (CONT.)			
Soap Solution	A		
Starch	A	A	
Tallow	A	A	
Turpentine	A		
Urea	A	A	
Varnish	A		
Vinegar	A	A	
Wax	A		
White Spirit	A		
Wines and Spirits	A		
Yeast	A	A	

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ORGANO-NITROGENS			
Acetonitrile	A		
Aniline	A	B	
Dimethyl Formamide (DMF)	A		
Diethylamine	A		
Nitrobenzene	A		C
Pyridine	A	A	
PHENOLS			
Phenol, Conc.	C	C	C
Phenol, Dilute	A		
SULFUR COMPOUNDS			
Carbon Disulfide	A	A	
Dimethylsulfoxide (DMSO)	B	B	
Diphenylsulfone (DPS)	B	C	C
Ethylene Sulfate	A		

KEY AND INTERPRETATION

Test bars of unfilled PEEK were immersed in chemicals at constant temperature for a minimum of 7 days (concentrated, unless otherwise stated). Chemical compatibility was assessed via retention of mechanical properties, supplemented by weight or dimensional changes when applicable. Compatibility was then classified into A, B, or C which should be interpreted as follows:

- A – No interaction. Victrex materials are likely to operate in these chemicals. It is nevertheless recommended to validate the application performance.
- B – Slight interaction. Victrex materials could be used in some applications exposed to these chemicals. It is necessary to evaluate the application specific performance criteria.
- C – Severe interaction. Victrex materials should only be considered for applications with exposure to these chemicals under exceptional circumstances.

¹ Genklene is a registered trademark of ICI
² Freon is a registered trademark of DuPont
³ Dowtherm is a registered trademark of Dow Chemical
⁴ Skydrol is a registered trademark of Monsanto
⁵ Vaseline is a registered trademark of Chesebrough-Pond's, Inc.



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