



Chemical Resistance PCTFE

PCTFE is often used in Aerospace applications due to its extreme low outgassing value. PCTFE is also ideal for cryogenic applications. Products out of PCTFE have excellent physical, mechanical and electrical properties, heat resistance, chemical resistance and low moisture absorption.

Note: The chemical resistance of each polymer is mainly determined by the chemical structure of the material and the strength of the weakest link in this specific structure.

Chart codes

R = Resistant, **LR = Limited Resistance,** **NR = Not Recommended,** **ND = No Data**

Actual properties may change due to processing method, compound type, extruded dimensions and other variables. It is the user's responsibility to evaluate and fully test the suitability of the product for their specific application.

Chemical	Resistance		
	20°C/68°F	60°C/140°F	100°C/212°F
Acetaldehyde	R	R	ND
Acetic acid (10%)	R	R	R
Acetic acid (glac./anh.)	R	R	R
Acetic anhydride	R	R	NR
Aceto-acetic ester	ND	ND	ND
Acetone	R	R	NR
Other ketones	R	R	NR
Acetonitrile	ND	ND	ND
Acetylene	ND	ND	ND
Acetyl salicylic acid	ND	ND	ND
Acid fumes	R	R	R
Alcohols	R	R	R
Aliphatic esters	R	NR	R
Alkyl chlorides	R	ND	ND
Alum	R	R	R
Aluminium chloride	R	R	R
Aluminium sulphate	R	R	R
Ammonia, anhydrous	R	R	R
Ammonia, aqueous	R	R	R

Chemical	Resistance		
Ammonium chloride	R	R	R
Amyl acetate	R	R	NR
Aniline	R	R	ND
Antimony trichloride	ND	ND	ND
Aqua regia	R	R	R
Aromatic solvents	R	R	NR
Ascorbic acid	ND	ND	ND
Beer	R	R	ND
Benzaldehyde	R	R	R
Benzene	R	R	NR
Benzoic acid	R	R	R
Benzoyl peroxide	R	R	ND
Boric acid	R	R	R
Brines, saturated	R	R	R
Bromide (K) solution	R	R	R
Bromine	R	R	R
Bromine liquid, tech.	R	R	R
Bromine water, saturated aqueous	R	R	R
Butyl acetate	R	R	R
Calcium chloride	R	R	R
Carbon disulphide	R	R	ND
Carbonic acid	R	R	R
Carbon tetrachloride	R	NR	NR
Caustic soda & potash	R	R	R
Cellulose paint	ND	ND	ND
Chlorates of Na, K, Ba	R	R	R
Chlorine, dry	R	R	R
Chlorine, wet	R	R	R
Chlorides of Na, K, Ba	R	R	R
Chloroacetic acid	R	R	R
Chlorobenzene	R	NR	NR

Chemical	Resistance		
Chloroform	R	NR	NR
Chlorosulphonic acid	R	R	ND
Chromic acid (80%)	R	R	R
Citric acid	R	R	R
Copper salts (most)	R	R	R
Cresylic acids (50%)	R	R	ND
Cyclohexane	R	R	R
Detergents, synthetic	R	R	R
Emulsifiers, concentrated	R	R	R
Ether	NR	NR	NR
Fatty acids (>C6)	R	R	R
Ferric chloride	R	R	R
Ferrous sulphate	R	R	R
Fluorinated refrigerants	R	NR	NR
Fluorine, dry	R	R	R
Flourine, wet	R	R	NR
Fluorosilic acid	ND	ND	ND
Formaldehyde (40%)	R	R	ND
Formic acid	R	NR	NR
Fruit juices	R	R	R
Gelatine	R	R	ND
Glycerine	R	R	R
Glycols	R	R	R
Glycol, ethylene	R	R	NR
Glycolic acid	ND	ND	ND
Hexamethylene diamine	ND	ND	ND
Hexamine	R	R	ND
Hydrazine	ND	ND	ND
Hydrobromic acid (50%)	R	R	R
Hydrochloric acid (10%)	R	R	R
Hydrochloric acid (conc.)	R	R	R

Chemical	Resistance		
Hydrocyanic acid	R	R	ND
Hydrofluoric acid (40%)	R	R	R
Hydrofluoric acid (75%)	R	R	R
Hydrogen peroxide (30%)	R	R	R
Hydrogen peroxide (30 - 90%)	R	R	ND
Hydrogen sulphide	R	R	R
Hypochlorites	R	R	R
Hypochlorites (Na 12-14%)	ND	ND	ND
Iso-butyl-acetate	R	R	R
Lactic acid (90%)	R	R	R
Lead acetate	ND	ND	ND
Lead perchlorate	ND	ND	ND
Lime (CaO)	R	R	R
Maleic acid	R	R	R
Manganate, potassium (K)	R	R	R
Meat juices	R	R	ND
Mercuric chloride	R	R	R
Mercury	R	R	R
Methanol	R	R	R
Methylene chloride	ND	ND	ND
Milk products	R	R	R
Moist air	R	R	R
Molasses	R	R	R
Monoethanolamine	ND	ND	ND
Naptha	R	NR	NR
Napthalene	NR	NR	NR
Nickel salts	R	R	R
Nitrates of Na, K and NH3	R	R	R
Nitric acid (<25%)	R	R	ND
Nitric acid (50%)	R	R	R
Nitric acid (90%)	R	R	R

Chemical	Resistance		
Nitric acid (fuming)	R	R	R
Nitrite (Na)	R	R	R
Nitrobenzene	R	R	R
Oils, diesel	R	R	R
Oils, essential	ND	ND	ND
Oils, lubricating + aromatic additives	R	R	R
Oils, mineral	R	R	R
Oils, vegetable and animal	R	R	ND
Oxalic acid	R	R	R
Ozone	R	R	R
Paraffin wax	R	R	R
Perchloric acid	R	R	R
Petroleum spirits	R	R	R
Phenol	R	R	ND
Phosphoric acid (20%)	R	R	R
Phosphoric acid (50%)	R	R	R
Phosphoric acid (95%)	R	R	R
Phosphorous chlorides	R	ND	ND
Phosphorous pentoxide	ND	ND	ND
Phthalic acid	R	R	ND
Picric acid	ND	ND	ND
Pyridine	R	R	ND
Salicyl aldehyde	ND	ND	ND
Sea water	R	R	R
Silicic acid	R	R	R
Silicone fluids	R	R	R
Silver nitrate	R	R	R
Sodium carbonate	R	R	R
Sodium peroxide	R	R	R
Sodium silicate	R	R	R
Sodium sulphide	R	R	R

Chemical	Resistance		
Stannic chloride	R	R	R
Starch	R	R	R
Sugar, syrups & jams	R	R	R
Sulphamic acid	ND	ND	ND
Sulphates (Na, K, Mg, Ca)	R	R	R
Sulphites	R	R	R
Sulphonic acids	ND	ND	ND
Sulphur	R	R	R
Sulphur dioxide, dry	R	R	R
Sulphur dioxide, wet	R	R	R
Sulphur dioxide (96%)	R	R	R
Sulphur trioxide	ND	ND	ND
Sulphuric acid (<50%)	R	R	R
Sulphuric acid (70%)	R	R	R
Sulphuric acid (95%)	R	R	R
Sulphuric acid, fuming	R	R	R
Sulphur chlorides	ND	ND	ND
Tallow	R	R	R
Tannic acid (10%)	R	R	R
Tartaric acid	R	R	R
Trichlorethylene	NR	NR	NR
Urea (30%)	ND	ND	ND
Vinegar	R	R	R
Water, distilled.	R	R	R
Water, soft	R	R	R
Water, hard	R	R	R
Wetting agents (<5%)	ND	ND	ND
Yeast	R	R	R
Zinc chloride	R	R	R

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