

## General Chemical Resistance of PET - Products

The below data reflect the information available to the PET producers members of *PlasticsEurope*. They should not be construed as implying a legal guarantee for specific properties of the products or for their suitability for a particular application.

Chemical resistance data are for storage at room temperature of the substance in the physical state that is specified in the relevant column. When a percentage is indicated, it refers to the concentration of a solution in water, unless otherwise indicated. The meaning of the symbols for chemical resistance is:  
 1 = PET exhibits good resistance to attack; chances of successful testing are very good.  
 2 = PET has marginal resistance to attack; significant chance of container failure.  
 3 = PET exhibits poor resistance to attack; should not be considered for this application.

Substance	Physical state or concentration	PlasticsEurope
Beer	liquid	1
Brake fluid	liquid	1
Camphorated Oil	liquid	1
Carbonated Soft Drinks	liquid	1
Castor Oil	liquid	1
Cottonseed oil	liquid	1
Detergents	1%	1
Diesel Oil	liquid	1

Fruit Juices and Nectars	liquid	1
Gasoline	liquid	2
Grease	See Lubricating grease	
Kerosene	liquid	1
Linseed Oil	liquid	1
Lubricating Grease	solid	1
Medical Syrups	liquid	1
Milk and milk products	liquid	1
Mineral Oils	liquid	1
Mineral Spirits	liquid	2
Mineral water	liquid	1
Mouthwashes	liquid	1
Motor Oils	liquid	1

Naphtha Solvent	liquid	2
Olive oil	liquid	1
Paraffin (medicinal)	solid	1
Petrol	liquid	1
Petroleum Ether	liquid	1
Silicone Fluids	liquid	1
Soap Solution	1%	1
Transformer oil	liquid	1
Turpentine	liquid	1
Vaseline	solid	1
Vegetable oils	liquid	1
Vinegar	liquid	1
Water	pure (liquid)	1

White Spirit	liquid	1
Wine and Spirits	liquid	1

## General Chemical Resistance of PET - Chemicals

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Chemical resistance data are for storage at room temperature of the substance in the physical state that is specified in the relevant column. When a percentage is indicated, it refers to the concentration of a solution in water, unless otherwise indicated. The meaning of the symbols for chemical resistance is:  
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Substance	Physical state or concentration	<i>PlasticsEurope</i>
Acetic Acid	1-10%	1
	10-40%	2
	> 40%	3
Acetic Anhydride	pure (liquid)	3
Acetone	pure (liquid)	3
Aliphatic Hydrocarbons	liquid	1
Allyl Alcohol	pure (liquid)	1
Aluminium Sulphate	pure (solid)	1

Ammonia	pure (gas)	3
Ammonium Chloride	pure (solid)	1
Ammonium Hydroxide	>10%	3
Ammonium Persulphate	pure (solid)	1
Ammonium Sulphate	pure (solid)	1
Amyl Acetate	pure (liquid)	2
Amyl Alcohol	pure (liquid)	2
Amyl Methyl Ketone	pure (liquid)	2
Aniline	pure (liquid)	3
Anthraquinone	pure (solid)	1
Aqua Regia	liquid	3
Barium Chloride	pure (solid)	1
Benzene	pure (liquid)	3

Benzoic Acid	pure (solid)	1
Benzyl Acetate	pure (liquid)	3
Benzyl Alcohol	pure (liquid)	3
Benzyl Benzoate	pure (liquid)	2
Bromine	pure (liquid)	3
Butane	pure (liquid)	1
Butyl Acetate	pure (liquid)	3
Butyl Alcohol	pure (liquid)	2
Butyl Lactate	pure (liquid)	1
Butyl Stearate	pure (liquid)	1
Calcium Chloride	10%	1
Calcium Hypochlorite	pure (solid)	1
Camphor	pure (solid)	1

Carbon Disulphide	pure (liquid)	1
Carbon Tetrachloride	pure (liquid)	1
Cetyl Alcohol	pure (solid)	1
Chloral Hydrate	pure (solid)	3
Chlorobenzene	pure (liquid)	3
Chloroform	pure (liquid)	3
Chromic Acid	1-10%	1
	10-40%	2
	> 40%	3
Citric Acid	10%	1
	pure (solid)	1
Citronellol	pure (liquid)	1
Copper (II) sulphate	pure (solid)	1
Copper (III) sulphate	pure (solid)	1
Cyclohexane	pure (liquid)	1

Cyclohexanol	pure (liquid)	1
Cyclohexanone	pure (liquid)	3
Di (1-Phenyl) Ethanol	pure (solid)	2
Di (2 -Ethylhexyl) Phthalate	pure (liquid)	1
Diacetone Alcohol	pure (liquid)	1
1,2-Dibromoethane	pure (liquid)	3
Dibutyl Phthalate	pure (liquid)	1
Dibutyl Sebacate	pure (liquid)	1
o-Dichlorobenzene	pure (liquid)	3
1,2-Dichloroethane	pure (liquid)	3
Diethyl Ether	pure (liquid)	1
Diethylene Glycol	pure (liquid)	1
Diethylketone	pure (liquid)	3



Dimethyl Formamide	pure (liquid)	3
Dinonyl Phthalate	pure (liquid)	1
Dioctyl Phthalate	pure (liquid)	1
Dioxane	pure (liquid)	3
Dipentene	pure (liquid)	1
Ethanol	See Ethyl Alcohol	
2-Ethoxy Ethanol	pure (liquid)	1
Ethoxylated Alcohols	pure (liquid)	3
Ethyl Acetate	pure (liquid)	3
Ethyl Alcohol	1 - 100%	1
Ethyl Benzene	pure (liquid)	2
Ethylene Chlorohydrin	pure (solid)	3
Ethylene Glycol	pure (liquid)	1

Ethylene Oxide	pure (liquid)	2
Eugenol	pure (liquid)	3
Ferric Nitrate	pure (solid)	1
Formaldehyde	40%	1
Formic Acid	5 - 30% 90%	1 3
Freon 11 (fluorotrichloromethane)	pure (gas)	1
Freon TF (1,1,2-trichloro-1,2,2-trifluoroethane)	pure (gas)	1
Furfuryl Alcohol	pure (liquid)	3
Geraniol	pure (liquid)	1
Glycerol (Glycerine)	pure (liquid)	1
Heptane	pure (liquid)	1
Hexane	pure (liquid)	1

Hydrobromic Acid	50%	1
Hydrochloric Acid	10% concentrated	1 3
Hydrofluoric Acid	5% 50%	1 3
Hydrogen Peroxide	3% 30%	1 1
Hydroquinone	pure (solid)	1
Iron(III) Nitrate	pure (solid)	1
Isooctane	pure (liquid)	1
Isopropyl Alcohol	pure (liquid)	1
Lanolin	solid	1
Linalol	liquid	1
Magnesium Chloride	aqueous	1
Maleic Acid	50%	1

Mercury	pure (liquid)	1
Mercury (II) chloride	pure (solid)	1
Mercury (III) chloride	pure (solid)	1
2-Methoxy Ethanol	pure (liquid)	2
Methyl Alcohol	pure (liquid)	1
Methyl Cyclohexanol	pure (liquid)	1
Methyl Ethyl Ketone	pure (liquid)	3
Methyl Isobutyl Ketone	pure (liquid)	3
Methyl Methacrylate	pure (liquid)	2
Methyl Propyl Ketone	pure (liquid)	3
Methyl Salicylate	pure (liquid)	3
Methylene Chloride	pure (liquid)	3
Nitric Acid	1-10%	1
	10-20%	2
	> 20%	3

Nitrobenzene	pure (liquid)	3
n-Octane	pure (liquid)	1
Oleic Acid	pure (liquid)	1
Oxalic Acid	aqueous	1
	pure (solid)	1
Oxygen	pure (gas)	1
Perchloroethylene	pure (liquid)	3
Phenol	5%	3
Phosphoric acid	1-10%	1
	10-30%	2
	> 30%	3
Pinene	pure (liquid)	1
Potassium Bromide	pure (solid)	1
Potassium Chloride	10%	1
Potassium Chromate	pure (solid)	1

Potassium Cyanide	pure (solid)	1
Potassium Dichromate	10% pure (solid)	1 1
Potassium Hydroxide	1 - 10%	3
Potassium Permanganate	10% pure (solid)	1 2
Propionic Acid	pure (liquid)	3
Propyl Alcohol	pure (liquid)	1
Propylene Glycol	pure (liquid)	1
Salicylic Acid	pure (solid)	1
Sodium Acetate	40%	1
Sodium Bicarbonate	10% pure (solid)	1 1
Sodium Bisulfide	40%	1
Sodium Bisulphite	10%	1

Sodium Borate	pure (solid)	1
Sodium Bromide	pure (solid)	1
Sodium Carbonate	1-20% pure (solid)	1 1
Sodium Chloride	10%	1
Sodium Cyanide	pure (solid)	1
Sodium Hydroxide	1-30%	3
Sodium Hypochlorite	1-10%	1
Sodium Nitrate	pure (solid)	1
Sodium Nitrite	pure (solid)	1
Sodium Phosphate	pure (solid)	1
Sodium Sulphate	pure (solid)	1
Sodium Sulphite	pure (solid)	1

Sodium Thiosulphate	pure (solid)	1
Stearic Acid	pure (solid)	1
Sucrose	pure (solid)	1
Sulphur	pure (solid)	1
Sulphuric Acid	1-30% > 30%	1 3
Tartaric Acid	pure (solid)	1
Tetrachloroethylene	pure (liquid)	1
Tetrahydrofuran	pure (liquid)	3
Tetralin	pure (liquid)	1
Toluene	pure (liquid)	1
Trichloroacetic Acid	pure (solid)	3
1,1,1,-Trichloroethane	pure (liquid)	3
Trichloroethyl Phosphate	pure (liquid)	1



Trichloroethylene	pure (liquid)	3
Triethanolamine	pure (liquid)	3
Triisopropanolamine	pure (liquid)	3
Urea	urea/water/glycerol dispersion (1:1:1)	1
Xylene	pure (liquid)	1
Zinc Chloride	pure (solid)	1