



## Chemical Resistance Cyclic Olefin Polymer (COP)

The following table evaluates the chemical resistance to various fluids. In general, common chemical names are used.

When assessing the resistance of TPP products to chemicals, the following factors must be considered:

- Exposure time
- Concentration of chemicals
- Thermal stress (e.g., autoclave)
- Mechanical stress (e.g., applied force)
- Exposure to UV radiation
- Aging effects (e.g., caused by detergents)
- Other environmental factors

TPP's recommendations are based on technical literature and information provided by raw material manufacturers. They have been carefully prepared and are intended as a general guide for users of plastic materials. However, they cannot replace suitability testing performed by the user under actual working conditions.

Resistance is categorized based on the material's stability under standard conditions.

<b>+ = Resistance</b>	<b>± = Limited Resistance</b>	<b>– = Not Resistant</b>
Continuous exposure to the substance does not cause damage within 30 days. The plastic may remain resistant for years.	Continuous exposure to the substance causes minor damage, some of which may be reversible within 7–30 days (e.g., swelling, softening, reduced mechanical strength, discoloration).	Not suitable for continuous exposure. Immediate damage may occur (e.g., loss of mechanical strength, deformation, discoloration, cracking, dissolution).

Chemicals	COP
<b>A</b>	
Acetic acid >94%	+
Acetone	+
Acrylonitrile	+
Ammonia (aqueous solution) 35%	+
Alkanes	-
<b>B</b>	
Benzaldehyde	±
Benzene	-
Butanol	+
Butanone	+
<b>C</b>	
Carbon tetrachloride	-
Chlorinated solvents	-



<b>D</b>	
Detergents	+
Dibutyl ether	-
Dichloroethane	-
Diethyl ether	-
Dimethyl sulfoxide (DMSO)	+
<b>E</b>	
Ethanol 50%	+
Ethanol 96%	+
<b>F</b>	
Fatty acid	-
<b>G</b>	
Gasoline	-
<b>H</b>	
Halogenated hydrocarbons	-
n-Heptane	-
Hexane	-
Hydrochloric acid (HCl) 36%	+
Hydrogen peroxide water 30%	+
<b>I</b>	
Isopropanol	+
<b>M</b>	
Mcs-oil-04	+
Methanol	+
Methylene chloride	-
Mineral oils	-
<b>N</b>	
Naphtha	-
Nitric acid 65%	+
Norbornene	-
<b>O</b>	
Octane	-
Oleic acid	-
<b>P</b>	
Pentane	-
Petroleum ether	-
<b>S</b>	
Saline solution	+
Silicone oils	+
Sodium hydroxide (NaOH) 50%	+
Sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ) 40 %	+
Sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ) 95 %	+
<b>T</b>	
Toluene	-
<b>X</b>	
Xylene	-



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