

**LIST OF THE CHEMICAL RESISTANCE OF THE POLYCARBONATE
USED IN GENERATION III PRODUCTS**

○ Almost non-corrosion (good) Δ May be corrosion under some condition (common) × Corrosion (bad)

INORGANICS					
SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE
Aluminium Chloride	○	Hydrofluoric Acid 10%	○	Potassium Nitrate	○
Aluminium Sulfate	○	Hydrochloric Acid (Conc.)	Δ	Potassium Permanganate	○
Ammonia	×	Hydrogen Peroxide 30 %	○	Potassium Sulfate	○
Ammonium Fluoride	×	Isopropanol	○	Silver Nitrate	○
Ammonium Hydroxide	×	Lime, Chlorinated (paste) 5 %	○	Sodium Carbonate	○
Ammonium Nitrate	○	Lime, Chlorinated(sol.) 2 %	○	Sodium Chlorate	○
Ammonium Solution	×	Magnesium Chloride	○	Sodium Chloride	○
Ammonium Sulfate	○	Magnesium Sulfate	○	Sodium Hydroxide 5%	×
Ammonium Sulfide	×	Mercuric Chloride	○	Sodium Hypochlorite	○
Antimony Trichloride	○	Milk of lime	Δ	Sodium Nitrate	×
Arsenic Acid 20 %	○	Nickel (II) Sulfate	○	Sodium Sulfate	○
Benzoic Acid	×	Nitric Acid 10 %	○	Sodium Sulfide	×
Benzyl Alcohol	×	Nitric Acid 20 %	○	Stannous Chloride	○
Brake Fluid	×	Nitric Acid (Conc.)	×	Sulfur	○
Caustic Potash 5 %	×	Ozone	×	Sulfuric Acid 10%	○
Caustic Soda 5 %	×	Phosphoric Acid 10 %	○	Sulfuric Acid 50%	○
Chrome Alum	○	Phosphorus Chloride	×	Sulfuric Acid (Conc.)	×
Chromic Acid 20%	○	Phosphorus Oxychloride	×	Sulfuryl Chloride	×
Copper Sulfate	○	Phosphorus Trichloride	×	Zinc Chloride	○
Cuprous Chloride	○	Potassium Bromate	○	Zinc Sulfate	○
Hydrochloric Acid 10%	○	Potassium Hydroxide 5 %	×		

ORGANICS					
SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE
Acetadehyde	×	Chlorobenzene	×	Ethylene Chloride	×
Acetic Acid (Conc.)	×	Chloroform	×	Ethylene Dichloride	×
Acetone	×	Chlorothene	×	Ethylene Glycol	Δ
Acrylonitrile	×	Cresol	×	Ethyl Ether	×
Benzene	×	Cyclohexanone	×	Formic Acid 10 %	○
Bromobenzene	×	Cyclohexene	×	Formic Acid (Conc.)	×
Butyl Alcohol	○	Cyclohexanol	Δ	Freon	×
Butyric Acid	×	Dimethyl Formamide	×	Glycerol	○
Carbonic Acid	×	Dioxane	×	Isoamyl Alcohol	○
Carbon Disulfide	×	Ethylamide	×	Lacquer	×
Carbon Tetrachloride	×	Ethylene Chlorohydrin	×	Lactic Acid 20 %	○

ORGANICS CONTINUES.

SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE
Methyl Alcohol	X	Pentane	o	Tetrahydrofuran	X
Methylene Chloride	X	Phenol	X	Thiophene(Thiofuran)	X
Methyl Methacrylate	X	Propionic Acid (Conc.)	X	Toluene	X
Nitrobenzene	X	Pyridine	X	Xylene	X
Oleic Acid	o	Styrene	X		
Oxalic Acid	o	Tetrachloroethylene	X		

MINERAL OIL

SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE
Axle oil	o	Heating oil (mineral)	o	Transformer oil	o
Compressor oil	o	Paraffin oil	o	Turpentine	X
Cutting oils	X	Pump oil	o		
Diesel oil	o	Spindle oil	o		
Gasoline (high aromatic group)	X	Silicon oil	o		

OTHERS

SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE	SUBSTANCES	RESISTANCE
Borax	o	Detergent (non-ion)	o	Nutmeg oil	X
Cement	o	Insulating tape	o	Soap	o
Clove oil	X	Linseed oil	o	Vinegar	o
Detergent (cation)	o	Mustard oil	o	Water	o

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Sources: **Polymer Monthly** (May, 1961), **Makrolon® sheet: Environmental Resistance** (March, 2012)
 Note: The above data is for reference only Last updated **13 July 2015**