



## Chemical Resistance of Laserlite Polycarbonate Products

In instances where a chemical attack on Polycarbonate Sheet occurs, a number of effects can be observed.

Ethylene chloride, chloroform, tetrachloroethane & other chemicals can cause partial dissolution of Polycarbonate. Chemicals such as benzene, acetone, ethyl acetate & tetrachloride may cause Polycarbonate to swell. In addition chemical attack can include colour change & whitening.

It should be noted that these effects may not always lead to product failure. They will however change &/or reduce the mechanical properties. The most critical effect of chemical attack is stress corrosion cracking or crazing which may or may not be visible to the naked eye. Stress cracks will always result in product failure.

The table below lists the chemical resistance of polycarbonate products to a number of commonly used chemicals at room temperature.

Chemical	Resistance
Acetic Acid (10% in water)	R
Acetone	N
Ammonia (0.1% in water)	N
Ammonia Nitrate (10% in water)	R
Benzene	N
Butyl Acetate	N
Carbon Tetrachloride	N
Chloroform	N
Citric Acid (10% in water)	R
Dibutyl Phthalate	N
Dibutyl Ether	N
Dimethyl Formaldehyde	N
Diethyl Phthalate	N
Dioxane	N
Ethanol (pure)	R
Ethyl Acetate	N
Ethylamine	N
Ethylene Chloride	N
Ethylene Glycol (1:1 with water)	R
Glycerine	N
Hexane	R
Hydrochloric Acid (10% in water)	R
Hydrogen Peroxide (30% in water)	R
Iron III Chloride (saturated solution)	R
Isooctane (2, 2, 4 – trimethyl pentane) pure	R
Isopropanol (pure)	R

Key: R = Resistant, N = Non-Resistant

Chemical	Resistance
Methanol	N
Methyl Ethyl Ketone	N
Methylamine	N
Methylene Chloride	N
Nitric Acid (10% in water)	R
N-propanol	N
Ozone (1% in air)	N
Paraffin, Paraffin Oil, (pure/free from aromatic hydrocarbons)	R
Phosphoric Acid (1% in water)	R
Potassium Hydroxide (1% in water)	N
Propane	R
Silicone Oil	R
Sodium Carbonate (10% in water)	R
Sodium Chloride (saturated/aqueous solution)	R
Sodium Hydroxide (1% in water)	N
Sodium Nitrate (10% in water)	R
Styrene	N
Sulphuric Acid (10% in water)	R
Tetrachloroethane	N
Tetrachloroethylene	N
Trichloroethylene	N
Tricresylphosphate	N
Triethylene Glycol	R
Xylene	N

This chemical resistance information is a recommendation only & is not a guarantee unless specifically supplied by Mulford Building Products.

For information on other chemicals not included in this document, please contact your local Mulford Building Products representative.

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