Chemical Compatibility Chart for Plazit-Polygal PLAZCAST PMMA Sheets

PLAZIT POLYGAL
The Plastic Sheets Group

The chemical resistance table below gives an indication of the chemical resistance of PLAZCAST sheets to a range of common chemicals as determined by visual examination of small unstressed samples immersed in the various liquids at 20o C for various periods of time.

This information should be used with caution since the performance of the products is influenced byinternal stresses created in the material when the product is machined or thermoformed or under service conditions. The chemical stability also depends on such factors as the concentration of the chemical agents and on the exposure temperature.

It is recommended to carry out specific tests that simulate the actual service conditions of the intended application.

The chemical resistance table refers only to the effects on PLAZCAST resulting from contact with the substances listed, all data is based on general literature.

Chemical	Concentration	Compliance
Acetaldehyde		Dissolved
Acetic acid		Dissolved
Acetic acid	10% aqueous	Not affected
Acetic anhydride		Affected
Acetone		Dissolved
Acetonitrile	Aqueous	Dissolved
Ammonia		Dissolved
Ammonium chloride	Saturated	Affected
Amyl acetate		Dissolved
Aniline		Dissolved
Benzaldehyde		Dissolved
Benzene		Dissolved
Benzyl alcohol		Dissolved
Butyl acetate		Dissolved
Butyl alcohol		Dissolved
Calcium chloride	Saturated	Not affected
Carbon dioxide	Gas	Not affected
Carbon disulfide		Dissolved
Carbon tetrachloride		Dissolved
Chlorine	2% aqueous	Not affected
Chlorine	Gas	Not affected
Chlorine	Conc.	Affected
Chlorobenzene		Dissolved
Chloroform	Saturated	Dissolved
Chromic acid	10% aqueous	Not affected
Chromic acid		Dissolved
Citric acid		Not affected
Cyclohexane		Dissolved
Cyclohexanone		Dissolved
Dibutyl phthalate		Affected
Diesel oil		Not affected
Diethyl ether		Dissolved

Chemical	Concentration	Compliance
Dioctyl phthalate		Affected
Epichlorohydrin		Dissolved
Ethyl acetate		Dissolved
Ethyl alcohol	10% aqueous	Not affected
Ethyl alcohol	50% aqueous	Affected
Ethyl alcohol		Dissolved
Ethylene dichloride	90% aqueous	Dissolved
Ethylene glycol		Not affected
Formaldehyde	40% aqueous	Not affected
Formic acid	10% aqueous	Not affected
Formic acid		Dissolved
Glycerin		Not affected
Hexane		Not affected
Hydrochloric acid		Not affected
Hydrofluoric acid	90% aqueous	Dissolved
Hydrogen peroxide	10% aqueous	Not affected
Hydrogen peroxide		Dissolved
Isopropyl alcohol	10% aqueous	Affected
Isopropyl alcohol	50% aqueous	Affected
Lactic acid		Not affected
Lanolin		Not affected
Methyl alcohol		Dissolved
Methyl alcohol	10% aqueous	Not affected
Methyl alcohol	50% aqueous	Affected
Methyl ethyl ketone		Dissolved
Methyl salicylate		Dissolved
Nitric acid	95% aqueous	Dissolved
Nitric acid	10% aqueous	Not affected
Nitrobenzene	98% aqueous	Dissolved
Nitrogen		Not affected

Chemical	Concentration	Compliance
n-octane		Affected
Olive oil		Not affected
Oxygen		Not affected
Paraffin		Not affected
Phosphoric acid		Dissolved
Phosphoric acid	10% aqueous	Not affected
Potassium hydroxide	Saturated	Not affected
Salt water		Not affected
Silicone F110		Affected
Silicone F130		Affected
Silicone R220		Affected
Sodium carbonate	Saturated	Not affected
Sodium chloride	40% aqueous	Not affected

Chemical	Concentration	Compliance
Sodium hydroxide		Not affected
Sodium thiosulfate		Not affected
Sulfuric acid		Dissolved
Sulfuric acid	10% aqueous	Not affected
Sulfuric acid	30% aqueous	Affected
Tetrahydrofuran		Dissolved
Tetralin		Dissolved
Toluene		Dissolved
Trichloroethane		Dissolved
Trichloroethylene		Dissolved
Turpentine oil		Not affected
Water		Not affected
Xylene		Dissolved

Important Note:

Any substance that comes with contact with PMMA should be checked for compatibility. Even if the supplier confirms that the material is suitable for PMMA, please apply it first to a hidden area to see if there are any effects. However, this will cover you for short-time effects only. To assess long-term effects of substances on PMMA, laboratory testing is required.

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