

CHEMICAL COMPATIBILITY CHART

FOE PMMA SHEETS

Chemical Properties

Plazcryn sheets have good resistance to water, alkalis, aqueous inorganic salt solutions and most common dilute acids. Some substances do not produce any effect on Plazcryn, some cause staining, swelling, crazing, weakening or dissolve it completely. The chemical resistance table below gives an indication of the chemical resistance of Plazcryn to a range of common chemicals, judged by visual examination of small unstressed samples immersed in various liquids at 20°C. This information should be used with caution since the performance of articles is influenced by temperature and by stresses applied to the material when machined or thermoformed or under service conditions. In case of doubt, it is recommended that appropriate tests be carried out to simulate the actual service conditions of the intended application. Please contact Plazit-Polygal for information regarding special applications.

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.

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

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Chemical	Concentration	Compliance(dB)	Chemical	Concentration	Compliance(dB)
Ethyl alcohol	10% aqueous	Not affected	n-octane		Affected
Ethyl alcohol	50% aqueous	Affected	Olive oil		Not affected
Ethyl alcohol		Dissolved	Oxygen		Not affected
Ethyl dichloride	90% aqueous	Dissolved	Paraffin		Not affected
Ethylene glycol		Not affected	Phosphoric acid		Dissolved
Formaldehyde	40% aqueous	Not affected	Phosphoric acid	10% aqueous	Not affected
Formic acid	10% aqueous	Not affected	Potassium hydroxide	Saturated	Not affected
Formic acid		Dissolved	Salt water		Not affected
Glycerin		Not affected	Silicone F110		Affected
Hexane		Not affected	Silicone F130		Affected
Hydrochloric acid		Not affected	Silicone R220		Affected
Hydrofluoric acid	90% aqueous	Dissolved	Sodium carbonate	Saturated Saturated Saturated	Not affected
Hydrogen peroxide	10% aqueous	Not affected	Sodium chlorate	40% aqueous	Not affected
Hydrogen peroxide		Dissolved	Sodium hydroxide		Not affected
Isopropyl alcohol	10% aqueous	Affected	Sodium thiosulfate		Not affected
Isopropyl alcohol	50% aqueous	Affected	Sulfuric acid		Dissolved
Lactic acid		Not affected	Sulfuric acid	30% aqueous	Not affected
Lanoline		Not affected	Sulfuric acid	10% aqueous	Not affected
Methyl alcohol		Dissolved	Tetrahydrofuran		Dissolved
Methyl alcohol	50% aqueous	Not affected	Tetraline		Dissolved
Methyl alcohol	10% aqueous	Affected	Toluene		Dissolved
Methyl ethyl ketone		Dissolved	Trichloroethane		Dissolved
Methyl salicylate		Dissolved	Trichloroethylene		Dissolved
Methylen		Dissolved	Turpentine oil		Not affected
Nitric acid	95% aqueous	Dissolved	Water		Not affected
Nitric acid	10% aqueous	Not affected	Xylene		Dissolved
Nitrobenzene	98% aqueous	Dissolved			
Nitrogen		Not affected			