PLASKOLITE TUFFAK® Polycarbonate Sheets

EUROPE

PLASKOLITE TUFFAK polycarbonate sheets can be safely used with most chemical materials and components, however, some common materials are not compatible with polycarbonate. The sheets have good resistance to mineral acids, many organic acids, neutral and acid salt solutions, oxidizing and reducing agents, aliphatic hydrocarbons, greases, waxes and oils and alcohols (except methanol). They have a good resistance to water up to 60º. Minimal contact with hot water will cause no effect, however, long exposure of TUFFAK to hot water or water vapor is not recommended. The chemical stability depends on many factors such as concentration of the chemical agents, internal stresses and on expose temperature.

The resistance of TUFFAK sheet is indicated in the table below.

1. Chemicals

Chemical	Concentration	Compliance
Acetaldehyde		Affected
Acetic acid	up to 10%	Not affected
Acetone		Affected
Acetylene		Not affected
Acrylonitrile		Affected
Alumen		Not affected
Aluminum chloride anhydrous	saturated solution in water	Not affected
Aluminum alumen potash	saturated solution in water	Not affected
Aluminium oxalate		Not affected
Aluminium sulfate	saturated solution in water	Not affected
Allyl alcohol		Dissolved
Ammonia		Affected
Ammonia water		Affected
Ammonium sulphide	saturated solution in water	Affected
Amyl acetate		Affected
Ammonium chloride	saturated solution in water	Not affected
Ammonium fluoride	saturated solution in water	Not affected
Ammonium nitrate	saturated solution in water	Not affected
Ammonium sulphate	saturated solution in water	Not affected
Aniline		Affected
Antimony chloride	saturated solution in water	Not affected
Arsenic acid	20%	Not affected
Benzine (Petroleum Benzin)	(non-aromatic)	Not affected
Benzaldehyde		Affected
Benzoic acid		Affected

Chemical	Concentration	Compliance
Benzene		Affected
Benzyl alcohol		Affected
Borax	saturated solution in water	Not affected
Boric acid		Not affected
Bromine		Affected
Brombenzene		Affected
Butyric acid		Affected
Butyl acid		Affected
Butyl acetate		Affected
Butane (liquid and gaseous)		Not affected
Butyl alcohol		Not affected
Butylene glycol		Not affected
Cyclohexanal		Not affected
Cyclohexane		Not affected
Calcium chloride	saturated solution in water	Not affected
Chloric gas	moist	Not affected
Calcium nitrate	saturated solution in water	Not affected
Calcium soap fat	pure	Not affected
Calcium hypochloride		Not affected
Carbon dioxide	moist	Not affected
Carbon monoxide		Not affected
Chloride of lime	magma	Not affected
Chloride of lime	solution, 2% in water	Not affected
Chromic alum,	saturated solution in water	Not affected
Chromic acid	20% in water	Not affected
Citric acid	10%	Not affected
Copper chloride	saturated solution in water	Not affected

Chemical	Concentration	Compliance
Cupric sulphate	saturated solution in water	Not affected
Carbon bisulphide		Affected
Chloric gas	dry	Affected
Chloroform		Affected
Caustic potash		Affected
Caustic potash	solution	Affected
Caustic soda		Affected
Cresol		Affected
Chlorobenzene		Dissolved
Cyclohexanone		Affected
Dinonyl phtalate	(softener)	Dissolved
Dioctyl phtalate	(softener)	Dissolved
Diphyl 5.3		Dissolved
Decalin		Not affected
Diethylene glycol		Not affected
Diglycol acid,	saturated solution in water	Not affected
Diamyl phtalate		Affected
Diethyl ether		Affected
Dibutyl phtalate (softener)		Affected
Dimethyl formamide		Dissolved
Dioxan		Dissolved
Ethyl alcohol	96% pure	Not affected
Ethylene glycol		Not affected
Ethyl amine		Affected
Ethyl bromide		Affected
Ethylene chlorohydrine		Affected
Ethyl dichloride		Affected
Ether		Dissolved
Hydrochloride acid, concentrated		Affected
Hydrofluoric acid	concentrated	Affected
Heptane		Not affected
Hexane		Not affected
Hydrochloride acid	20%	Not affected
Hydrosilicofluoric acid	30%	Not affected
Hydrofluoric acid	5%	Not affected
Hydrogen superoxide	30%	Not affected
Formic acid		Affected
Glycerin		Affected
Iodine		Affected
Isopropyl alcohol	Up to 30%	Not affected
Ferric chloride	saturated solution in water	Not affected
Ferrous sulphate		Not affected
Glycol		Not affected
Illuminating gas		Not affected
Lead tetraethyl	10% in benzine	Affected
Lactic acid	10% solution in water	Not affected
Ligroine (cardon-hydrogen mixture)		Not affected

Chemical	Concentration	Compliance
Magnesium chloride	saturated solution in water	Not affected
Magnesium sulphate	saturated solution in water	Not affected
Manganese sulphate	saturated solution in water	Not affected
Mercury		Not affected
Mercury chloride	saturated	Not affected
Methane		Not affected
Milk of lime	30% slurry in water	Affected
Nitric acid	10%	Not affected
Nitric acid	10-20%	Affected
Oxalic acid	10% in water	Not affected
Oxide of zine		Not affected
Oxygen		Not affected
Ozone		Not affected
Perchloric acid	concentrated	Affected
Petroleum ether (cardon hydrogen mixture)		Dissolved
Petroleum		Dissolved
Potato-spirit oil		Dissolved
Pentane		Not affected
Perchloric acid	10% in water	Not affected
Perhydrol	30%	Not affected
Potassium bichromate	saturated solution in water	Not affected
Potassium bromate	saturated solution in water	Not affected
Potassium carbonate	saturated solution in water	Not affected
Potassium chloride	saturated solution in water	Not affected
Potassium nitrate	saturated solution in water	Not affected
Potassium metabisulphite	4% in water	Not affected
Methyl methacrylate		Affected
Methanol		Affected
Methyl amine		Affected
Methyl ethyl ketone		Affected
Methylene chloride		Affected
Narton solution		Affected
Nitric acid	20%	Affected
Nitro benzene		Affected
Nitrous fumes	dry	Affected
Perchlorethylene		Affected
Phenol		
Pyridine		Affected
Phenyl ethyl alcohol		Dissolved
Phosphorus oxychloride		Dissolved
Potassium cyanide		Dissolved
Potassium rhodanide	saturated in water	Not affected

Chemical	Concentration	Compliance
Potassium perchlorate	10% in water	Not affected
Potassium permanganate	10% in water	Not affected
Potassium persulphate	10% in water	Not affected
Potassium sulphate	saturated solution in water	Not affected
Propane gas		Not affected
Propanyl alcohol		Not affected
Propionic acid,	concentrated	Not affected
Propyl alcohol		Not affected
Resorcin solution	1%	Not affected
Styrene		Affected
Sulphuric acid	concentrated	Affected
Sulphurous acid	10%	Affected
Sulphury chloride		Affected
Soda		Not affected
Sodium bicarbonate	saturated solution in water	Not affected
Sodium bisulphate	saturated solution in water	Not affected
Sodium bisulphite	saturated solution in water	Not affected
Sodium carbonate	saturated solution in water	Not affected
Sodium chlorate	saturated solution in water	Not affected
Sodium chloride	saturated solution in water	Not affected
Sodium hypochloride	0.5% solution in water	Not affected
Sodium sulphate	saturated solution in water	Not affected

Chemical	Concentration	Compliance
Spirit	pure	Not affected
Sublimate	saturated solution in water	Not affected
Sulphur		Not affected
Sulphuric acid,	50%	Not affected
Sulphuretted hydrogen		Not affected
Sodium sulphite	saturated solution in water	Dissolved
Sulphur dioxide		Dissolved
Sulphuric acid	70%	Dissolved
Tartaric acid	10%	Not affected
Tetrachloro-ethane		Affected
Tetrahydrofurane		Affected
Tetraline		Affected
Thiophene		Affected
Toluol		Affected
Trichloro-		Affected
ethylamine		Dissolved
Trichloroethylene		Dissolved
Tricresylol phosphate	(softener)	Not affected
Trichloroethyl phosphate	(softener)	Not affected
Urea	saturated solution in water	Not affected
Water		Not affected
Xylol		Dissolved
Zinc chloride	saturated solution in water	Not affected
Zinc sulphate	saturated solution in water	Not affected

2. Germicides

Chemical	Concentration	Compliance
Baktol	5%	Not affected
Carbolic acid		Affected
Chloramine		Not affected
DDT		Affected
Delegol	5%	Not affected
Dimamine T	5%	Dissolved
Hydrogen superoxide		Not affected
Lysoform	2%	Not affected
Maktol		Not affected
Merfen	2%	Not affected

Chemical	Concentration	Compliance
Baktol	1%	Not affected
Carbolic acid		Not affected
Chloramine	solution 1%	Not affected
DDT	pure	Not affected
Delegol		Not affected
Dimamine T		Affected
Hydrogen superoxide	1.5%	Not affected
Lysoform	5%	Dissolved
Maktol		Dissolved
Merfen		Dissolved

3. Detergents

Chemical	Concentration	Compliance
Ajax		Not affected
Javel water		Not affected
Laundry soap		Not affected

Chemical	Concentration	Compliance
Silicone fluid-emulsion		Not affected
Soft soap		Not affected

4. Technical Oil & Lubricants

Chemical	Concentration	Compliance
Aral BG®58		Not affected
Automatic switch grease		Not affected
Baysilon®-silicone oils		Not affected
BP Energol HL 100®		Not affected
BP Energol EM 100®		Not affected
BP H LR 65®		Not affected
Brake fluid (ATE)		Not affected
Burnishing oil Brunofix®		Not affected
Camphor oil		Affected
Cable insulating oil IG 1402		Not affected
Cable insulating oil KH 190		Not affected
Calcium soap fat		Not affected
Castor oil		Not affected
Contact oil 611		Not affected
Diesel oil		Dissolved
Drilling oil		Affected
Esso Estic 42-45®		Not affected
Fish oil		Not affected
Grease R Z Darina®		Not affected
Heating fuel oil		Dissolved
Hydraulic oil Vac HLP 16		Not affected
Jet propulsion fuel JP4 (kp 97-209°C)Skydrol 500 A®		Dissolved

Chemical	Concentration	Compliance
Mobil special oil 10 w 30®		Not affected
Molikote®-paste		Not affected
Molikote®-powder		Not affected
Nato-turbine oil 0-250		Not affected
Naphtenic lubricating oil		Not affected
Paraffin oil		Not affected
Polyran® MM25 (lubricating oil)		Not affected
Rape seed oil		Not affected
Renocalor N®		Not affected
Sewing machine oil		Not affected
Shell Spriax 90 EP®		Not affected
Shell Tellus 33®		Not affected
Silicone fluid		Not affected
Sodium soap fat		Not affected
Texaco Regal oil BRUO®		Not affected
Texaco Regal oil CRUO®		Not affected
Train oil		Not affected
Turbo oil 29		Not affected
Shell Tellus 11-33®		Dissolved
Turpentine oil		Dissolved
Valvoline WA 4-7		Dissolved
Varnish		Dissolved

5. Adhesives & Sealing Materials

Chemical	Concentration	Compliance
All-purpose glue		Dissolved
Cellux® - adhesive film		Not affected
Gypsum		Not affected
Insulating tape		Not affected
Perbunan C®		Not affected
Putty		Not affected
Rubber (softener-free)		Not affected
Terostat®		Not affected
Tesafilm		Not affected
Tesamoll®		Not affected
+ Sea 210		Not affected
Silpruf		Not affected

Chemical	Concentration	Compliance
Serbaseal MP		Not affected
Dow Corning 917		Not affected
Dow Corning 3793 (w.)		Not affected
Dow Corning 7098		Not affected
Dow Corning 791		Not affected
Parasilico PL (cl.)		Not affected
Proglaze		Not affected
3M 431 -aluminum tape		Not affected
Gerlinger 712 -aluminum tape		Not affected

6. Polishing Agents & Antistatics

Chemical	Concentration	Compliance
Antistaticum 58		Dissolved
Antistatic C	5%	Affected
Arquad 18®	50%	Dissolved

Chemical	Concentration	Compliance
Delu-Antistatic solution®		Not affected
Persoftal®	2%	Not affected

These suggestions and data are based on information we believe to be reliable. They are offered in good faith, but without guarantee, as conditions and methods of use are beyond our control. We recommend that the prospective user determines the suitability of our materials and suggestions before adopting them on a commercial scale.
© 2024 PLASKOLITE, LLC 062024
TUFFAK® is a registered trademark of PLASKOLITE LLC

PLASKOLITE
400 W Nationwide Blvd, Suite 400
Columbus, OH 43215
800.848.9124 • Fax: 877.538.0754
plaskolite@plaskolite.com
www.plaskolite.com