

Technical Data Sheet

Polycarbonate

Advantages

- Polycarbonate is one of the toughest transparent plastics available, about 300 times stronger than single-strength glass.
- Polycarbonate machines well and brake forms cold.
- Can be joined mechanically, solvent bonded, and welded with lots of practice.
- Excellent resistance to dilute acids and mineral oils.
- Good resistance to Alcohols and vegetable oils.
- Limited resistance to Aldehydes.
- Poor resistance (not recommended for use) with Concentrated Acids, Bases, Esters,
- Aliphatic Hydrocarbons, Aromatic Hydrocarbons, Halogenated Hydrocarbons, Ketones and Oxidizing Agents.

	Test Standard	Units	Guide Values
General			
Density	DIN 53479	g/m ³	1,2
Refraction index nD	DIN 53491	no	1,58
Moisture absorption	DIN 53495	%	0,36
Permeability to steam (0,1mm)	DIN 53122	g/m ² d	15
Mechanical Properties			
Yield stress σ_y	DIN 53455	N/mm ²	>60
Stress at break σ_r	DIN 53455	N/mm ²	>70
Yield strain ϵ_y	DIN 53455	%	6
Strain at break ϵ_r	DIN 53455	%	>100
Tensile modulus of elasticity E	DIN 53457	N/mm ²	2200
Strength Impact a_n	+23°C	DIN 53453	kJ/m ²
	-40°C	DIN 53453	kJ/m ²
Resiliency a_k at +23°C	DIN 53453	kJ/m ²	35
Impact stress Izod with notch	ASTM 256-56	J/m	>700
Brinell Hardness H30	DIN 53456	N/mm ²	110
Thermal Properties			
Linear thermal expansion α	DIN 53752	mm/m °C	0,065
Thermal conductivity λ	DIN 52612	W/m K	0,20
Softening temperature VICAT	DIN 53460	°C	145-150

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