

# TECHNICAL DATA SHEET

## Polycarbonate Solid Sheet



### Product Description

PolyLine Solid Sheet stands for a wide range of large-format, virtually extruded polycarbonate sheets with very good optical and mechanical properties. The product range comprises a variety of different surfaces, variants and structures. The high quality sheets have an excellent impact strength and provide solutions for a large number of indoor and outdoor applications.

PolyLine Solid Sheet is available not only in standard thicknesses from 1 to 15 mm, but also in the special thicknesses 0.8 and 20 mm.

### Product Datasheet

GENERAL			
Property	Method	Unit	PolyLine
Density	DIN EN ISO 1183	g/cm <sup>3</sup>	1.2
Ball Indentation Hardness (H359/30°)	DIN EN ISO 2039-1	MPa	110
Water Vapour Permeability δ	EN ISO 12572	mg/m h Pa	3.8 x 10 <sup>-5</sup>
MECHANICAL			
Property	Method	Unit	PolyLine
Flexural Modulus	DIN EN ISO 178	MPa	2000
Flexural Strength	DIN EN ISO 178	MPa	>90
Tensile Modulus	DIN EN ISO 527-2	MPa	2200
Tensile Strength	DIN EN ISO 527-2	MPa	60
Elongation	DIN EN ISO 527-2	%	80
Impact Strength - Izod [notched]	DIN EN ISO 180	kJ/m <sup>2</sup>	>10
Impact Strength - Charpy [notched]	DIN EN ISO 179 (179-1/1eA)	kJ/m <sup>2</sup>	>13
Impact Strength - Charpy [unnotched]	DIN EN ISO 179-1	kJ/m <sup>2</sup>	NB [no break]
OPTICAL			
Property	Method	Unit	PolyLine
Light Transmission (3mm clear transparent)	DIN 5036 / DIN EN ISO 13468-1	%	86
Refractive Index	DIN EN ISO 489	n <sub>D20</sub>	1.585
Solar Energy Transmittance [g-value]	DIN EN 410	%	3 mm 81.7 / 10 mm 78.5
THERMAL			
Property	Method	Unit	PolyLine
VICAT-Temperature [method B 50]	DIN EN ISO 306	°C	145
Heat Deflection Temperature (HDT/A)	DIN EN ISO R 75	°C	135
Specific Heat Capacity	DIN EN ISO 11357-4	J/gK	1.17
Coefficient of Linear Thermal Expansion	DIN 53328 / DIN EN ISO 11359-1, -2	mm/m °C	0.065
Thermal Conductivity	DIN 52612 / DIN EN ISO 22007-1	W/mK	0.2
Degradation Temperature		°C	>280
Temperature Range		°C	-40 to +135
Max. Service Temperature Continuous Use		°C	115
Max. Service Temperature Short Term Use		°C	135
Forming Temperature		°C	180-210
ELECTRICAL			
Property	Method	Unit	PolyLine
Dielectric Constant (50 Hz)	IEC 250 / DIN 53483-2		3.0
Volume Resistivity	IEC 60093 / DIN 53482	Ω.cm	10 <sup>15</sup>
Surface Resistivity	IEC 60093 / DIN 53482	Ω	10 <sup>15</sup>
Dielectric Strength	IEC 60243-1 / DIN 53481	kV/mm	>30
Dissipation Factor (50 Hz)	IEC 250 / DIN 53483		8 x 10 <sup>-4</sup>
Comparative Tracking Index	DIN EN 60112:2010-05	CTI - Value	CTI - 250 <1
OTHERS			
Property	Method	Unit	PolyLine
Fire Performance [building product] (1.5 mm - 6 mm)	BP - VO 305/2011 / DIN EN 13501-1	Classification	B-s1, d0
Biocompatibility [skin contact]	DIN EN 10993-5	Classification	Not cytotoxic
Resistance to Manual Attack [steel ball] (4 - 8 - 15 mm)	DIN EN 356	Class	EN 356 - P5A
Resistance to Manual Attack [ax] (8 - 15 mm)	DIN EN 356	Class	EN 356 - P8B
Glazing for Vehicles	StVZO §22a (Germany)	Approval	ABG D469 / ABG D2272