



Material data sheet PC transparent

Chemical Designation: Polycarbonate
 DIN-abbreviation: PC
 Colour / Fillers: white transparent
 Density: 1,19 g/cm³

Main features

- high toughness
- electrically insulating
- good machinability
- easy to polish
- good heat deflection temperature
- sensitive to stress cracking
- good weldable and bondable

Target Industries

- mechanical engineering
- electronics
- food technology
- automotive industry

Characteristics

mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1 mm / min	2200	MPa	DIN EN ISO 527-2 1)	1) For tensile test: specimen type 1b 2) For flexural test: support span 64 mm, norm specimen. 3) Specimen 10 x 10 x 10 mm 4) Specimen 10 x 10 x 50 mm, modulus range between 0,5 and 1% compression. 5) For Charpy test: support span 64 mm, norm specimen. n. b. = not broken 6) Specimen in 4 mm thickness
Tensile strength	50 mm / min	69	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50 mm / min	69	MPa	DIN EN ISO 527-2	
Elongation at yield	50 mm / min	6	%	DIN EN ISO 527-2	
Elongation at break	50 mm / min	90	%	DIN EN ISO 527-2	
Flexural strength	2 mm / min, 10 N	97	MPa	DIN EN ISO 178 2)	
Modulus of elasticity (flexural test)	2 mm / min, 10 N	2300	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5 mm / min, 10 N	16/29/64	MPa	EN ISO 604 3)	
Compression modulus	5 mm / min, 10 N	2000	MPa	EN ISO 604 4)	
Impact strength (Charpy)	max. 7,5 J	n. b.	kJ/m ²	DIN EN ISO 179-1eU 5)	
Notched impact strength (Charpy)	max. 7,5 J	14	kJ/m ²	DIN EN ISO 179-1eA	
Ball indentation hardness		128	MPa	ISO 2039-1 6)	





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thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		149	°C	DIN EN ISO 11357 1)	1) Found in public sources. 2) n.a. = not applicable 3) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		n.a.	°C	DIN EN ISO 11357 2)	
Service temperature	short term	140	°C	3)	
Service temperature	long term	120	°C		
Thermal expansion (CLTE)	23-60 °C, long	8	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100 °C, long	8	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Specific heat		1.3	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.25	W/(K*m)	ISO 22007-4:2008	

electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 ¹⁴	Ω	DIN IEC 60093	
volume resistivity		10 ¹⁴	Ω*cm	DIN IEC 60093	

other properties	parameter	value	unit	norm	comment
Water absorption	24 h / 96 h (23 °C)	0.3 / 0.6	%	DIN EN ISO 62 1)	1) Ø ca. 50 mm, h = 13 mm 2) – poor resistance 3) (+) limited resistance
Resistance to hot water/bases		-		- 2)	
Resistance to weathering		(+)		- 3)	
Flammability (UL94)	Listed (value at 0,4 and 1,5 mm)	HB		DIN IEC 60695-11-10	

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