Material data sheet
POM-C GF25 natural

Chemical Designation:	Polyacetal (Copolymer)
DIN-abbreviation:	POM-C
Colour / Fillers:	white opaque / glass fibres
Density:	1,53 g/cm³

Main features

- very high stiffness
- difficult to bond
- good chemical resistance
- good wear properties
- electrically insulating
- high strength

Target Industries

- mechanical engineering
- electronics
- automotive industry

Characteristics

mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1 mm / min	4200	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. 6) Specimen in 4 mm thickness
Tensile strength	50 mm / min	51	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50 mm / min	51	MPa	DIN EN ISO 527-2	
Elongation at yield	50 mm / min	9	%	DIN EN ISO 527-2	
Elongation at break	50 mm / min	12	%	DIN EN ISO 527-2	
Flexural strength	2 mm / min, 10 N	88	MPa	DIN EN ISO 178 2)	
Modulus of elasticity (flexural test)	2 mm / min, 10 N	4100	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5 mm / min, 10 N	23/39/74	MPa	EN ISO 604 3)	
Compression modulus	5 mm / min, 10 N	3600	MPa	EN ISO 604 4)	
Impact strength (Charpy)	max. 7,5 J	36	kJ/m²	DIN EN ISO 179-1eU 5)	
Ball indentation hardness		180	MPa	ISO 2039-1 6)	

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thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		-60	°C	DIN EN ISO 11357 1)	1) Found in public sources. 2) Found in public sources.Individual testing regarding application conditions is mandatory.
Melting temperature		170	°C	DIN EN ISO 11357	
Service temperature	short term	140	°C	2)	
Service temperature	long term	100	°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		1.2	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.47	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)	0.7 / 0.2	%	DIN EN ISO 62 1)	1) Ø ca. 50 mm, h = 13 mm 2) (+) limited resistance 3) – poor resistance 4) Corresponding means no listing at UL(yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding applicaton conditions is mandatory
Resistance to hot water/bases		(+)		- 2)	
Resistance to weathering		-		- 3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10 4)	

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