

Chemical Designation

POM-C (Polyacetal (Copolymer))

Colour

blue opaque

Density

1.41 g/cm³

Main features

- high strength
- high toughness
- good chemical resistance
- good machinability
- very good electrical insulation
- easy to polish
- difficult to bond
- good slide and wear properties

Target Industries

- mechanical engineering
- electronics
- food technology
- automotive industry

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Tensile strength	50mm/min	67	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
Tensile strength at yield	50mm/min	67	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Elongation at yield (tensile test)	50mm/min	9	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0,5 and 1% compression.
Elongation at break (tensile test)	50mm/min	32	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
Flexural strength	2mm/min, 10 N	91	MPa	DIN EN ISO 178	n.b.= not broken
Modulus of elasticity (flexural test)	2mm/min, 10 N	2600	MPa	DIN EN ISO 178	
Compression strength	1% / 2% 5mm/min, 10 N	20 / 35	MPa	EN ISO 604	(3)
Compression modulus	5mm/min, 10 N	2300	MPa	EN ISO 604	(4)
Impact strength (Charpy)	max. 7.5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU	(5)
Notched impact strength (Charpy)	max. 7,5J	9	kJ/m ²	DIN EN ISO 179-1eA	
Shore hardness	D	81		DIN EN ISO 868	
<i>Thermal properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Glass transition temperature		-60	°C	DIN EN ISO 11357	(1)
Melting temperature		166	°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.	13	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	14	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
surface resistivity	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω	-	(1)
volume resistivity	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω*cm	-	(2)
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	(1)
Resistance to hot water/ bases		(+)		-	(2)
Resistance to weathering		-		-	(3)
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	(4)

