



POM- Acetal

Chemical Designation

POM-H (Polyacetal (Homopolymer))

Colour

black opaque

Density

1.43 g/cm³

Main features

- high strength
- difficult to bond
- good slide and wear properties
- good machinability
- not hot water resistant over 60°C
- good chemical resistance
- easy to polish

Target Industries

- mechanical engineering
- aircraft and aerospace technology
- electronics
- oil and gas industry
- automotive industry

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	80	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	3600	MPa	DIN EN ISO 527-2	1) (2) For flexural test: support span 64mm, norm specimen.
Tensile strength at yield	50mm/min	80	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Elongation at yield (tensile test)	50mm/min	32	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
Elongation at break (tensile test)	50mm/min	43	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
Flexural strength	2mm/min, 10 N	106	MPa	DIN EN ISO 178	2) n.b. = not broken
Modulus of elasticity (flexural test)	2mm/min, 10 N	3600	MPa	DIN EN ISO 178	(6) Specimen in 4mm thickness
Compression strength	1% / 2% / 5% 5mm/min, 10 N	22/38/72	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	2800	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	14	kJ/m ²	DIN EN ISO 179-1eA	
Ball indentation hardness		185	MPa	ISO 2039-1	6)

Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)
Melting temperature		182	°C	DIN EN ISO 11357	
Service temperature	short term	150	°C		2)
Service temperature	long term	110	°C		
Thermal expansion (CLTE)	23-60°C, long.	11	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	11	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Specific heat		1.3	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.43	W/(K*m)	ISO 22007-4:2008	

Electrical properties	parameter	value	unit	norm	comment
surface resistivity	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω	DIN IEC 60093	1)
volume resistivity	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω*cm	DIN IEC 60093	2)
Dielectric strength	23°C, 50% r.h.	38	kV/mm	ISO 60243-1	3)
Resistance to tracking (CTI)	Platin electrode, 23°C, 50% r.h., solvent A	600	V	DIN EN 60112	

Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1)
Resistance to hot water/ bases		-	-	-	2)
Resistance to weathering		-	-	-	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)

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