

## TECAFORM AD AF natural - Stock Shapes (rods, plates, tubes)

### Chemical Designation

POM-H (Polyacetal (Homopolymer))

### Colour

dark brown opaque

### Density

1.49 g/cm<sup>3</sup>

### Fillers

PTFE

### Main features

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

### Target Industries

- mechanical engineering
- automotive industry
- aircraft and aerospace technology
- electronics
- food technology

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	53	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	3000	MPa	DIN EN ISO 527-2	1) (2) For flexural test: support span 64mm, norm specimen.
Tensile strength at yield	50mm/min	53	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Elongation at yield (tensile test)	50mm/min	8	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
Elongation at break (tensile test)	50mm/min	8	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
Flexural strength	2mm/min, 10 N	85	MPa	DIN EN ISO 178	2) n.b. = not broken
Modulus of elasticity (flexural test)	2mm/min, 10 N	3000	MPa	DIN EN ISO 178	(6) Specimen in 4mm thickness
Compression strength	1% / 2% / 5% 5mm/min, 10 N	19/33/67	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	2400	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	5)
Notched impact strength (Charpy)	max. 7,5J	25	kJ/m <sup>2</sup>	DIN EN ISO 179-1eA	
Ball indentation hardness		166	MPa	ISO 2039-1	6)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1) (1) Found in public sources.
Melting temperature		179	°C	DIN EN ISO 11357	(2) Found in public sources.
Heat distortion temperature	HDT, Method A	141	°C	ISO-R 75 Method A	Individual testing regarding application conditions is mandatory.
Service temperature	short term	150	°C		2)
Service temperature	long term	110	°C		
Thermal expansion (CLTE)	23-60°C, long.	12	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	13	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Specific heat		1.3	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.46	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 <sup>14</sup>	Ω	DIN IEC 60093	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1) (1) Ø ca. 50mm, h=13mm
Resistance to hot water/ bases		-	-	-	2) (2) - poor resistance
Resistance to weathering		-	-	-	(3) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)

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