

# TECAFORM AH natural - Stock Shapes

## Chemical Designation

POM-C (Polyacetal (Copolymer))

## Colour

white opaque

## Density

1.41 g/cm<sup>3</sup>

## Main features

- high strength
- resistant to cleaning agents
- stiff
- high toughness
- very good electrical insulation
- good machinability
- good slide and wear properties
- difficult to bond

## Target Industries

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

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1mm/min	2800	MPa	DIN EN ISO 527-2	1) (1) For tensile test: specimen type 1b
Tensile strength	50mm/min	67	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	50mm/min	9	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
Elongation at break	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	2) n.b. = not broken
Modulus of elasticity (flexural test)	2mm/min, 10 N	2600	MPa	DIN EN ISO 178	(6) Specimen in 4mm thickness
Compression strength	1% / 2% / 5% 5mm/min, 10 N	20/35/68	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 <sup>2</sup>	DIN EN ISO 179-1eU	5)
Notched impact strength (Charpy)	max. 7,5J	8	kJ/m <sup>2</sup>	DIN EN ISO 179-1eA	
Ball indentation hardness		165	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		166	°C	DIN EN ISO 11357	(2) Found in public sources.
Service temperature	short term	140	°C		2) Individual testing regarding application conditions is mandatory.
Service temperature	long term	100	°C		
Thermal expansion (CLTE)	23-60°C, long.	13	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	14	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Specific heat		1.4	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
Specific surface resistance	Silver electrode, 23°C, 12% r.h.	10 <sup>14</sup>	Ω	DIN IEC 60093	1) (1) Specimen in 20mm thickness
Specific volume resistance	Silver electrode, 23°C, 12% r.h.	10 <sup>13</sup>	Ω*cm	DIN IEC 60093	(2) Specimen in 1mm thickness
Dielectric strength	23°C, 50% r.h.	49	kV/mm	ISO 60243-1	2)
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) (1) Ø ca. 50mm, h=13mm
Resistance to hot water/ bases		(+)	-	-	2) (2) (+) limited resistance
Resistance to weathering		-	-	-	3) (3) - poor resistance
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4) (4) 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.

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