TECAFORM AH natural - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
white opaque

Density
1.41 g/cm^3

Main features
- high strength
- resistent 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*
Tensile strength	5mm/min	64	MPa	ASTM D 638		(1) For tensile test: specimen type 1 (2) Specimen Diam. 18x50mm (3) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (4) Specimen in 4mm thickness
Modulus of elasticity (tensile test)	5mm/min	3100	MPa	ASTM D 638	1)	
Elongation at break (tensile test)	5mm/min	30	%	ASTM D 638		
Flexural strength	5mm/min	56	MPa	ASTM D 790		
Modulus of elasticity (flexural test)	5mm/min	5300	MPa	ASTM D 790		
Compression strength	1,3mm/min	80	MPa	ASTM D 695	2)	
Compression modulus	1,3 mm/min	1400	MPa	ASTM D 695		
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	3)	
Notched impact strength (Charpy)	2,9m/s	8,31	kJ/m^2	DIN EN ISO 179-1eA		
Ball indentation hardness		165	MPa	ISO 2039-1	4)	
Shore hardness	Shore D	79		ASTM D 2240		

Thermal properties	*parameter*	*value*	*unit*	*norm*		*comment*
Glass transition temperature		-60	°C	DIN 53765	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		168	°C	DIN 53765		
Service temperature	short term	140	°C	-	2)	
Service temperature	long term	100	°C	-		
Thermal expansion (CLTE)	23-60°C, long.	12,36	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	13,6	10^{-5} K^{-1}	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*
surface resistivity		7,23x10^{15}		ASTM D 257		(1) Specimen in 1mm thickness
volume resistivity		1,57x10^{15}		ASTM D 257		
Dielectric strength	23°C, 50% r.h.	49	kV/mm	ISO 60243-1	1)	
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)	0,25 / 0,48	%	ASTM D 570	1)	(1) Ø ca. 50,8mm, h=3,3mm (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 application conditions is mandatory.
Resistance to hot water/ bases		(+)		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	4)	

This information reflects the current state of our knowledge and is intended only to assist and advise. It is given without obligation or liability. It does not assure or guarantee chemical resistance, quality of products or their suitability in any legally binding way. Values are not minimum or maximum values, but guidelines that can be used for comparative purposes in material selection. They are within the normal range of product properties and do not represent guaranteed property values. Testing under individual application circumstances is always recommended. Data is obtained from extruded shapes material unless otherwise noted. References to FDA compliance refer to the resins from which the products were made unless otherwise noted. All trade and patent rights should be observed. All rights reserved. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com.

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