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

Chemical Designation
POM-H (Polyacetal (Homopolymer))

Colour
dark brown opaque

Density
1.49 g/cm^3

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 (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken
Modulus of elasticity (tensile test)	1mm/min	3000	MPa	DIN EN ISO 527-2	1)	
Tensile strength at yield	50mm/min	53	MPa	DIN EN ISO 527-2		
Elongation at yield (tensile test)	50mm/min	8	%	DIN EN ISO 527-2		
Elongation at break (tensile test)	50mm/min	8	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	85	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	3000	MPa	DIN EN ISO 178		
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^2	DIN EN ISO 179-1eU	5)	
Notched impact strength (Charpy)	max. 7,5J	25	kJ/m^2	DIN EN ISO 179-1eA		
Shore hardness	D	81		DIN EN ISO 868		

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		-60	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		179	°C	DIN EN ISO 11357		
Heat distortion temperature	HDT, Method A	141	°C	ISO-R 75 Method A		
Service temperature	short term	150	°C		2)	
Service temperature	long term	110	°C			
Thermal expansion (CLTE)	23-60°C, long.	12	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	13	10^{-5} K^{-1}	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^{14}	Ω	-		

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 (2) - poor resistance (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.
Resistance to hot water/ bases		-		-	2)	
Resistance to weathering		-		-		
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)	

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Ensinger Ltd
Wilfried Way
Tonyrefail, Mid Glamorgan CF39 8JQ
Great Britain

Phone (01443) 678400
Fax (01443) 675777
ensingerplastics.com

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