TECAFORM AH GF25 natural - Stock Shapes (rods, plates, tubes)

Chemical Designation
POM-C (Polyacetal (Copolymer))

Colour
white opaque

Density
1.59 g/cm^3

Fillers
glass fibres

Main features
- high strength
- good wear properties
- good chemical resistance
- electrically insulating
- very high stiffness
- difficult to bond

Target Industries
- electronics
- mechanical engineering
- automotive industry

Mechanical properties	*parameter*	*value*	*unit*	*norm*		*comment*
Tensile strength	50mm/min	51	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. (6) Specimen in 4mm thickness
Modulus of elasticity (tensile test)	1mm/min	4200	MPa	DIN EN ISO 527-2	1)	
Tensile strength at yield	50mm/min	51	MPa	DIN EN ISO 527-2		
Elongation at yield (tensile test)	50mm/min	9	%	DIN EN ISO 527-2		
Elongation at break (tensile test)	50mm/min	12	%	DIN EN ISO 527-2		
Flexural strength	2mm/min, 10 N	88	MPa	DIN EN ISO 178	2)	
Modulus of elasticity (flexural test)	2mm/min, 10 N	4100	MPa	DIN EN ISO 178		
Compression strength	1% / 2% / 5% 5mm/min, 10 N	23/39/74	MPa	EN ISO 604	3)	
Compression modulus	5mm/min, 10 N	3600	MPa	EN ISO 604	4)	
Impact strength (Charpy)	max. 7,5J	36	kJ/m^2	DIN EN ISO 179-1eU	5)	
Ball indentation hardness		180	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. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		170	°C	DIN EN ISO 11357		
Service temperature	short term	140	°C		2)	
Service temperature	long term	100	°C			
Thermal expansion (CLTE)	23-60°C, long.	8	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	8	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Specific heat		1.2	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.47	W/(K*m)	ISO 22007-4:2008		

Electrical properties	*parameter*	*value*	*unit*	*norm*	*comment*
surface resistivity		10^{14}	Ω	-	
volume resistivity		10^{14}	Ω*cm	-	

Other properties	*parameter*	*value*	*unit*	*norm*		*comment*
Water absorption	24h / 96h (23°C)	0.07 / 0.2	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (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)	

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