

TechnoMid PA6 S GF 50

Polyamide 6
TechnoCompound GmbH

Message:

High mechanical strength and stiffness
High thermal stability
High toughness at low temperatures
Excellent sliding friction behavior
Optimal flow characteristics for challenging applications
Suitable for low-warpage injection molding parts
Also "cross-linkable" available
Typical Applications
Automotive: Radiator grills, exterior door handles, door sills, door-mirror housings, wheel covers, steering wheels, fastening clips, gearshift-lever housings, shift links, headlamp housings, power and fuse boxes, front-End-Modules, bumper stiffener, air intake modules, engine covers "Beauty-Cover", valve bonnet and cylinder head covers, chain guides, toothed belt covers, ventilation and cooling systems...
Household: Chair frames, furniture casters, craft toll shafts...
Sanitation: Handles, fittings, fixtures and fans
Plumbing: Wall dowels , fasteners, clamps for cables and pipes

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 50% filler by weight		
Features	Low warpage		
	Low Temperature Flexibility		
	Rigidity, high		
	High strength		
	Good liquidity		
	Thermal stability, good		
Uses	Handle		
	Pipe components		
	Household goods		
	Fasteners		
	Accessories		
	Application in Automobile Field		
	Shell		
	Bathroom products		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.55	g/cm ³	ISO 1183
Molding Shrinkage ¹			ISO 294-4
Transverse flow	0.50	%	ISO 294-4
Flow	0.050	%	ISO 294-4
Water Absorption			ISO 62

Saturated, 23°C	0.45	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Viscosity Number	150	cm ³ /g	ISO 307
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness ²	270	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	16000	MPa	ISO 527-2/1
Tensile Stress			
Yield	210	MPa	ISO 527-2/50
Fracture	210	MPa	ISO 527-2/5
Tensile Strain			
Yield	2.5	%	ISO 527-2/50
Fracture	2.5	%	ISO 527-2/5
Flexural Modulus ³	14500	MPa	ISO 178
Flexural Stress ⁴	345	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	11	kJ/m ²	ISO 179/1eA
23°C	15	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	85	kJ/m ²	ISO 179/1eU
23°C	90	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	220	°C	ISO 75-2/B
1.8 MPa, not annealed	210	°C	ISO 75-2/A
8.0 MPa, not annealed	170	°C	ISO 75-2/C
Melting Temperature ⁵	220	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 80°C	1.0E-5 - 2.5E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	9.0E-5 - 1.1E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+10	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms · cm	IEC 60093
Dielectric Strength (1.00 mm)	40	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	4.20		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.8 mm)	HB		UL 94
NOTE			
1.	260°C / WZ 80°C, 600 bar		
2.	358 N		
3.	2.0 mm/min		

4.	2.0 mm/min
5.	10°C/min

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