

# TechnoMid PA6 S GF 50 HY

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 <sup>3</sup>	ISO 1183
Molding Shrinkage <sup>1</sup>			ISO 294-4
Transverse flow	0.50	%	ISO 294-4
Flow	0.050	%	ISO 294-4
Water Absorption			ISO 62

Saturated, 23°C	4.8	%	ISO 62
Equilibrium, 23°C, 50% RH	1.5	%	ISO 62
Viscosity Number	150	cm <sup>3</sup> /g	ISO 307
<b>Hardness</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Ball Indentation Hardness <sup>2</sup>	270	MPa	ISO 2039-1
<b>Mechanical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Tensile Modulus	16000	MPa	ISO 527-2/1
<b>Tensile Stress</b>			
Yield	210	MPa	ISO 527-2/50
Fracture	210	MPa	ISO 527-2/5
<b>Tensile Strain</b>			
Yield	2.5	%	ISO 527-2/50
Fracture	2.5	%	ISO 527-2/5
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	11	kJ/m <sup>2</sup>	ISO 179/1eA
23°C	15	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	85	kJ/m <sup>2</sup>	ISO 179/1eU
23°C	90	kJ/m <sup>2</sup>	ISO 179/1eU
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
<b>Heat Deflection Temperature</b>			
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 <sup>3</sup>	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
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Dielectric Strength (1.00 mm)	36	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.80		IEC 60250
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (0.8 mm)	HB		UL 94
<b>NOTE</b>			
1.	260°C / WZ 80°C, 600 bar		
2.	358 N		
3.	10°C/min		

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