

Tarnoform® 500 GF8

Acetal (POM) Copolymer

Grupa Azoty S.A.

Message:

Tarnoform® 500 GF8 there is 40% glass fibres reinforced injection-moulding grade with extremely high strength and stiffness and with reduced shrinkage and coefficient of linear thermal expansion, combined with higher flowability during moulding.

General Information			
Filler / Reinforcement	Glass Fiber,40% Filler by Weight		
Features	High Flow		
	High Stiffness		
	High Strength		
	Low Shrinkage		
Uses	Automotive Applications		
	Electrical/Electronic Applications		
	Household Goods		
	Thin-walled Parts		
Appearance	Black		
	Colors Available		
	Natural Color		
Forms	Granules		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.71	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	5.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	3.50	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow : 2.00 mm	1.1	%	
Flow : 2.00 mm	0.50	%	
Water Absorption			ISO 62
Saturation, 23°C	0.80	%	
Equilibrium, 23°C, 50% RH	0.17	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	230	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	12500	MPa	ISO 527-2/1

Tensile Stress (Yield)	120	MPa	ISO 527-2/5
Tensile Strain (Break)	1.3	%	ISO 527-2/5
Flexural Modulus ¹	11500	MPa	ISO 178
Flexural Stress ²	170	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	5.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength	25	kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength	5.0	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	160	°C	ISO 75-2/A
Vicat Softening Temperature	155	°C	ISO 306/B
Melting Temperature	167	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow : 23 to 55°C	2.0E-5	cm/cm/°C	
Transverse : 23 to 55°C	7.0E-5	cm/cm/°C	
Limit of Temperature - a few hours operation	100	°C	
Burning Rate	< 100	mm/min	FMVSS 302
ISO Type	POM-K, M-GNR, 02-003, GF40		ISO 1874
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+14	ohms·cm	IEC 60093
Electric Strength (2.00 mm)	30	kV/mm	IEC 60243-1
Dielectric Constant (1 Hz)	4.20		IEC 60250
Dissipation Factor (1 Hz)	9.5E-3		IEC 60250
Comparative Tracking Index (Solution A)	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (3.20 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	100 to 120	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	< 0.10	%	
Suggested Max Regrind	10	%	
Processing (Melt) Temp	180 to 230	°C	
Mold Temperature	80.0 to 110	°C	
Injection Pressure	80.0 to 110	MPa	
Injection Rate	Slow-Moderate		
NOTE			
1.	2.0 mm/min		
2.	2.0 mm/min		

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