

Technical Data Sheet

SCHULAMID® 6 MGF 45 FR 6

Polyamide 6
Engineering Plastics

Product Description

45% mineral filled and glass fiber reinforced flame-retardant Polyamide 6 grade; halogen free; low warpage

General

Filler / Reinforcement	• Glass\Mineral, 45% Filler by Weight		
Features	• Flame Retardant • Good Electrical Properties • Halogen Free	• High Strength • Low (to None) Phosphorus Content • Low Smoke Emission	• Low Warpage
UL File Number	• E86615		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA6 (MD+GF) FR(61)		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.65 g/cm ³	1.65 g/cm ³	ISO 1183/A
Molding Shrinkage	0.20 to 0.90 %	0.20 to 0.90 %	ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	1.67E+6 psi	11500 MPa	ISO 527-2/1A/1
Tensile Stress (Break)	17400 psi	120 MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.0 %	2.0 %	ISO 527-2/1A/5
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	1.9 ft·lb/in ²	4.0 kJ/m ²	
73°F (23°C)	2.9 ft·lb/in ²	6.0 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	18 ft·lb/in ²	38 kJ/m ²	
73°F (23°C)	19 ft·lb/in ²	40 kJ/m ²	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	403 °F	206 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	360 °F	182 °C	ISO 75-2/Af
Vicat Softening Temperature	414 °F	212 °C	ISO 306/A50 ISO 306/B50
Ball Pressure Test (392°F (200°C))	Pass	Pass	IEC 60695-10-2
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Comparative Tracking Index	600 V	600 V	IEC 60112

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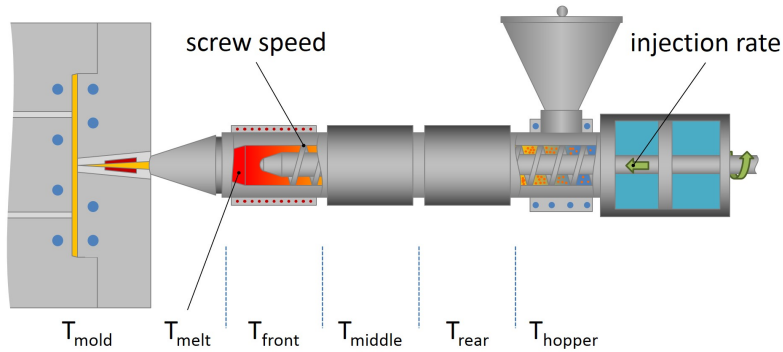
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Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate			ISO 3795
0.0591 in (1.50 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	
0.118 in (3.00 mm), Self-Extinguishing	0.0 in/min	0.0 mm/min	
Flame Rating			
--	V-0	V-0	UL 94
0.12 in (3.0 mm)	V-0	V-0	UL 94 IEC 60695-11-10, -20
0.06 in (1.5 mm)	V-0	V-0	IEC 60695-11-10, -20
Glow Wire Flammability Index			IEC 60695-2-12
0.06 in (1.5 mm)	1760 °F	960 °C	
0.12 in (3.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature			IEC 60695-2-13
0.06 in (1.5 mm)	1470 °F	800 °C	
0.12 in (3.0 mm)	1470 °F	800 °C	

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.04 to 0.10 %	0.04 to 0.10 %
Suggested Max Regrind	25 %	25 %
Processing (Melt) Temp	518 to 554 °F	270 to 290 °C
Mold Temperature	140 to 194 °F	60 to 90 °C
Injection Rate	Slow-Moderate	Slow-Moderate
Back Pressure	290 to 1160 psi	2.00 to 8.00 MPa
Screw Speed	< 591 in/min	< 15 m/min

Notes

These are typical property values not to be construed as specification limits.