

Technical Data Sheet

SCHULAMID® 6 HV 2 FR

Polyamide 6
Engineering Plastics

Product Description

High viscosity flame-retardant Polyamide 6 grade; halogen and phosphorus-free

General

Features	- Flame Retardant - Halogen Free	- High Viscosity - Low (to None) Phosphorus Content
Processing Method	Injection Molding	
Resin ID (ISO 1043)	PA6 FR(30)	

Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183/A
Viscosity Number	195	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	450000 (3100)	--	psi (MPa)	ISO 527-2/1A/1
Tensile Stress (Yield)	11600 (80.0)	--	psi (MPa)	ISO 527-2/1A/50
Tensile Strain (Yield)	4.0	--	%	ISO 527-2/1A/50
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (73°F (23°C))	3.3 (7.0)	5.7 (12)	ft·lb/in ² (kJ/m ²)	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F (-30°C)	No Break	--		
73°F (23°C)	No Break	No Break		
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
66 psi (0.45 MPa), Unannealed	370 (188)	--	°F (°C)	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	145 (63.0)	--	°F (°C)	ISO 75-2/Af
Vicat Softening Temperature				
--	428 (220)	--	°F (°C)	ISO 306/A50
--	403 (206)	--	°F (°C)	ISO 306/B50
Ball Pressure Test (392°F (200°C))	Pass	--		IEC 60695-10-2
RTI Elec				UL 746
0.030 in (0.75 mm)	149 (65.0)	--	°F (°C)	
0.06 in (1.5 mm)	149 (65.0)	--	°F (°C)	
0.12 in (3.0 mm)	149 (65.0)	--	°F (°C)	

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Thermal	Dry	Conditioned	Unit	Test Method
RTI Imp				UL 746
0.030 in (0.75 mm)	149 (65.0)	--	°F (°C)	
0.06 in (1.5 mm)	149 (65.0)	--	°F (°C)	
0.12 in (3.0 mm)	149 (65.0)	--	°F (°C)	
RTI Str				UL 746
0.030 in (0.75 mm)	149 (65.0)	--	°F (°C)	
0.06 in (1.5 mm)	149 (65.0)	--	°F (°C)	
0.12 in (3.0 mm)	149 (65.0)	--	°F (°C)	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	> 1.0E+15	> 1.0E+12	ohms	IEC 60093
Volume Resistivity	> 1.0E+13	> 1.0E+10	ohms·m	IEC 62631-3-1
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate				ISO 3795
0.0295 in (0.750 mm), Self-Extinguishing	0.0	--	in/min (mm/min)	
0.0591 in (1.50 mm), Self-Extinguishing	0.0	--	in/min (mm/min)	
0.118 in (3.00 mm), Self-Extinguishing	0.0	--	in/min (mm/min)	
Flame Rating				UL 94 IEC 60695-11-10, -20
0.030 in (0.75 mm)	V-2	--		
0.06 in (1.5 mm)	V-2	--		
0.12 in (3.0 mm)	V-2	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.030 in (0.75 mm)	1760 (960)	--	°F (°C)	
0.06 in (1.5 mm)	1760 (960)	--	°F (°C)	
0.12 in (3.0 mm)	1760 (960)	--	°F (°C)	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.030 in (0.75 mm)	1290 (700)	--	°F (°C)	
0.06 in (1.5 mm)	1290 (700)	--	°F (°C)	
0.12 in (3.0 mm)	1290 (700)	--	°F (°C)	
Oxygen Index	34	--	%	ISO 4589-2

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Injection	Dry (English)	Dry (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 %
Processing (Melt) Temp	446 to 500 °F	230 to 260 °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

Injection Notes

During transport one component of the dryblend can go more to the bottom. It is therefore recommended to tumble the material before use to assure an even distribution of the dryblend components.

Notes

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