Technical Data Sheet

Schulamid 6 HV2 FR DB NAT

Polyamide 6

Product Description

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

Processing Method	Injection Molding
Attribute	Halogen Free; High Viscosity; Low
Additive	Flame Retardant
Resin ID	PA6 FR(30)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.14	g/cm³	ISO 1183
Viscosity Number	230	cm³/g	ISO 307
Mechanical			
Tensile Stress at Yield, (Type 1A, 50 mm/min)	80.0	MPa	ISO 527-2
Tensile Strain at Yield, (Type 1A, 50 mm/min)	4.0	%	ISO 527-2
Tensile Modulus, (1 mm/min, Type 1A)	3100	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	7.0	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	12	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	No Break		ISO 179
(-30 °C, Type 1, Edgewise)	No Break		ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	No Break		ISO 179
Hardness			
Ball Pressure Test, (200 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	206	°C	ISO 306
(A (10N), 50 °C/h)	220	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	188	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	63.0	°C	ISO 75-2/A

RTI Elec			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(0.75 mm)	65.0	°C	UL 746B
RTI Imp			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(0.75 mm)	65.0	°C	UL 746B
RTI Str			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
(0.75 mm)	65.0	°C	UL 746B
Electrical			
Volume Resistivity	>1.0E+13	ohm*m	IEC 62631-3-1
- Conditioned	>1.0E+10	ohm*m	IEC 62631-3-1
Comparative Tracking Index (CTI)	600	V	IEC 60112
Surface Resistivity	>1.0E+15	ohm	IEC 60093
- Conditioned	>1.0E+12	ohm	IEC 60093
Flammable			
Burning Rate			
(0.750 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(1.50 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
(3.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
Glow Wire Flammability Index			
(0.75 mm)	960	°C	IEC 60695-2-12
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(0.75 mm)	700	°C	IEC 60695-2-13
(1.5 mm)	700	°C	IEC 60695-2-13
(3.0 mm)	700	°C	IEC 60695-2-13
Oxygen Index	34	%	ISO 4589-2
UL Information			
Flame Rating			
(1.5 mm)	V-2		UL 94
(3.0 mm)	V-2		UL 94
(0.75 mm)	V-2		UL 94
Flammability Classification			
(0.75 mm)	V-2		IEC 60695-11-10, -20
(1.5 mm)	V-2		IEC 60695-11-10, -20
(3.0 mm)	V-2		IEC 60695-11-10, -20

Injection Parameters	Nominal Value	Units
Drying Time	4.0 to 6.0	hr
Drying Temperature	80	°C
Suggested Max Moisture	0.040 to 0.10	%
Screw Speed	250	mm/sec
Processing (Melt) Temp	230 to 260	°C
Injection Rate	Slow-Moderate	
Back Pressure	20 to 80	bar
Mold Temperature	60 to 90	°C