

Technical Data Sheet

Schulamid 6 HV0 H FR BLK DB

Polyamide 6

Product Description

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

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

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.20	g/cm ³	ISO 1183
Viscosity Number	195	cm ³ /g	ISO 307
Mechanical			
Tensile Stress at Yield			
(Type 1A, 50 mm/min)	75.0	MPa	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	50.0	MPa	ISO 527-2
Tensile Strain at Yield			
(Type 1A, 50 mm/min)	4.0	%	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	>50	%	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	3200	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	1200	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	5.0	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	4.0	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	12	kJ/m ²	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)	200	°C	ISO 306
(A (10N), 50 °C/h)	216	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	197	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	68.0	°C	ISO 75-2/A

Electrical

Volume Resistivity	1000000000 0000	ohm*m	IEC 62631-3-1
- Conditioned	1000000000 0	ohm*m	IEC 62631-3-1
Dielectric Strength	31	kV/mm	IEC 60243-1
- Conditioned	28	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI)	600	V	IEC 60112
Surface Resistivity	1E+15	ohm	IEC 60093
- Conditioned	1000000000 000	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)	725	°C	IEC 60695-2-13
(1.5 mm)	725	°C	IEC 60695-2-13
(3.0 mm)	725	°C	IEC 60695-2-13
Oxygen Index	34	%	ISO 4589-2

UL Information

Flammability Classification			
(0.75 mm)	V-0		IEC 60695-11-10, -20
(1.5 mm)	V-0		IEC 60695-11-10, -20
(3.0 mm)	V-0		IEC 60695-11-10, -20
UL File Number	E86615		

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