

## Technical Data Sheet

### Schulamid 6 HV0 H FR DB NAT



Polyamide 6

#### Product Description

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

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

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Density, (Method A)	1.20	g/cm <sup>3</sup>	ISO 1183
Viscosity Number	195	cm <sup>3</sup> /g	ISO 307
<b>Mechanical</b>			
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
<b>Impact</b>			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	5.0	kJ/m <sup>2</sup>	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	4.0	kJ/m <sup>2</sup>	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	12	kJ/m <sup>2</sup>	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
<b>Hardness</b>			
Ball Pressure Test, (200 °C)	Pass		IEC 60695-10-2
<b>Thermal</b>			

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	2.00 to 8.00	MPa
Mold Temperature	60 to 90	°C