Technical Data Sheet

Schulamid 66 MV 5 FR BLACK

Polyamide 66

Product Description

Medium viscosity flame-retardant Polyamide 66 grade, V-0 by 0,38 mm; halogen free

Processing Method	Injection Molding
Attribute	Antimony Free; Halogen Free; Low Smoke Emission
Additive	Flame Retardant
Resin ID	PA66 FR(30)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.14	g/cm³	ISO 1183
Viscosity Number	152	cm³/g	ISO 307
Mechanical			
Tensile Stress at Yield			
(Type 1A, 50 mm/min)	80.0	MPa	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	55.0	MPa	ISO 527-2
Flexural Modulus, (2.0 mm/min)	3700	MPa	ISO 178
Tensile Strain at Yield			
(Type 1A, 50 mm/min)	4.9	%	ISO 527-2
(Type 1A, 50 mm/min) - Conditioned	18	%	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	3600	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	1800	MPa	ISO 527-1
Flexural Stress			
(2.0 mm/min, 3.5%)	115	MPa	ISO 178
(6.3%)	130	MPa	ISO 178
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	5.0	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	3.0	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)	70	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	25	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	No Break		ISO 179
Hardness			

Ball Pressure Test, (125 °C)	Pass		IEC 60695-10-2
Thermal			
Vicat Softening Temperature			
(B (50N), 50 °C/h)	238	°C	ISO 306
(A (10N), 50 °C/h)	250	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	222	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	80.0	°C	ISO 75-2/A
RTI Elec			
(1.5 mm)	150	°C	UL 746B
(3.0 mm)	150	°C	UL 746B
(0.75 mm)	140	°C	UL 746B
(1.0 mm)	150	°C	UL 746B
(0.38 mm)	140	°C	UL 746B
RTI Imp			
(1.5 mm)	115	°C	UL 746B
(3.0 mm)	115	°C	UL 746B
(0.75 mm)	115	°C	UL 746B
(1.0 mm)	115	°C	UL 746B
(0.38 mm)	105	°C	UL 746B
RTI Str			
(1.5 mm)	110	°C	UL 746B
(3.0 mm)	110	°C	UL 746B
(0.75 mm)	110	°C	UL 746B
(1.0 mm)	110	°C	UL 746B
(0.38 mm)	100	°C	UL 746B
Electrical			
Comparative Tracking Index (CTI), (Solution A)	600	V	IEC 60112
High Amp Arc Ignition			UL 746A
Flammable			
Hot-wire Ignition (HWI)			UL 746A
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)	775	°C	IEC 60695-2-13
(0.40 mm)	775	°C	IEC 60695-2-13
Oxygen Index	35	%	ISO 4589-2
UL Information			
Flammability Classification			
(0.38 mm)	V-0		IEC 60695-11-10, -20
(0.8 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	260 to 280	°C
Injection Rate	Slow-Moderate	
Back Pressure	20 to 80	bar
Mold Temperature	60 to 100	°C