

Technical Data Sheet

Schulamid 66 GF50 H NAT

Polyamide 66

Product Description

Schulamid 66 GF50 H NAT is a Polyamide 66 Glass Fiber, 50% filled material and is typically used in Injection Molding applications. Features include: Crack Resistant, Good Processability, Good Toughness, Heat Aging Resistant, Low Moisture Absorption, Medium Viscosity, Oil Resistant, and Ultra High Stiffness.

Processing Method	Injection Molding
Attribute	Crack Resistant; Good Heat Aging Resistance; Good Processability; Good Toughness; Low Moisture Absorption; Medium Viscosity; Oil Resistant; Ultra High Stiffness
Filler/Reinforcement	Glass Fiber, 50%

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.57	g/cm ³	ISO 1183
Mechanical			
Tensile Strain at Break			
(Type 1A, 5 mm/min)	2.3	%	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	3.3	%	ISO 527-2
Tensile Stress at Break			
(Type 1A, 5 mm/min)	228	MPa	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	180	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	16500	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	13000	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	14	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	12	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	18	kJ/m ²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	90	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise)	70	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	94	kJ/m ²	ISO 179
Hardness			
Ball Indentation Hardness			
(H 358/30)	300	MPa	ISO 2039-1
(H 358/30) - Conditioned	220	MPa	ISO 2039-1
Thermal			

Vicat Softening Temperature			
(B (50N), 50 °C/h)	>250	°C	ISO 306
(A (10N), 50 °C/h)	>250	°C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)			
	>250	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)			
	>250	°C	ISO 75-2/A
RTI Elec			
(1.5 mm)	120	°C	UL 746B
(3.0 mm)	120	°C	UL 746B
(0.75 mm)	120	°C	UL 746B
RTI Imp			
(1.5 mm)	105	°C	UL 746B
(3.0 mm)	115	°C	UL 746B
(0.75 mm)	105	°C	UL 746B
RTI Str			
(1.5 mm)	120	°C	UL 746B
(3.0 mm)	130	°C	UL 746B
(0.75 mm)	120	°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)	450	V	IEC 60112
Surface Resistivity	>1.0E+15	ohm	IEC 60093
- Conditioned	>1.0E+12	ohm	IEC 60093
Flammable			
Burning Rate			
(2.00 mm)	30	mm/min	FMVSS 302
(2.00 mm)	30	mm/min	ISO 3795
Glow Wire Flammability Index			
(1.5 mm)	600	°C	IEC 60695-2-12
(3.0 mm)	600	°C	IEC 60695-2-12
Additional Information			
Water Absorption 23C/50RH	1.2	%	ISO 62
UL Information			
Flammability Classification			
(0.75 mm)	HB		IEC 60695-11-10, -20
(1.5 mm)	HB		IEC 60695-11-10, -20
(3.0 mm)	HB		IEC 60695-11-10, -20
UL File Number	E86615		
Injection Parameters			
	Nominal Value	Units	
Drying Time	3.0 to 4.0	hr	
Drying Temperature	80	°C	
Suggested Max Moisture	0.040 to 0.10	%	
Processing (Melt) Temp	280 to 300	°C	
Mold Temperature	60 to 120	°C	