

Technical Data Sheet

Schulamid FR 6 GF40 FR2 NAT



Polyamide 6

Product Description

40% glass fibre reinforced flame-retardant Polyamide 6 grade; halogen free

Processing Method	Injection Molding
Attribute	Halogen Free; PFAS free
Additive	Flame Retardant
Filler/Reinforcement	Glass Fiber, 40%
Resin ID	PA6 GF40 FR(40)

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.54	g/cm ³	ISO 1183
Viscosity Number	146	cm ³ /g	ISO 307
Mechanical			
Tensile Strain at Break			
(Type 1A, 5 mm/min)	2.5	%	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	3.5	%	ISO 527-2
Tensile Stress at Break			
(Type 1A, 5 mm/min)	185	MPa	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	125	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	16000	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	11000	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	12	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	13	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	15	kJ/m ²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	75	kJ/m ²	ISO 179
(-30 °C, Type 1, Edgewise)	60	kJ/m ²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	70	kJ/m ²	ISO 179
Hardness			
Ball Pressure Test, (200 °C)	Pass		IEC 60695-10-2
Thermal			

Vicat Softening Temperature		
(B (50N), 50 °C/h)	202 °C	ISO 306
(A (10N), 50 °C/h)	210 °C	ISO 306
Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)		
	219 °C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)		
	209 °C	ISO 75-2/A
Electrical		
Comparative Tracking Index (CTI)	550 V	IEC 60112
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)	800 °C	IEC 60695-2-13
(1.5 mm)	775 °C	IEC 60695-2-13
(3.0 mm)	775 °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

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	270 to 290	°C
Injection Rate	Slow-Moderate	
Back Pressure	20 to 80	bar
Mold Temperature	60 to 90	°C