Technical Data Sheet

RW *Schulamid* 66 GBF 3020 FR 4 BLACK

Polyamide 66

Product Description

30% glass fibre and glass beads reinforced flame-retardant Polyamide 66 grade with low warpage high mechanical stability and high dimension stability, without PBDE

Processing Method	Injection Molding
Attribute	Low Warpage
Additive	Flame Retardant
Filler/Reinforcement	Glass Bead\Glass Fiber, 30%
Resin ID	PA66

Typical Properties	Nominal Value	Units	Test Method
Physical			
Density, (Method A)	1.59	g/cm³	ISO 1183
Mechanical			
Tensile Strain at Break			
(Type 1A, 5 mm/min)	2.5	%	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	4.5	%	ISO 527-2
Tensile Stress at Break			
(Type 1A, 5 mm/min)	140	MPa	ISO 527-2
(Type 1A, 5 mm/min) - Conditioned	92.0	MPa	ISO 527-2
Tensile Modulus			
(1 mm/min, Type 1A)	8700	MPa	ISO 527-1
(1 mm/min, Type 1A) - Conditioned	5000	MPa	ISO 527-1
Impact			
Charpy Impact Strength - Notched			
(23 °C, Type 1, Edgewise, Notch A)	5.5	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise, Notch A)	4.5	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise, Notch A) - Conditioned	7.0	kJ/m²	ISO 179
Charpy Impact Strength - Unnotched			
(23 °C, Type 1, Edgewise)	42	kJ/m²	ISO 179
(-30 °C, Type 1, Edgewise)	38	kJ/m²	ISO 179
(23 °C, Type 1, Edgewise) - Conditioned	51	kJ/m²	ISO 179
Hardness			
Ball Pressure Test, (200 °C)	Pass		IEC 60695-10-2
Thermal			

Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise)	>250	°C	ISO 75-2/B
Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise)	224	°C	ISO 75-2/A
RTI Elec			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
RTI Imp			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
RTI Str			
(1.5 mm)	65.0	°C	UL 746B
(3.0 mm)	65.0	°C	UL 746B
Electrical			
Volume Resistivity	>9.9E+13	ohm*m	IEC 62631-3-1
Dissipation Factor, (100 Hz)	0.049		IEC 60250
Dielectric Strength	22	kV/mm	IEC 60243-1
Comparative Tracking Index (CTI), (Solution A)	175	V	IEC 60112
Surface Resistivity	>7.8E+12	ohm	IEC 60093
Relative Permittivity			
(100 Hz)	4.81		IEC 60250
(1 MHz)	3.85		IEC 60250
Flammable			
Burning Rate, (2.00 mm, Self-Extinguishing)	0.0	mm/min	ISO 3795
Glow Wire Flammability Index			
(1.5 mm)	960	°C	IEC 60695-2-12
(3.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			
(1.5 mm)	750	°C	IEC 60695-2-13
(3.0 mm)	750	°C	IEC 60695-2-13
Oxygen Index	38	%	ISO 4589-2
UL Information			
Flame Rating			
(1.5 mm)	V-0		UL 94
(3.0 mm)	V-0		UL 94
Flammability Classification			
(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	270 to 300	°C
Injection Rate	Slow-Moderate	
Back Pressure	20 to 80	bar
Mold Temperature	60 to 90	°C