

RIALOX® B 120 GF30 ST F V-0 natural

Polybutylene Terephthalate

RIA-Polymers GmbH

Message:

RIALOX B 120 GF30 ST F V-0 natural is a semi-crystalline thermoplastic flame-retardant construction material based on polybutylene terephthalate (PBT), reinforced with 30% glass fibers.

RIALOX B 120 GF30 ST F V-0 natural will be processed by injection molding. It is used for parts for which a halogen-free PBT with fire protection equipment is required. The product is available in all colours.

RIALOX B 120 GF30 ST F V-0 natural is characterized by the following properties:

UL 94 V-0 from 0.4 mm

Tracking resistance 600 V

GWIT 775 °C conform at 3 mm

GWFI 960 °C from 0.75 mm

Very good dimensional stability

Very good elongation behavior

WEEE and RoHS conformity

General Information			
UL YellowCard	E257171-100508622		
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Additive	Flame retardancy		
Features	Semicrystallization		
	Good dimensional stability		
	Halogen-free		
	Flame retardancy		
Agency Ratings	EU 2002/96/EC (WEEE)		
RoHS Compliance	RoHS compliance		
Appearance	Available colors		
	Natural color		
Processing Method	Injection molding		
Resin ID (ISO 1043)	PBT GF30		
Physical	Nominal Value	Unit	Test Method
Density	1.51	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	3.50	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.20 - 0.60	%	ISO 294-4
Flow direction	0.10 - 0.40	%	ISO 294-4
Water Absorption			ISO 62
Saturated, 23°C	0.40	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus	9500	MPa	ISO 527-2/1
Tensile Stress (Break)	95.0	MPa	ISO 527-2/5
Tensile Strain (Break)	3.1	%	ISO 527-2/5
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	8.3	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	42	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	224	°C	ISO 75-2/B
1.8 MPa, not annealed	212	°C	ISO 75-2/A
Vicat Softening Temperature	193	°C	ISO 306/B50
Maximum Operating Temperature			
Continuous	150	°C	
Short Time	200	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+13	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Constant			IEC 60250
100 Hz	3.90		IEC 60250
1 MHz	3.50		IEC 60250
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (4.00 mm)	V-0		UL 94
Glow Wire Flammability Index (0.750 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
0.750 mm	775	°C	IEC 60695-2-13
3.00 mm	775	°C	IEC 60695-2-13
Additional Information			
Mechanical values determined after storage > 16 h at standard conditioning atmosphere (23 °C / 50 % rel. h.)			
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.030	%	
Hopper Temperature	50.0 - 70.0	°C	
Rear Temperature	230 - 250	°C	
Middle Temperature	240 - 260	°C	
Front Temperature	250 - 270	°C	
Nozzle Temperature	250 - 270	°C	
Processing (Melt) Temp	250 - 270	°C	
Mold Temperature	60.0 - 100	°C	
Injection Rate	Fast		
Back Pressure	5.00 - 10.0	MPa	

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