Polypropylene

Fibremod™ FF311SF-9502

Polypropylene Compound, Glass Fibre Reinforced, Halogen-Free Flame-Retardant

Description

Fibremod™ FF311SF-9502 is a high flow, 30 % chemically coupled glass fibre reinforced polypropylene compound intended for injection moulding.

This product is stabilized with a halogen-free flame retardant. It has excellent resistance against chemicals and water. It also provides high level of insulation.

Applications

Fibremod FF311SF-9502 has been developed for E&E and automotive applications such as the Lithium-Ion battery module housing, cell holder or insulation plate.

Special Features

Low density
Flame-Retardant stabilization
Stabilised for contact with metals

Physical Properties

Values determined on standard injection moulded specimens conditioned at 23°C and 50% relative humidity after at least 96 hours storage time.

Property	Typical Value Data should not be used for specification work	Test Method
Density	1243 kg/m³	ISO 1183
Melt Flow Rate (230 °C/2,16 kg)	16 g/10min	ISO 1133
Flexural Modulus (2 mm/min)	7.790 MPa	ISO 178
Flexural Strength	121 MPa	ISO 178
Tensile Modulus (1 mm/min) (23 °C)	8.540 MPa	ISO 527-2
Tensile Strength (50 mm/min) (23 °C)	86 MPa	ISO 527-2
Heat Deflection Temperature (1,8 MPa)	149 °C	ISO 75
Charpy Impact Strength, notched (23 °C)	9 kJ/m²	ISO 179/1eA
Charpy Impact Strength, unnotched (23 °C)	41 kJ/m²	ISO 179/1eU
Charpy Impact Strength, unnotched (-30 °C)	40 kJ/m²	ISO 179/1eU
Shrinkage, in flow [1]	0,18 %	Borealis Test Method
Shrinkage, perpendicular to flow [1]	0,69 %	Borealis Test Method

[1] Sector 300mm x 20° / 400 bar / 96 hours / 2.8mm thickness

Electrical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Volume Resistivity [1]	$0{,}01 \cdot 10^{15}$ Ωcm	IEC 60093
Surface Resistivity [1]	$1{,}6 \cdot 10^{15}$ Ω	IEC 60093
Dielectric Strength	37 kV/mm	ASTM D 149
Comparative Tracking Index	600 V	IEC 60112

[1] 23 °C

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Combustion Properties

Property	Typical Value Data should not be used for specification work	Test Method
Flammability at thickness 1,6 mm [1]	V-0	UL 94
Glow Wire Flammability Index at thickness 3,0 mm	960 °C	IEC 60695-2

[1] Tested at UL laboratory

Processing Techniques

The actual conditions will depend on the type of equipment used.

Injection Moulding

To avoid residual humidity from transport or storage, the material should be pre-dried approximately 2h at 80°C. Following parameters should be used as guidelines:

Feeding temperature	40 - 80 °C
Mass temperature	200 - 240 °C
Back pressure	Low to medium
Holding pressure	30 - 60 MPa
Mould temperature	30 - 50 °C
Screw speed	Low to medium
Flow front speed	100 - 200 mm/s

Storage

Fibremod FF311SF-9502 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of this product.

Safety

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of safety of the product. For more information, contact your Borealis representative.

Regional Availability

Europe

For information on regional availability please contact Borealis Sales Representative.

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Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

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