Polypropylene

Fibremod™ GB311U

Polypropylene Compound, Glass Fibre Reinforced

Description

Fibremod GB311U is a 30% chemically coupled glass fibre reinforced polypropylene compound intended for injection moulding.

This material shows excellent mechanical properties also at elevated temperatures.

The product is available in standard black 8229.

Applications

Fibremod GB311U has been developed especially for demanding applications in the automotive industry.

Technical components exposed to high heat and loads
Structural parts
Washing machine parts

Special features

High heat stabilised
Detergent resistant

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density	1120 kg/m³	ISO 1183
Melt Flow Rate (230 °C/2,16 kg)	2,0 g/10min	ISO 1133
Flexural Modulus (2 mm/min)	6.200 MPa	ISO 178
Flexural Strength	130 MPa	ISO 178
Tensile Modulus (1 mm/min)	6.800 MPa	ISO 527-2
Tensile Strain at Break (50 mm/min)	3,0 %	ISO 527-2
Tensile Strength	97 MPa	ISO 527-2
Heat Deflection Temperature A (1,80 MPa)	145 °C	ISO 75-2
Heat Deflection Temperature B (0,45 MPa)	159 °C	ISO 75-2
Vicat softening temperature A, (10 N)	165 °C	ISO 306
Vicat softening temperature B, (50 N)	135 °C	ISO 306
Charpy Impact Strength, notched (23 °C)	11 kJ/m²	ISO 179/1eA
Charpy Impact Strength, notched (-20 °C)	9 kJ/m²	ISO 179/1eA
Charpy Impact Strength, notched (-30 °C)	8 kJ/m²	ISO 179/1eA
Charpy Impact Strength, unnotched (23 °C)	50 kJ/m²	ISO 179/1eU
Charpy Impact Strength, unnotched (-20 °C)	45 kJ/m²	ISO 179/1eU
Izod Impact Strength, notched (23 °C)	11 kJ/m²	ISO 180/1A
Izod Impact Strength, notched (-20 °C)	8 kJ/m²	ISO 180/1A
Hardness, Ball Indentation H 358/30	124 MPa	ISO 2039

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

HongRong Engineering Plastics Co.,Ltd.
Head Office Tel. +85-2-6957-5415
Research Center Tel.+188 1699 6168

BOREALIS

Polypropylene

Fibremod GB311U

Application Related and other Tests

Property	Typical Value Data should not be used for specification work	Test Method
Fogging (100 °C,16 h)	1,0 mg	DIN 75201
Emission	15 µgC/g	VDA 277
Average process Shrinkage (in flow, 150x80x2 mm) [1]	0,2 %	Borealis Method
Average process Shrinkage (cross flow, 150x80x2 mm) [1]	1,0 %	Borealis Method
Melt energy	75,7 kJ/kg	DSC ISO 11357

[1] VALUES MAY ONLY BE USED AS INDICATION, AND SHOULD NOT BE USED DIRECTLY IN MOULD DESIGN WITHOUT PRIOR VALIDATION

Processing Techniques

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

Injection Moulding

This product is easy to process with standard injection moulding machines. 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	220 - 260 °C
Back pressure	As low as possible
Holding pressure	30 - 60 MPa
Mould temperature	30 - 50 °C
Screw speed	Low to medium
Flow front speed	100 - 200 mm/s

Storage

Fibremod GB311U 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

The product is not classified as dangerous.

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.

HongRong Engineering Plastics Co.,Ltd.
Head Office Tel. +85-2-6957-5415
Research Center Tel.+188 1699 6168

BOREALIS