

Polypropylene

Fibremod™ GB205U

Polypropylene Glass Fibre Reinforced Compound

Description

Fibremod™ GB205U is a 20% chemically coupled glass fiber reinforced polypropylene compound intended for injection molding. This material shows excellent mechanical properties also at elevated temperatures. The product is available in natural color and in standard black "-8229".

Typical characteristics

Fibremod™ GB205U can be described with following typical characteristics:

High heat stabilized

UL registered - File E108112

Applications

Fibremod™ GB205U is intended for following applications:

Structural parts

Washing machine parts

Technical components exposed to high heat and loads

Automotive under the bonnet parts

and other demanding applications in the automotive industry.

Physical properties

Property	Typical value *	Unit	Test method
Density	1040	kg/m ³	ISO 1183-1
Melt flow rate (230 °C/2.16 kg)	2	g/10min	ISO 1133-1
Flexural modulus (2 mm/min)	4400	MPa	ISO 178
Tensile strength (50 mm/min)	80	MPa	ISO 527-2
Heat deflection temperature B (0.45 MPa)	154	°C	ISO 75-2
Charpy impact strength, notched (23 °C)	10	kJ/m ²	ISO 179-1/1eA
Charpy impact strength, notched (-20 °C)	8	kJ/m ²	ISO 179-1/1eA

* Data should not be used for specification work

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

Other properties

Property	Typical value *	Unit	Test method
Fogging (100 °C, 16 h)	<2	mg	DIN 75201
Total emission (headspace)	<50	µg C/g	VDA 277

* Data should not be used for specification work

Processing techniques

Injection Molding:

This product is easy to process with standard injection molding machines. To avoid residual humidity from transport or storage, the material should be pre-dried approximately 2 h at 80°C. Following molding parameters should be used as guidelines:

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Processing setting	Typical value/range
Feeding temperature	40 - 80 °C
Mass temperature	220 - 260 °C
Back pressure	As low as possible
Screw speed	Low to medium
Holding pressure	30 - 60 MPa
Mould temperature	30 - 50 °C
Flow front speed	100 - 200 mm/s

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

Packaging and storage

Fibremod™ GB205U should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which can result in odour generation and colour changes and can have negative effects on the physical properties of this product.

Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency.

Further information on sustainability and Design for Recycling (DfR) can be found from our websites www.borealisgroup.com and www.borealiseverminds.com.

Regional Availability

Europe

North America: Grade available under the name Fibremod™ GB205UU

For information on regional availability please contact Borealis Sales Representative.

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.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

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It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

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