Polypropylene
Fibremod™ GB601HP

Polypropylene, Long Glass Fibre Reinforced

Description

Fibremod GB601HP is a special long glass fibre reinforced polypropylene concentrate grade intended for injection moulding and extrusion. This material is designed for the dilution process in combination with special developed dilution polypropylene grades, for example homopolymer HK060AE or copolymer BJ356MO. This combination of concentrate - dilution polypropylene should then be adjusted for a glass fibre content range of 20 - 40 % in the end product. The product is available in standard black 9502.This grade is additionally available in an emission optimized version with the same technical properties.

Applications

Fibremod GB601HP is intended for injection moulding of highly demanding technical applications, needing all features listed under Special features.

Special features

High strength
High stiffness
Excellent impact resistance
Very good dimensional stability
Very low moisture absorption
High creep resistance also at high temperatures
Very good long term heat resistance

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density	1469 kg/m³	ISO 1183
Flexural Modulus (2 mm/min)	14.100 MPa	ISO 178
Flexural Strength	195 MPa	ISO 178
Tensile Modulus (1 mm/min)	15.000 MPa	ISO 527-2
Tensile Strain at Break	1,1 %	ISO 527-2
Tensile Strength	135 MPa	ISO 527-2
Heat Deflection Temperature A	164 °C	ISO 75-2
Heat Deflection Temperature B	167 °C	ISO 75-2
Charpy Impact Strength, notched (23 °C)	23,5 kJ/m²	ISO 179/1eA
Charpy Impact Strength, unnotched (23 °C)	45 kJ/m²	ISO 179/1eU
Hardness, Ball Indentation H 132/30	127 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.

Processing Techniques

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

Injection Moulding

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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 bar
Mould temperature	40 - 80 °C
Screw speed	Low to medium
Flow front speed	100 - 200 mm/s

Storage

Fibremod GB601HP 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.

Recycling

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of recovery and disposal of the product.

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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.

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.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

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.

No liability can be accepted in respect of the use of any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.

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