

## Polypropylene

# Fibremod™ GB402HP

## Polypropylene, Long Glass Fibre Reinforced

### Description

**Fibremod™ GB402HP** is a 40 % long glass fibre reinforced polypropylene grade intended for injection moulding and extrusion. The long glass fibres, chemically coupled to the polypropylene matrix, are providing outstanding mechanical properties such as high strength, high stiffness and excellent impact behaviour.

Due to its excellent combination of properties this material can substitute in many applications other engineering plastics or metal alloys. A significant value of this material is the fact that it does not change its mechanical properties at humid conditions or water contact. It also contains UV-stabilizer.

The product is available in standard black 8229.

### Applications

**Fibremod GB402HP** has been developed especially for applications like:

Front end carriers	Structural parts
Dashboard carriers	Technical components exposed to high heat and loads
Door module carriers	

### Special Features

Excellent mechanical properties even at high temperatures	UV stabilised
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### Physical Properties

Property	Typical Value	Test Method
	Data should not be used for specification work	
Density	1240 kg/m <sup>3</sup>	ISO 1183
Flexural Modulus (2 mm/min)	8.400 MPa	ISO 178
Tensile Strength	140 MPa	ISO 527-2
Heat Deflection Temperature B (0,45 MPa)	166 °C	ISO 75-2
Charpy Impact Strength, notched (23 °C)	28 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Impact Strength, notched (-20 °C)	32 kJ/m <sup>2</sup>	ISO 179/1eA

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

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: The fibre length in the final part is the key factor determining the mechanical properties. The main goal of the moulding recommendation is to limit fibre breakage to a minimum. Therefore it is favourable to melt the material as quickly as possible to prevent excessive fibre breakage in the feeding section. Low work during plastification and smooth flow during moulding provides the most reinforcing fibre structure for the final part. Further specific recommendations for processing conditions can be determined only when the application and type of equipment are known. Please contact your local Borealis representative for specific assistance.

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

Fibremod is a trademark of the Borealis group.

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### Storage

**Fibremod GB402HP** 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.

### 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.

### Regional Availability

Europe

For information on regional availability please contact Borealis Sales Representative.

### Issuer:

Marketing Automotive / Georg Grestenberger  
Product Management / Gennaro Signorelli

### 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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