Polypropylene

Fibremod™ GB477HP

Description

Fibremod GB477HP is a 40 % chemically coupled high performance glass fibre reinforced polypropylene compound intended for injection moulding.

The product is available in standard black 9502.

Applications

Fibremod GB477HP has been developed especially for demanding applications in the automotive industry.

Front end carriers
Under the bonnet components
Pedal carriers
Other automotive parts
Structural parts
Tailgate carriers

Special features

Excellent stiffness
Good processability
Low emission

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density	1230 kg/m³	ISO 1183
Melt Flow Rate (230 °C/2,16 kg)	2,7 g/10min	ISO 1133
Flexural Modulus (2 mm/min)	9.000 MPa	ISO 178
Flexural Strength	175 MPa	ISO 178
Tensile Modulus (1 mm/min)	10.000 MPa	ISO 527-2
Tensile Strain at Break	2,8 %	ISO 527-2
Tensile Strength	130 MPa	ISO 527-2
Heat Deflection Temperature A (1,8 MPa)	153 °C	ISO 75-2
Coefficient of Thermal Expansion (-30 °C/80 °C)	20 µm/mK	Borealis Method
Charpy Impact Strength, notched (23 °C)	11,5 kJ/m²	ISO 179/1eA
Charpy Impact Strength, notched (-20 °C)	11,0 kJ/m²	ISO 179/1eA
Charpy Impact Strength, unnotched (23 °C)	62 kJ/m²	ISO 179/1eU
Charpy Impact Strength, unnotched (-20 °C)	59 kJ/m²	ISO 179/1eU

Application Related Tests

Property	Typical Value Data should not be used for specification work	Test Method
Emission	< 50 µgC/g	VDA 277
Average process Shrinkage (in flow, 150x80x2 mm) [1]	0,1 - 0,3 %	Borealis Method
Average process Shrinkage (cross flow, 150x80x2 mm)	0,7 - 1,1 %	Borealis Method

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

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Processing Techniques

Fibremod GB477HP is recommended to pre-dry before processing. A guideline is to dry the material 3 hours at 80°C.

Injection Moulding

This product is easy to process with standard injection moulding machines.

Following moulding parameters should be used as guidelines:

Feeding temperature	40 - 80 °C
Mass temperature	220 - 260 °C
Back pressure	Low to medium
Holding pressure	30 - 70 MPa
Mould temperature	30 - 70 °C
Screw speed	Low to medium
Flow front speed	100 - 200 mm/s

Storage

Fibremod GB477HP 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, recovery and disposal 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.

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