

PRODUCT DATA SHEET

08.07.2015 Ed.11

**Polypropylene**
MD231U

Polypropylene Compound, Mineral Filled

Description**MD231U** is a 20% mineral filled polypropylene compound intended for injection moulding.

This material has excellent balanced mechanical properties and a medium melt flow rate.

Applications**MD231U** is designed for:Air ducts
Air filtersAir conditioning parts
Automotive under the bonnet parts**Special Features**Long term high heat stabilised
UL registered under File E108112High dimensional stability
Low shrinkage**Physical Properties**

Property	Typical Value	Test Method
Data should not be used for specification work		
Density	1050 kg/m ³	ISO 1183
Melt Flow Rate (230 °C/2,16 kg)	6 g/10min	ISO 1133
Flexural Modulus (2 mm/min)	2.700 MPa	ISO 178
Tensile Strength (50 mm/min)	36 MPa	ISO 527-2
Heat Deflection Temperature B (0,45 MPa)	125 °C	ISO 75-2
Charpy Impact Strength, notched (23 °C)	3 kJ/m ²	ISO 179/1eA
Charpy Impact Strength, notched (-20 °C)	1 kJ/m ²	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.

Application Related and Other Tests

Property	Typical Value	Test Method
Data should not be used for specification work		
Fogging (100 °C,16 h)	< 2 mg	DIN 75201
Emission	< 50 µgC/g	VDA 277

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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	Low to medium
Holding pressure	30 - 60 MPa
Mould temperature	30 - 50 °C
Screw speed	Low to medium
Flow front speed	100 - 200 mm/s

Storage

MD231U 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.

Regional Availability

Europe

North America

For information on regional availability please contact Borealis Sales Representative.

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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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