

Polypropylene

MD441U

Polypropylene Mineral Filled Compound

Description

MD441U is a mineral filled polypropylene compound intended for injection molding. This material has excellent balanced mechanical properties and a medium melt flow rate.

Typical characteristics

MD441U can be described with following typical characteristics:

Low shrinkage

Excellent dimensional stability

Long term high heat stabilised

UL94 listed

Applications

MD441U is intended for following applications:

Air conditioning parts

Small appliances

Heater housings

Structural parts

Under the bonnet components

White goods

Physical properties

Property	Typical value *	Unit	Test method
Density	1220	kg/m ³	ISO 1183-1
Melt flow rate (230 °C/2.16 kg)	6	g/10min	ISO 1133-1
Flexural modulus (2 mm/min)	4700	MPa	ISO 178
Heat deflection temperature B (0.45 MPa)	130	°C	ISO 75-2
Charpy impact strength, notched (-20 °C)	1.2	kJ/m ²	ISO 179-1
Charpy impact strength, notched (23 °C)	2.4	kJ/m ²	ISO 179-1
Tensile strength (50 mm/min)	32	MPa	ISO 527-2

* Data should not be used for specification work

Processing techniques

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 parameters should be used as guideline:

Processing setting	Typical value/range
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

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

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Packaging and storage

MD441U 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 MD441UU

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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