Polypropylene
Daplen™ EE109AE

Polypropylene TPO Compound

Description

Daplen EE109AE is a 20% mineral filled elastomer modified polypropylene compound intended for injection moulding.

This material has an excellent balance between impact strength and stiffness, gives a good surface quality and is easy to process.

Applications

Daplen EE109AE has been developed especially for the car industry to be used in automotive exterior parts.

Bumpers
Body side mouldings
Body panels

Special features

Suitable for applications, which require low expansion over a broad temperature scale
Excellent paintability

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density	1040 kg/m3	ISO 1183
Melt Flow Rate (230 °C/2,16 kg)	13 g/10min	ISO 1133
Flexural Modulus (2 mm/min)	1.500 MPa	ISO 178
Flexural Strength	21 MPa	ISO 178
Tensile Modulus (1 mm/min)	1.400 MPa	ISO 527-2
Tensile Strain at Yield (50 mm/min)	7 %	ISO 527-2
Tensile Strain at Break (50 mm/min)	> 300 %	ISO 527-2
Tensile Stress at Yield (50 mm/min)	16 MPa	ISO 527-2
Heat Deflection Temperature A (1,80 MPa)	50 °C	ISO 75-2
Heat Deflection Temperature B (0,45 MPa)	92 °C	ISO 75-2
Vicat softening temperature (10 N)	121 °C	ISO 306
Vicat softening temperature (50 N)	38 °C	ISO 306
Coefficient of Thermal Expansion (-30 °C/80 °C)	50 µm/mK	Borealis Method
Charpy Impact Strength, notched (23 °C)	40 kJ/m²	ISO 179/1eA
Charpy Impact Strength, notched (-20 °C)	5 kJ/m²	ISO 179/1eA
Charpy Impact Strength, notched (-30 °C)	4,2 kJ/m²	ISO 179/1eA
Charpy Impact Strength, unnotched (23 °C)	No break	ISO 179/1eU
Charpy Impact Strength, unnotched (-20 °C)	No break	ISO 179/1eU
Izod Impact Strength, notched (23 °C)	40,5 kJ/m²	ISO 180/1A
Izod Impact Strength, notched (-20 °C)	6,1 kJ/m²	ISO 180/1A
Hardness, Ball Indentation 132 N/10 s	26 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.

Borealis AG | Wagramerstrasse 17-19 | 1220 Vienna | Austria
Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com

BOREALIS

Polypropylene
Daplen EE109AE

Application Related Tests

Property	Typical Value Data should not be used for specification work	Test Method
Mould average Shrinkage (disk) [1]	0,65 %	Borealis Method
Post Shrinkage (2h/90 °C) [1]	0,10 %	Borealis Method

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

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:

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
Daplen EE109AE 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 a dangerous preparation.

Please see our Safety Data 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 for details on various aspects of recovery and disposal of the product.

Borealis AG | Wagramerstrasse 17-19 | 1220 Vienna | Austria
Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com

Polypropylene
Daplen EE109AE

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 Borealis' products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.

Borealis AG | Wagramerstrasse 17-19 | 1220 Vienna | Austria
Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com