Polypropylene

# Daplen™ EE189AI

Polypropylene TPO Compound

## Description

**Daplen EE189AI** is a 15% mineral filled polypropylene compound intended for injection moulding.

This material has an excellent balance between impact strength and stiffness and is easy to process.

## Applications

**Daplen EE189AI** has been developed especially for the car industry to be used in automotive interior parts.

Dashboards
Door panels and pockets
Other automotive interior parts

## Special features

High scratch resistance
No tendency to show stickiness after outdoor exposure

## Physical Properties

| Property | Typical Value<br>Data should not be used for specification work | Test Method |
|---|---|---|
| Density | 1030 kg/m3 | ISO 1183 |
| Melt Flow Rate (230 °C/2,16 kg) | 11 g/10min | ISO 1133 |
| Melt Flow Rate (230 °C/5,0 kg) | 40 g/10min | ISO 1133 |
| Flexural Modulus (2 mm/min) | 1.900 MPa | ISO 178 |
| Flexural Strength | 30 MPa | ISO 178 |
| Tensile Modulus (1 mm/min) | 1.850 MPa | ISO 527-2 |
| Tensile Strain at Yield (50 mm/min) | 4,5 % | ISO 527-2 |
| Tensile Strain at Break (50 mm/min) | 21 % | ISO 527-2 |
| Tensile Stress at Yield (50 mm/min) | 22 MPa | ISO 527-2 |
| Heat Deflection Temperature A (1,80 MPa) | 53 °C | ISO 75-2 |
| Heat Deflection Temperature B (0,45 MPa) | 100 °C | ISO 75-2 |
| Vicat softening temperature (10 N) | 136 °C | ISO 306 |
| Vicat softening temperature (50 N) | 55 °C | ISO 306 |
| Charpy Impact Strength, notched (23 °C) | 16 kJ/m² | ISO 179/1eA |
| Charpy Impact Strength, notched (-20 °C) | 4,5 kJ/m² | ISO 179/1eA |
| Charpy Impact Strength, unnotched (23 °C) | No break | ISO 179/1eU |
| Charpy Impact Strength, unnotched (-20 °C) | 65 kJ/m² | ISO 179/1eU |
| Hardness, Ball Indentation H 358/30 | 50 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

Polypropylene

# Daplen EE189AI

## Application Related Tests

| Property | Typical Value<br>Data should not be used for specification work | Test Method |
|---|---|---|
| Fogging (100 °C,16 h) | < 2 mg | DIN 75201 |
| Emission | < 50 µgC/g | VDA 277 |
| Mould average Shrinkage (disk) [1] | 1 % | 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**

To avoid residual humidity from transport or storage, the material should be pre-dried approximately 2h at 80°C. 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 - 60 bar |
| Mould temperature | 30 - 50 °C |
| Screw speed | Low to medium |
| Flow front speed | 100 - 200 m/min |

## Storage

**Daplen EE189AI** 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.

BOREALIS