# Polypropylene

# VC105

Polypropylene Compound, Mineral Filled

## Description

**VC105** is a 40% mineral filled polypropylene compound intended for injection moulding.

## Applications

**VC105** has been developed especially for the car industry to be used in automotive interior parts.

Air ducts

## Special features

Very good chemical resistance
Very good stiffness
Very good dimensional stability
High heat stabilised

## Physical Properties

Values determined on standard injection moulded specimens conditioned at 23°C and 50% relative humidity after at least 96 hours storage time.

| Property | Typical Value<br>Data should not be used for specification work | Test Method |
|---|---|---|
| Density (23 °C) | 1240 kg/m³ | ISO 1183 |
| Melt Flow Rate (230 °C/2,16 kg) | 4 g/10min | ISO 1133 |
| Flexural Modulus (2 mm/min) | 4.500 MPa | ISO 178 |
| Flexural Strength | 52 MPa | ISO 178 |
| Tensile Stress at Yield (50 mm/min) (23 °C) | 34 MPa | ISO 527-2 |
| Heat Deflection Temperature Edgewise (1,8 MPa) | 93 °C | ISO 75-2 |
| Heat Deflection Temperature Edgewise (0,45 MPa) | 135 °C | ISO 75-2 |
| Izod Impact Strength, notched (23 °C) | 3 kJ/m² | ISO 180/1A |
| Izod Impact Strength, unnotched (23 °C) | 16 kJ/m² | ISO 180/1U |

## Combustion Properties

| Property | Typical Value<br>Data should not be used for specification work | Test Method |
|---|---|---|
| Flammability at thickness 1 mm | Max100 mm/min | ISO 3795 |

## Processing Techniques

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

VC105 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 moulding parameters should be used as guidelines:

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| | |
|---|---|
| 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

**VC105** 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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