



# Polypropylene KSR4525

Polypropylene Reactor Elastomer Modified

## Description

**KSR4525** is a reactor elastomer modified polypropylene intended for injection moulding. The product is available in natural colour.

This material has excellent balanced mechanical properties and gives a good surface quality.

## Applications

**KSR4525** has been developed especially for the car industry to be used in automotive exterior parts.

Bumpers  
Exterior trims

## Special features

UV stabilised

## Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density	905 kg/m <sup>3</sup>	ISO 1183
Melt Flow Rate (230 °C/2,16 kg)	7 g/10min	ISO 1133
Flexural Modulus (2 mm/min)	970 MPa	ISO 178
Flexural Strength	22 MPa	ISO 178
Tensile Modulus (1 mm/min)	940 MPa	ISO 527-2
Tensile Strain at Yield (50 mm/min)	6 %	ISO 527-2
Tensile Stress at Yield (50 mm/min)	20 MPa	ISO 527-2
Heat Deflection Temperature A (1,80 MPa)	45 °C	ISO 75-2
Heat Deflection Temperature B (0,45 MPa)	70 °C	ISO 75-2
Vicat softening temperature A, (10 N)	137 °C	ISO 306
Vicat softening temperature B, (50 N)	47 °C	ISO 306
Coefficient of Thermal Expansion (-30 °C/80 °C)	100 µm/mK	Borealis Method
Charpy Impact Strength, notched (23 °C)	50 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Impact Strength, notched (-20 °C)	7 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Impact Strength, notched (-30 °C)	5,5 kJ/m <sup>2</sup>	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 (-20 °C)	6 kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact Strength, notched (23 °C)	45 kJ/m <sup>2</sup>	ISO 180/1A
Hardness, Ball Indentation	38 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.



# Polypropylene KSR4525

## Application Related and other Tests

Property	Typical Value	Test Method
Data should not be used for specification work		
Mould average Shrinkage <sup>1</sup>	1,60 %	Borealis Method
Melt energy	80 kJ/kg	DSC ISO 11357

<sup>1</sup> 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

**KSR4525** 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.