

SABIC® PPcompound 5450

Polypropylene

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® PPcompound 5450 is a low density modified polypropylene. Material properties include very high flow, high impact and high stiffness with low shrinkage and CLTE and good process-ability. The material exhibits good esthetical behaviour with low tiger stripes visibility. Typical applications include automotive exterior parts such as zero gap automotive bumper applications with complex and large shapes. It can be used in painted and unpainted applications with UV stabilization added on demand.

SABIC® PPcompound 5450 is a designated automotive grade.

| General Information | | | |
|---|---------------------------|-------------------|-----------------|
| Additive | Impact Modifier | | |
| Features | Good Processability | | |
| | High Flow | | |
| | High Impact Resistance | | |
| | High Stiffness | | |
| | Impact Modified | | |
| | Low CLTE | | |
| | Low Density | | |
| | Low Shrinkage | | |
| | Paintable | | |
| | | | |
| | | | |
| | | | |
| Uses | Automotive Applications | | |
| | Automotive Bumper | | |
| | Automotive Exterior Parts | | |
| Forms | Pellets | | |
| Processing Method | Injection Molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Density | 0.930 | g/cm ³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 20 | g/10 min | ISO 1133 |
| Molding Shrinkage (24 hr) | 0.70 | % | Internal Method |
| Hardness | Nominal Value | Unit | Test Method |
| Shore Hardness (Shore D, Injection Molded) | 55 | | ISO 868 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Stress | | | ISO 527-2/5/50 |
| Yield, 3.20 mm, Injection Molded | 20.0 | MPa | |
| Break, 3.20 mm, Injection Molded | 22.0 | MPa | |
| Tensile Strain (Break, 3.20 mm, Injection Molded) | 500 | % | ISO 527-2/5/50 |

| Flexural Modulus ¹ (Injection Molded) | 1000 | MPa | ASTM D790 |
|--|-------------------------|----------|-------------|
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength (23°C, Injection Molded) | No Break | | ISO 179/1eA |
| Charpy Unnotched Impact Strength (-40°C, Injection Molded) | No Break | | ISO 179/1eU |
| Notched Izod Impact Strength | | | ISO 180/4A |
| -20°C, Injection Molded | No Break | | |
| 0°C, Injection Molded | No Break | | |
| 23°C, Injection Molded | No Break | | |
| Thermal | Nominal Value | Unit | Test Method |
| Heat Deflection Temperature (0.45 MPa, Unannealed) | 90.0 | °C | ISO 75-2/B |
| Vicat Softening Temperature | 120 | °C | ISO 306/A |
| CLTE - Flow | | | ASTM D696 |
| -30 to 30°C | 7.0E-5 | cm/cm/°C | |
| 23 to 80°C | 8.0E-5 | cm/cm/°C | |
| NOTE | | | |
| 1. | Method I (3 point load) | | |

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

