

MAGNUM™ 3453

Trinseo - ABS Resin

Tuesday, March 10, 2020

General Information

Product Description

MAGNUM* 3453 ABS is a general purpose injection moulding resin suitable for a wide range of applications. The product combines a medium to high impact performance with good flowability.

The mass (continuous process) ABS technology ensures an ABS resin that combines excellent processability with a stable light base colour that is ideal for self-colouring.

Applications:

- Household appliances
- Telephones
- Electrical and computer equipment
- Consumer goods
- Toys

General

| | | | |
|-----------------|--------------------------------------|-----------------------|--------------------------|
| Material Status | • Commercial: Active | | |
| Availability | • Asia Pacific | • Europe | • North America |
| Features | • Good Flow | • Good Processability | • High Impact Resistance |
| Uses | • Appliances | • General Purpose | |
| | • Electrical/Electronic Applications | • Toys | |
| Forms | • Pellets | | |

ASTM & ISO Properties¹

| Physical | Nominal Value | Unit | Test Method |
|---|---------------|-------------------|--------------|
| Density | 1.05 | g/cm ³ | ISO 1183/B |
| Apparent (Bulk) Density | 0.65 | g/cm ³ | ISO 60 |
| Melt Mass-Flow Rate (MFR) | | | ISO 1133 |
| 220°C/10.0 kg | 15 | g/10 min | |
| 230°C/3.8 kg | 5.0 | g/10 min | |
| Molding Shrinkage - Flow | 0.40 to 0.70 | % | ISO 294-4 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus (3.20 mm, Injection Molded) | 2280 | MPa | ISO 527-2 |
| Tensile Stress (Yield, 3.20 mm, Injection Molded) | 45.0 | MPa | ISO 527-2/50 |
| Tensile Strain (Yield, 3.20 mm, Injection Molded) | 2.5 | % | ISO 527-2/50 |
| Flexural Modulus ^{2,3} (3.20 mm, Injection Molded) | 2300 | MPa | ISO 178 |
| Flexural Stress ^{2,3} (3.20 mm, Injection Molded) | 68.0 | MPa | ISO 178 |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength | | | ISO 179/1eA |
| -30°C, Injection Molded | 10 | kJ/m ² | |
| 23°C, Injection Molded | 20 | kJ/m ² | |
| Notched Izod Impact Strength | | | ISO 180/A |
| -30°C, Injection Molded | 9.0 | kJ/m ² | |
| 23°C, Injection Molded | 19 | kJ/m ² | |
| Thermal | Nominal Value | Unit | Test Method |
| Heat Deflection Temperature (1.8 MPa, Annealed) | 100 | °C | ISO 75-2/A |
| Vicat Softening Temperature | 97.0 | °C | ISO 306/B50 |

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| Flammability | Nominal Value | Unit | Test Method |
|-------------------------------------|---------------|--------|-------------|
| Burning Rate ⁴ (2.00 mm) | 55 | mm/min | ISO 3795 |
| Flame Rating ⁴ | | | UL 94 |
| 1.5 mm | | HB | |
| 3.0 mm | | HB | |
| Carbon Emission ⁴ | 25.0 | µg/g | VDA 277 |
| Fogging ⁴ | 97 | % | ISO 294-4 |

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 mm/min

³ 3-points

⁴ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.