

MAGNUM™ A440 SMOOTH

ABS Resin

Overview

MAGNUM™ A440 SMOOTH is a general purpose ABS resin with outstanding processability. It has medium impact and heat performance, and is designed for extrusion thermoforming applications. Its stable light base color makes it an ideal candidate for self-coloring process. Magnum™ 'SMOOTH series' resins have an ultra low particulate content, which results in a superb finish that will enable our customers to produce parts with excellent aesthetics at a lower total cost.

Complies with

- U.S. FDA 21 CFR 181.32(a)(3)(i)
- Consult the regulation for complete details

Applications:

- Medium impact mono-layer sheets
- Co-extruded sheets
- Sanitary wares
- Transportation
- Signage

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|--|---------------------------|------------------------|--------------|
| Density | 1.05 g/cm ³ | 1.05 g/cm ³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg) | 6.5 g/10 min | 6.5 g/10 min | ISO 1133 |
| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Tensile Strength | | | |
| Yield ¹ | 6380 psi | 44.0 MPa | ASTM D638 |
| Yield | 5950 psi | 41.0 MPa | ISO 527-2/50 |
| Break ¹ | 4930 psi | 34.0 MPa | ASTM D638 |
| Break | 4500 psi | 31.0 MPa | ISO 527-2/50 |
| Tensile Elongation | | | |
| Break ¹ | 15 % | 15 % | ASTM D638 |
| Break | 30 % | 30 % | ISO 527-2/50 |
| Flexural Modulus ² | 305000 psi | 2100 MPa | ASTM D790 |
| Flexural Strength ² | 10200 psi | 70.0 MPa | ASTM D790 |
| Impact | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Charpy Notched Impact Strength (73°F (23°C)) | 7.9 ft·lb/in ² | 17 kJ/m ² | ISO 179/1eA |
| Notched Izod Impact (73°F (23°C)) | 4.3 ft·lb/in | 230 J/m | ASTM D256 |
| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 264 psi (1.8 MPa), Annealed | 205 °F | 96.0 °C | |
| Vicat Softening Temperature | 216 °F | 102 °C | ISO 306/B50 |
| Flammability | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Flame Rating ³ (0.06 in (1.5 mm)) | HB | HB | UL 94 |

Additional Information

Mass balance versions (bio-based (BIO) or chemically recycled (CR)) of this product are chemically and physically indistinguishable to the standard fossil grade. This technical data sheet applies to all versions. Letters of sameness are available upon request.

| Injection | Nominal Value (English) | Nominal Value (SI) |
|--------------------|--------------------------------|---------------------------|
| Drying Temperature | 176 to 194 °F | 80 to 90 °C |
| Drying Time | 2.0 to 4.0 hr | 2.0 to 4.0 hr |