

Technical Information



MAGNUM™ CO2NET™ A440BIO80 SMOOTH ABS Resin

Overview

MAGNUM™ CO2NET™ A440BIO80 SMOOTH is credited with up to 80% of ISCC+ bio-based feedstocks through mass balance certification. It 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)
- ISCC+
- 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
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	

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ 2.0 in/min (50 mm/min)

² 0.051 in/min (1.3 mm/min)

³ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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