

Technical Information



MAGNUM™ CO2NET™ A460BIO80 ABS Resin

Overview

MAGNUM™ CO2NET™ A460BIO80 ABS is credited with 80% of ISCC+ bio-based feedstocks through mass balance certification. MAGNUM™ CO2NET™ A460BIO80 is an ABS resin that can be used for both extrusion and injection molding applications. This grade combines high impact and medium-high heat resistance. The mass (continuous polymerization process) ABS technology ensures a stable light base color ideal for self-coloring, low gel level and high purity that makes MAGNUM™ A460 a suitable candidate for extrusion and alloy compounding applications

Applications:

- High end extrusion applications
- ABS feedstock for PC/ABS compound
- General injection molding applications

Complies with

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

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)	5.0 g/10 min	5.0 g/10 min	ISO 1133
Molding Shrinkage	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			
Yield ¹	6240 psi	43.0 MPa	ASTM D638
Yield	6240 psi	43.0 MPa	ISO 527-2/50
Break ¹	4930 psi	34.0 MPa	ASTM D638
Break	4640 psi	32.0 MPa	ISO 527-2/50
Tensile Elongation			
Break ¹	15 %	15 %	ASTM D638
Break	15 %	15 %	ISO 527-2/50
Flexural Modulus ²	348000 psi	2400 MPa	ASTM D790
Flexural Strength ²	10900 psi	75.0 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	12 ft-lb/in ²	25 kJ/m ²	ISO 179/1eA
Notched Izod Impact (73°F (23°C))	7.5 ft-lb/in	400 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	208 °F	98.0 °C	
Vicat Softening Temperature	216 °F	102 °C	ISO 306/B50
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ³			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	
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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