

Technical Information



MAGNUM™ CO2NET™ 3416SC BIO80 ABS Resin

Overview

Overview:

MAGNUM™ CO2NET™ 3416SC BIO80 ABS is credited with 80% of ISCC+ biobased feedstocks through mass balance certification.

MAGNUM™ CO2NET™ 3416SC BIO80 ABS has the same formulation and offers the same properties as well as the same sales specifications as MAGNUM™ 3416SC ABS, which is the reference high-heat ABS in the automotive industry. It is universally suitable for all interior and exterior applications.

Benefits:

- Lot to lot consistency allowing for optimal machine parameters settings from the start
- Self-coloring enabling improvement of costs by using less pigments and lowering your logistic costs
- Low VOC allowing a better interior air quality facing increasing regulatory and OEMs constraints.
- Heat stability during wide range of processing temperatures: enhanced part design freedom

Applications:

- Main interior and exterior automotive applications
- Mid-consoles
- Door panels
- Door handles
- Pillars

Complies with

- ISCC+

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.05 g/cm ³	1.05 g/cm ³	ISO 1183
Apparent (Bulk) Density	0.65 g/cm ³	0.65 g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR)			ISO 1133
220°C/10.0 kg	6.5 g/10 min	6.5 g/10 min	
230°C/3.8 kg	2.3 g/10 min	2.3 g/10 min	
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 Modulus	305000 psi	2100 MPa	ISO 527-1/1
Tensile Stress (Yield)	6240 psi	43.0 MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	3.0 %	3.0 %	
Break	30 %	30 %	
Flexural Modulus ¹	305000 psi	2100 MPa	ISO 178
Flexural Stress ¹	9720 psi	67.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
73°F (23°C), Injection Molded	6.7 ft-lb/in ²	14 kJ/m ²	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ISO 75-2/A
264 psi (1.8 MPa), Unannealed	181 °F	83.0 °C	
Vicat Softening Temperature	226 °F	108 °C	ISO 306/B50

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ²			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	
Carbon Emission ²	20.0 µg/g	20.0 µg/g	VDA 277

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 0.079 in/min (2.0 mm/min)

² This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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