

EMERGE™ ABS 5302

Advanced Resin

Overview

EMERGE ABS 5302 is a black, 20% glass filled ABS which is suitable for use in a wide variety of internal structural component applications in the Information Technology market. This resin exhibits a property balance of flow, rigidity, and dimensional stability.

Applications:

- Information Technology Equipment and consumer electronics
- Printer internal components
- Structural frames

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.19 g/cm ³	1.19 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg	5.0 g/10 min	5.0 g/10 min	
230°C/3.8 kg	1.6 g/10 min	1.6 g/10 min	
Molding Shrinkage			
Flow	1.5E-3 to 2.5E-3 in/in	0.15 to 0.25 %	
Across Flow	3.5E-3 to 4.0E-3 in/in	0.35 to 0.40 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	10200 psi	70.0 MPa	
Break, 0.126 in (3.20 mm), Injection Molded	10200 psi	70.0 MPa	
Tensile Elongation			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	2.0 %	2.0 %	
Break, 0.126 in (3.20 mm), Injection Molded	2.0 %	2.0 %	
Flexural Modulus			ASTM D790
0.126 in (3.20 mm), Injection Molded	921000 psi	6350 MPa	
Flexural Strength			ASTM D790
0.126 in (3.20 mm), Injection Molded	16500 psi	114 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	1.3 ft-lb/in	72 J/m	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	221 °F	105 °C	
264 psi (1.8 MPa), Unannealed	212 °F	100 °C	
Vicat Softening Temperature			
--	223 °F	106 °C	ASTM D1525 ¹
--	239 °F	115 °C	ASTM D1525 ²
CLTE			ASTM D696
Flow : -22 to 85°F (-30 to 29°C)	5.0E-5 in/in/°F	9.0E-5 cm/cm/°C	
Transverse : -22 to 85°F (-30 to 29°C)	5.2E-5 in/in/°F	9.4E-5 cm/cm/°C	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ³ (0.04 in (1.0 mm), BK, NC, GY)	HB	HB	UL 94
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	176 °F	80 °C	
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr	

Injection	Nominal Value (English)	Nominal Value (SI)
Processing (Melt) Temp	428 to 500 °F	220 to 260 °C
Mold Temperature	68 to 140 °F	20 to 60 °C

Notes

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

¹ Rate A (50°C/h), Loading 2 (50 N)

² Rate B (120°C/h), Loading 1 (10 N)

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



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