TRINSEO™

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/cm³	1.19	g/cm³	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					ASTM D955
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	%	
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
Processing (Melt) Temp	428 to 500	°F	220 to 260	°C
Mold Temperature	68 to 140	°F	20 to 60	°C

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