

EMERGE™ ABS 5302

Advanced Resin

Trinseo

Message:

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

General Information			
UL YellowCard	E54680-469940	E206114-468476	
Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Features	Good Dimensional Stability		
	Good Flow		
	High Rigidity		
Uses	Electrical/Electronic Applications		
	Structural Parts		
Appearance	Black		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg	5.0	g/10 min	
230°C/3.8 kg	1.6	g/10 min	
Molding Shrinkage			ASTM D955
Flow	0.15 to 0.25	%	
Across Flow	0.35 to 0.40	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, 3.20 mm, Injection Molded	70.0	MPa	
Break, 3.20 mm, Injection Molded	70.0	MPa	
Tensile Elongation			ASTM D638
Yield, 3.20 mm, Injection Molded	2.0	%	
Break, 3.20 mm, Injection Molded	2.0	%	
Flexural Modulus (3.20 mm, Injection Molded)	6350	MPa	ASTM D790

Flexural Strength (3.20 mm, Injection Molded)	114	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.20 mm, Injection Molded)	72	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	105	°C	
1.8 MPa, Unannealed	100	°C	
Vicat Softening Temperature			
--	106	°C	ASTM D1525 ¹
--	115	°C	ASTM D1525 ²
CLTE			ASTM D696
Flow : -30 to 29°C	9.0E-5	cm/cm/°C	
Transverse : -30 to 29°C	9.4E-5	cm/cm/°C	
Flammability	Nominal Value		Test Method
Flame Rating ³ (1.00 mm, BK, NC, GY)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	220 to 260	°C	
Mold Temperature	20.0 to 60.0	°C	
NOTE			
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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