Styron EMERGEâ„¢ 5302 Acrylonitrile Butadiene Styrene (ABS)

Category : Polymer , Thermoplastic , ABS Polymer

Material Notes:

EMERGEâ„¢ 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. Applications: Information Technology Equipment and Consumer Electronics Printer Internal Components Structural Frames Information provided by DowThis product line was spun off from Dow Chemical to Styron in 2010.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Styron-EMERGE-5302-Acrylonitrile-Butadiene-Styrene-ABS.php

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/inÂ³	ISO 1183B
Filler Content	20 %	20 %	Glass; ISO 5630-B
Linear Mold Shrinkage	0.0015 - 0.0025 cm/cm	0.0015 - 0.0025 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0035 - 0.0040 cm/cm	0.0035 - 0.0040 in/in	ISO 294-4
Melt Flow	1.6 g/10 min @Load 3.80 kg, Temperature 230 Â°C	1.6 g/10 min @Load 8.38 lb, Temperature 446 Â°F	ISO 1133
	5.0 g/10 min @Load 10.0 kg, Temperature 220 Â°C	5.0 g/10 min @Load 22.0 lb, Temperature 428 Â°F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	72.0 MPa @Thickness 4.00 mm	10400 psi @Thickness 0.157 in	50mm/min, injection molded, unannealed; ISO 527-2
Tensile Strength, Yield	72.0 MPa @Thickness 4.00 mm	10400 psi @Thickness 0.157 in	50mm/min, injection molded, unannealed; ISO 527-2
Elongation at Break	2.0 % @Thickness 4.00 mm	2.0 % @Thickness 0.157 in	50mm/min, injection molded, unannealed; ISO 527-2
Elongation at Yield	2.0 % @Thickness 4.00 mm	2.0 % @Thickness 0.157 in	50mm/min, injection molded, unannealed; ISO 527-2
Tensile Modulus	6.10 GPa	885 ksi	1mm/min, 4mm injection molded, unannealed; ISO 527-2
Flexural Strength	115 MPa @Thickness 4.00 mm	16700 psi @Thickness 0.157 in	2mm/min, injection molded, unannealed; ISO 178

Mechanical Properties	Metric	English	Comments
Flexural Modulus	6.20 GPa @Thickness 4.00 mm	899 ksi @Thickness 0.157 in	Conditioned, injection molded, unannealed; ISO 178
Izod Impact, Notched (ISO)	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	ISO 180/A
Charpy Impact, Notched	0.750 J/cmÂ²	3.57 ft-lb/inÂ²	

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	50.0 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	
CTE, linear, Transverse to Flow	94.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	52.2 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	105 Â°C	221 Â°F	unannealed; ISO 75-B
Deflection Temperature at 1.8 MPa (264 psi)	100 Â°C	212 Â°F	unannealed; ISO 75-A
Vicat Softening Point	106 Â°C	223 Â°F	50Â°C / 50N; ISO 306-B50
	115 Â°C	239 Â°F	120Â°C / 10N; ISO 306-A120
Flammability, UL94	HB @Thickness 1.00 - 2.50 mm	HB @Thickness 0.0394 - 0.0984 in	

Processing Properties	Metric	English	Comments
Melt Temperature	220 - 260 Â°C	428 - 500 Â°F	
Mold Temperature	20.0 - 60.0 Â°C	68.0 - 140 Â°F	
Drying Temperature	80.0 Â°C	176 Â°F	
Dry Time	3 - 4 hour	3 - 4 hour	

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