



Geon™ Vinyl Rigid Molding M4600

Rigid Polyvinyl Chloride

Key Characteristics

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• High Flow • Medium Impact Resistance		
Uses	• Battery Cases		
Appearance	• Clear/Transparent		
Forms	• Pellets		

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.36	1.36	ASTM D792
Spiral Flow	40.0 in	102 cm	
Molding Shrinkage - Flow	2.0E-3 to 5.0E-3 in/in	0.20 to 0.50 %	ASTM D955
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus ²	460000 psi	3170 MPa	ASTM D638
Tensile Strength ² (Yield)	8000 psi	55.2 MPa	ASTM D638
Tensile Elongation ² (Break)	30 %	30 %	ASTM D638
Flexural Modulus	440000 psi	3030 MPa	ASTM D790
Flexural Strength	13000 psi	89.6 MPa	ASTM D790
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact 73°F (23°C), 0.125 in (3.18 mm), Injection Molded	0.80 ft·lb/in	43 J/m	ASTM D256A
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore D)	81	81	ASTM D2240
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed, 0.250 in (6.35 mm)	151 °F	66.1 °C	ASTM D648
Deflection Temperature Under Load 66 psi (0.45 MPa), Annealed, 0.250 in (6.35 mm)	158 °F	70.0 °C	ASTM D648
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed, 0.250 in (6.35 mm)	145 °F	62.8 °C	ASTM D648
Deflection Temperature Under Load 264 psi (1.8 MPa), Annealed, 0.250 in (6.35 mm)	154 °F	67.8 °C	ASTM D648
RTI Elec	122 °F	50.0 °C	UL 746
RTI Imp	122 °F	50.0 °C	UL 746
RTI Str	122 °F	50.0 °C	UL 746
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating 0.06 in (1.5 mm), Transparents	V-0	V-0	UL 94

Optical	Typical Value (English)	Typical Value (SI)	Test Method
Transmittance (125 mil (3180 µm))	82.0 %	82.0 %	ASTM D1003
Haze (125 mil (3180 µm))	4.00 %	4.00 %	ASTM D1003

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Processing (Melt) Temp	390 to 400 °F	199 to 204 °C

Notes

¹ Typical values are not to be construed as specifications.

² Type I, 2.0 in/min (51 mm/min)



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