



Geon™ Vinyl Rigid Molding MP412

Rigid Polyvinyl Chloride

Key Characteristics

Product Description

*UL VO and 5VA values are associated with Trans colors only.

General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Food Contact Acceptable	• High Flow	• High Impact Resistance
Agency Ratings	• FDA Food Contact, Unspecified Rating		
Appearance	• Clear/Transparent		
Forms	• Pellets		

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.31	1.31	ASTM D792
Spiral Flow	32.0 in	81.3 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	380000 psi	2620 MPa	ASTM D638
Tensile Strength ² (Yield)	6900 psi	47.6 MPa	ASTM D638
Tensile Elongation ² (Break)	35 %	35 %	ASTM D638
Flexural Modulus	360000 psi	2480 MPa	ASTM D790
Flexural Strength	11000 psi	75.8 MPa	ASTM D790
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact			ASTM D256A
32°F (0°C), 0.125 in (3.18 mm), Injection Molded	2.0 ft·lb/in	110 J/m	
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	15 ft·lb/in	800 J/m	
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore D)	83	83	ASTM D2240
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, 0.250 in (6.35 mm)	153 °F	67.2 °C	
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Annealed, 0.250 in (6.35 mm)	160 °F	71.1 °C	
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed, 0.250 in (6.35 mm)	153 °F	67.2 °C	
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Annealed, 0.250 in (6.35 mm)	158 °F	70.0 °C	
RTI Elec	122 °F	50.0 °C	UL 746
RTI Imp	122 °F	50.0 °C	UL 746

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Thermal	Typical Value (English)	Typical Value (SI)	Test Method
RTI Str	122 °F	50.0 °C	UL 746
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating			UL 94
0.0470 in (1.19 mm), ALL	V-0	V-0	
0.0580 in (1.47 mm), ALL	5VA	5VA	
Optical	Typical Value (English)	Typical Value (SI)	Test Method
Transmittance ³ (125 mil (3180 µm))	76.0 %	76.0 %	ASTM D1003
Haze (125 mil (3180 µm))	7.0 %	7.0 %	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)

³ CIE Illuminant C

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