



Geon™ Vinyl Rigid Extrusion L0189

Rigid Polyvinyl Chloride

Key Characteristics

General	
Material Status	• Commercial: Active
Regional Availability	• Africa & Middle East • Europe • Asia Pacific • Latin America • North America
Features	• Food Contact Acceptable
Uses	• Fittings • Piping • Profiles
Agency Ratings	• NSF 51 • NSF 61
Appearance	• Clear/Transparent
Forms	• Pellets
Processing Method	• Extrusion

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.33	1.33	ASTM D792
PVC Cell Classification	16443	16443	ASTM D1784
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus ²	392000 psi	2700 MPa	ASTM D638
Tensile Strength ² (Yield)	7260 psi	50.1 MPa	ASTM D638
Flexural Modulus	389000 psi	2680 MPa	ASTM D790
Flexural Strength	12000 psi	82.7 MPa	ASTM D790
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact			ASTM D256A
73°F (23°C), 0.125 in (3.18 mm), Injection Molded	23 ft·lb/in	1200 J/m	
Across Flow : 73°F (23°C), 0.125 in (3.18 mm), Compression Molded	2.0 ft·lb/in	110 J/m	
Flow : 73°F (23°C), 0.125 in (3.18 mm), Compression Molded	8.0 ft·lb/in	430 J/m	
Drop Impact Resistance			ASTM D4226
73°F (23°C) ³	1.52 in·lb/mil	67.6 J/cm	
73°F (23°C) ⁴	4.00 in·lb/mil	178 J/cm	
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore D, 15 sec)	84	84	ASTM D2240
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)	154 °F	67.8 °C	
CLTE - Flow	4.1E-5 in/in/°F	7.4E-5 cm/cm/°C	ASTM D696

Additional Information

--This rigid PVC product is acceptable for food contact applications regulated under the provisions of the Food, Drug and the Cosmetic Act and subsequent amendments as outlined in Title 21 of the Code of Federal Regulations. It is acceptable for use in the manufacture of pipes and fittings intended for contact with water in food processing plants and for use in contact with food types: Aqueous or non aqueous, acid or non acid, dairy, except liquid milk, alcoholic and non alcoholic, bakery products and dry solids under use conditions not to exceed 88C.(190F). ---NSF listings are obtained on specific colors. Contact PolyOne for the latest listing of approved colors for this product.

- The Cell Classification was determined using the notched Izod test with injection molded samples.

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Processing Information

Extrusion	Typical Value (English)	Typical Value (SI)
Melt Temperature	360 to 380 °F	182 to 193 °C

Notes

¹ Typical values are not to be construed as specifications.

² Type I, 0.20 in/min (5.1 mm/min)

³ Procedure A, C.125 Dart

⁴ Procedure B, C.125 Dart

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