



Geon™ Vinyl Rigid Extrusion 85857

Rigid Polyvinyl Chloride

Key Characteristics

| General | | | |
|-----------------------|--|-----------------------------|-------------------|
| Material Status | • Commercial: Active | | |
| Regional Availability | • Africa & Middle East • Asia Pacific | • Europe • Latin America | • North America |
| Features | • High Impact Resistance • Weather Resistant | | |
| Uses | • Outdoor Applications | • Profiles | • Windows & Doors |
| Agency Ratings | • AAMA 303 | | |
| Forms | • Cube | | |
| Processing Method | • Extrusion | | |

Technical Properties ¹

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|---|-------------------------|--------------------|-------------|
| Density / Specific Gravity | 1.46 | 1.46 | ASTM D792 |
| PVC Cell Classification | 1-41432-33 | 1-41432-33 | ASTM D4216 |
| PVC Cell Classification | 16334 | 16334 | ASTM D1784 |
| Mechanical | Typical Value (English) | Typical Value (SI) | Test Method |
| Tensile Modulus ² | 355000 psi | 2450 MPa | ASTM D638 |
| Tensile Strength ² (Yield) | 6200 psi | 42.7 MPa | ASTM D638 |
| Flexural Modulus | 410000 psi | 2830 MPa | ASTM D790 |
| Flexural Strength | 11300 psi | 77.9 MPa | ASTM D790 |
| Impact | Typical Value (English) | Typical Value (SI) | Test Method |
| Notched Izod Impact | | | ASTM D256A |
| Across Flow : 73°F (23°C), 0.125 in (3.18 mm), Compression Molded | 3.8 ft·lb/in | 200 J/m | |
| Flow : 73°F (23°C), 0.125 in (3.18 mm), Compression Molded | 4.1 ft·lb/in | 220 J/m | |
| Drop Impact Resistance | | | ASTM D4226 |
| 73°F (23°C) ³ | 1.20 in·lb/mil | 53.4 J/cm | |
| 73°F (23°C) ⁴ | 4.20 in·lb/mil | 187 J/cm | |
| Hardness | Typical Value (English) | Typical Value (SI) | Test Method |
| Durometer Hardness (Shore D, 15 sec) | 83 | 83 | 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) | 163 °F | 72.8 °C | |
| CLTE - Flow | 3.3E-5 in/in/°F | 5.9E-5 cm/cm/°C | ASTM D696 |
| Flammability | Typical Value (English) | Typical Value (SI) | Test Method |
| Flame Rating | | | UL 94 |
| 0.029 in (0.75 mm) | V-0 | V-0 | |
| 0.12 in (3.0 mm) | 5VA | 5VA | |
| Additional Information | Typical Value (English) | Typical Value (SI) | |
| AAMA 303 | Pass | Pass | |
| Ease of Sizing | Good | Good | |

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

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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