

GEON® Rigid M1000

GEON Performance Solutions - Rigid Polyvinyl Chloride

Thursday, August 17, 2023

General Information

| General | | | |
|-------------------|--|-----------------------------|---------------------------|
| Material Status | • Commercial: Active ¹ | | |
| Availability | • Africa & Middle East • Asia Pacific | • Europe • Latin America | • North America |
| Uses | • Fittings | | |
| Agency Ratings | • NSF STD-14 | • NSF STD-61 | • NSF Type I ² |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

ASTM & ISO Properties ³

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|-------------------------|--------------------|-------------|
| Density / Specific Gravity | 1.40 | 1.40 | ASTM D792 |
| Spiral Flow | 25.0 in | 63.5 cm | |
| Molding Shrinkage - Flow | 2.0E-3 to 5.0E-3 in/in | 0.20 to 0.50 % | ASTM D955 |
| PVC Cell Classification | 12454 | 12454 | ASTM D1784 |
| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Tensile Modulus ⁴ | 440000 psi | 3030 MPa | ASTM D638 |
| Tensile Strength ⁴ (Yield) | 7200 psi | 49.6 MPa | ASTM D638 |
| Flexural Modulus | 450000 psi | 3100 MPa | ASTM D790 |
| Flexural Strength | 13200 psi | 91.0 MPa | ASTM D790 |
| Impact | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Notched Izod Impact | | | ASTM D256A |
| 73°F (23°C), 0.125 in (3.18 mm), Injection Molded | 1.0 ft·lb/in | 53 J/m | |
| 73°F (23°C), 0.250 in (6.35 mm), Injection Molded | 0.70 ft·lb/in | 37 J/m | |
| Hardness | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Durometer Hardness (Shore D) | 81 | 81 | ASTM D2240 |
| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 66 psi (0.45 MPa), Unannealed, 0.250 in (6.35 mm) | 163 °F | 72.8 °C | |
| 264 psi (1.8 MPa), Unannealed, 0.250 in (6.35 mm) | 162 °F | 72.2 °C | |
| Flammability | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Flame Rating (0.06 in (1.6 mm), ALL) | V-0 | V-0 | UL 94 |

Processing Information

| Injection | Nominal Value (English) | Nominal Value (SI) |
|------------------------|-------------------------|--------------------|
| Processing (Melt) Temp | 390 to 410 °F | 199 to 210 °C |

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Notes

¹ RoHS compliant

² NSF Agency ratings are based on tested and certified colors. Please contact PolyOne technical for further information.

³ Typical properties: these are not to be construed as specifications.

⁴ Type I, 2.0 in/min (51 mm/min)

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