

GEON® Rigid M4910 (USP CLASS VI for TRANS 9494 only)

GEON Performance Solutions - Rigid Polyvinyl Chloride

Thursday, November 2, 2023

General Information

| General | |
|-----------------|--|
| Material Status | <ul style="list-style-type: none"> Commercial: Active |
| Availability | <ul style="list-style-type: none"> Africa & Middle East Asia Pacific Europe Latin America North America |
| Features | <ul style="list-style-type: none"> Radiation (Gamma) Resistant |
| Agency Ratings | <ul style="list-style-type: none"> USP Class VI on selected colors |
| Appearance | <ul style="list-style-type: none"> Clear/Transparent |
| Forms | <ul style="list-style-type: none"> Pellets |

ASTM & ISO Properties ¹

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|-------------------------|--------------------|-------------|
| Density / Specific Gravity | 1.30 | 1.30 | ASTM D792 |
| Spiral Flow | 29.0 in | 73.7 cm | |
| Molding Shrinkage - Flow | 2.0E-3 to 5.0E-3 in/in | 0.20 to 0.50 % | ASTM D955 |
| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Tensile Modulus ² | 422000 psi | 2910 MPa | ASTM D638 |
| Tensile Strength ² (Yield) | 7900 psi | 54.5 MPa | ASTM D638 |
| Tensile Elongation ² (Break) | 19 % | 19 % | ASTM D638 |
| Flexural Modulus | 410000 psi | 2830 MPa | ASTM D790 |
| Flexural Strength | 12400 psi | 85.5 MPa | ASTM D790 |
| Impact | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Notched Izod Impact | | | ASTM D256A |
| 32°F (0°C), 0.125 in (3.18 mm), Injection Molded | 1.0 ft·lb/in | 53 J/m | |
| 73°F (23°C), 0.125 in (3.18 mm), Injection Molded | 1.5 ft·lb/in | 80 J/m | |
| Hardness | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Durometer Hardness (Shore D) | 83 | 83 | 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) | 154 °F | 67.8 °C | |
| 66 psi (0.45 MPa), Annealed, 0.250 in (6.35 mm) | 149 °F | 65.0 °C | |
| 264 psi (1.8 MPa), Unannealed, 0.250 in (6.35 mm) | 142 °F | 61.1 °C | |
| 264 psi (1.8 MPa), Annealed, 0.250 in (6.35 mm) | 144 °F | 62.2 °C | |

Processing Information

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

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Notes

¹ Typical properties: these are not to be construed as specifications.

² Type I, 2.0 in/min (51 mm/min)

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