



# Geon™ Vinyl Rigid Molding 85891

## Rigid Polyvinyl Chloride

### Key Characteristics

| General               |  |                             |                        |
|-----------------------|--|-----------------------------|------------------------|
| Material Status       | • Commercial: Active                     |                             |                        |
| Regional Availability | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America        |
| Features              | • General Purpose                        | • High Impact Resistance    | • Medium Flow          |
| Uses                  | • Fluid Handling                         | • General Purpose           | • Outdoor Applications |
| Forms                 | • Pellets                                |                             |                        |
| Processing Method     | • Injection Molding                      |                             |                        |

### Technical Properties <sup>1</sup>

| Physical  | Typical Value (English) | Typical Value (SI) | Test Method |
|---|-------------------------|--------------------|-------------|
| Specific Gravity                                  | 1.47                    | 1.47               | ASTM D792   |
| Spiral Flow                                       | 23.0 in                 | 58.4 cm            |             |
| Molding Shrinkage - Flow                          | 2.0E-3 to 5.0E-3 in/in  | 0.20 to 0.50 %     | ASTM D955   |
| Outdoor Suitability (All Colors)                  | f2                      | f2                 | UL 746C     |
| Mechanical  | Typical Value (English) | Typical Value (SI) | Test Method |
| Tensile Modulus <sup>2</sup>                      | 420000 psi              | 2900 MPa           | ASTM D638   |
| Tensile Strength <sup>2</sup> (Yield)             | 7100 psi                | 49.0 MPa           | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break)           | 26 %                    | 26 %               | ASTM D638   |
| Flexural Modulus                                  | 400000 psi              | 2760 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  |
| 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)                      | 84                      | 84                 | 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) | 160 °F                  | 71.1 °C            |             |
| Deflection Temperature Under Load                 |                         |                    | ASTM D648   |
| 66 psi (0.45 MPa), Annealed, 0.250 in (6.35 mm)   | 169 °F                  | 76.1 °C            |             |
| Deflection Temperature Under Load                 |                         |                    | ASTM D648   |
| 264 psi (1.8 MPa), Unannealed, 0.250 in (6.35 mm) | 154 °F                  | 67.8 °C            |             |
| Deflection Temperature Under Load                 |                         |                    | ASTM D648   |
| 264 psi (1.8 MPa), Annealed, 0.250 in (6.35 mm)   | 162 °F                  | 72.2 °C            |             |
| RTI Elec  | 167 °F                  | 75.0 °C            | UL 746      |
| RTI Imp   | 122 °F                  | 50.0 °C            | UL 746      |
| RTI Str   | 167 °F                  | 75.0 °C            | UL 746      |

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| Flammability             | Typical Value (English) | Typical Value (SI) | Test Method |
|--------------------------|-------------------------|--------------------|-------------|
| Flame Rating             |                         |                    | UL 94       |
| 0.0650 in (1.65 mm), ALL | V-0                     | V-0                |             |
| 0.120 in (3.05 mm), ALL  | 5VA                     | 5VA                |             |

### Processing Information

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

### Notes

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> 2.0 in/min (51 mm/min)

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