



# Geon™ HTX M6309

## Polyvinyl Chloride Alloy

### Key Characteristics

| General               |   |  |                 |
|-----------------------|---|--|-----------------|
| Material Status       | • Commercial: Active  |  |                 |
| Regional Availability | • Africa & Middle East<br>• Asia Pacific                            | • Europe<br>• Latin America                    | • North America |
| Features              | • High Flow   | • Low Temperature Impact Resistance            |                 |
| Uses                  | • Construction Applications<br>• Electrical/Electronic Applications | • Outdoor Applications<br>• Telecommunications |                 |
| Appearance            | • Opaque  |  |                 |
| Forms                 | • Pellets   |  |                 |

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

| Physical   | Typical Value (English) | Typical Value (SI) | Test Method |
|--|-------------------------|--------------------|-------------|
| Density / Specific Gravity   | 1.23                    | 1.23               | 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   |
| Outdoor Suitability (Gray)   | f1                      | f1                 | UL 746C     |
| Mechanical   | Typical Value (English) | Typical Value (SI) | Test Method |
| Tensile Modulus <sup>2</sup>   | 240000 psi              | 1650 MPa           | ASTM D638   |
| Tensile Strength <sup>2</sup> (Yield)  | 4300 psi                | 29.6 MPa           | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break)  | 56 %                    | 56 %               | ASTM D638   |
| Flexural Modulus   | 240000 psi              | 1650 MPa           | ASTM D790   |
| Flexural Strength  | 7000 psi                | 48.3 MPa           | ASTM D790   |
| Impact   | Typical Value (English) | Typical Value (SI) | Test Method |
| Notched Izod Impact  |                         |                    | ASTM D256A  |
| -40°F (-40°C), 0.125 in (3.18 mm), Injection Molded                                    | 4.0 ft-lb/in            | 210 J/m            |             |
| 0°F (-18°C), 0.125 in (3.18 mm), Injection Molded                                      | 11 ft-lb/in             | 590 J/m            |             |
| 32°F (0°C), 0.125 in (3.18 mm), Injection Molded                                       | 14 ft-lb/in             | 750 J/m            |             |
| 73°F (23°C), 0.125 in (3.18 mm), Injection Molded                                      | 16 ft-lb/in             | 850 J/m            |             |
| Hardness   | Typical Value (English) | Typical Value (SI) | Test Method |
| Durometer Hardness (Shore D)   | 75                      | 75                 | ASTM D2240  |
| Thermal  | Typical Value (English) | Typical Value (SI) | Test Method |
| Deflection Temperature Under Load<br>66 psi (0.45 MPa), Unannealed, 0.250 in (6.35 mm) | 167 °F                  | 75.0 °C            | ASTM D648   |
| Deflection Temperature Under Load<br>66 psi (0.45 MPa), Annealed, 0.250 in (6.35 mm)   | 183 °F                  | 83.9 °C            | ASTM D648   |
| Deflection Temperature Under Load<br>264 psi (1.8 MPa), Unannealed, 0.250 in (6.35 mm) | 154 °F                  | 67.8 °C            | ASTM D648   |

| Thermal   | Typical Value (English) | Typical Value (SI) | Test Method |
|---|-------------------------|--------------------|-------------|
| Deflection Temperature Under Load<br>264 psi (1.8 MPa), Annealed, 0.250 in<br>(6.35 mm) | 165 °F                  | 73.9 °C            | ASTM D648   |
| RTI Elec  | 122 °F                  | 50.0 °C            | UL 746      |
| RTI Imp   | 122 °F                  | 50.0 °C            | UL 746      |
| RTI Str   | 122 °F                  | 50.0 °C            | UL 746      |
| Flammability  | Typical Value (English) | Typical Value (SI) | Test Method |
| Flame Rating  |                         |                    | UL 94       |
| 0.08 in (2.0 mm), ALL   | V-0                     | V-0                |             |
| 0.12 in (3.0 mm), ALL   | 5VA                     | 5VA                |             |
| Additional Information  | Typical Value (English) | Typical Value (SI) |             |
| QUV Weatherometer <sup>3</sup>  | 0.50 %                  | 0.50 %             |             |

**Processing Information**

| Injection              | Typical Value (English) | Typical Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 155 °F                  | 68 °C              |
| Drying Time            | 2.0 hr                  | 2.0 hr             |
| Processing (Melt) Temp | 395 to 405 °F           | 202 to 207 °C      |

**Notes**

- <sup>1</sup> Typical values are not to be construed as specifications.
- <sup>2</sup> Type I, 2.0 in/min (51 mm/min)
- <sup>3</sup> 351 Lamp, All Colors, delta E (CIE), 24 hrs light, 300 hrs, No Moisture



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