



# Geon™ Vinyl Rigid Extrusion L7801

## 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              | • High Impact Resistance                 |                             |                 |
| Uses                  | • Outdoor Applications                   | • Profiles                  |                 |
| Forms                 | • Pellets                                |                             |                 |
| Processing Method     | • Extrusion                              |                             |                 |

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

| Physical                                            | Typical Value (English) | Typical Value (SI) | Test Method |
|-----------------------------------------------------|-------------------------|--------------------|-------------|
| Density / Specific Gravity                          | 1.51                    | 1.51               | ASTM D792   |
| PVC Cell Classification                             | 1-41424-33-0000         | 1-41424-33-0000    | ASTM D4216  |
| PVC Cell Classification                             | 16254                   | 16254              | ASTM D1784  |
| Mechanical                                          | Typical Value (English) | Typical Value (SI) | Test Method |
| Tensile Modulus <sup>2</sup>                        | 421000 psi              | 2900 MPa           | ASTM D638   |
| Tensile Strength <sup>2</sup> (Yield)               | 5990 psi                | 41.3 MPa           | ASTM D638   |
| Flexural Modulus                                    | 430000 psi              | 2960 MPa           | ASTM D790   |
| Flexural Strength                                   | 12300 psi               | 84.8 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), Compression Molded  | 3.7 ft·lb/in            | 200 J/m            |             |
| 73°F (23°C), 0.125 in (3.18 mm), Compression Molded | 21 ft·lb/in             | 1100 J/m           |             |
| Drop Impact Resistance                              |                         |                    | ASTM D4226  |
| 32°F (0°C) <sup>3</sup>                             | 0.910 in·lb/mil         | 40.5 J/cm          |             |
| 32°F (0°C) <sup>4</sup>                             | 0.910 in·lb/mil         | 40.5 J/cm          |             |
| 73°F (23°C) <sup>3</sup>                            | 1.17 in·lb/mil          | 52.0 J/cm          |             |
| 73°F (23°C) <sup>4</sup>                            | 4.00 in·lb/mil          | 178 J/cm           |             |
| Hardness                                            | Typical Value (English) | Typical Value (SI) | Test Method |
| Durometer Hardness (Shore D, 15 sec)                | 79                      | 79                 | ASTM D2240  |
| Thermal                                             | Typical Value (English) | Typical Value (SI) | Test Method |
| Deflection Temperature Under Load                   |                         |                    | ASTM D648   |
| 66 psi (0.45 MPa), Unannealed, 0.125 in (3.18 mm)   | 169 °F                  | 76.1 °C            |             |
| Deflection Temperature Under Load                   |                         |                    | ASTM D648   |
| 66 psi (0.45 MPa), Annealed, 0.125 in (3.18 mm)     | 174 °F                  | 78.9 °C            |             |
| Deflection Temperature Under Load                   |                         |                    | ASTM D648   |
| 264 psi (1.8 MPa), Unannealed, 0.125 in (3.18 mm)   | 160 °F                  | 71.1 °C            |             |

| Thermal                                                                                                 | Typical Value (English) | Typical Value (SI) | Test Method |
|---------------------------------------------------------------------------------------------------------|-------------------------|--------------------|-------------|
| Deflection Temperature Under Load<br>264 psi (1.8 MPa), Annealed, 0.125 in<br>(3.18 mm)                 | 165 °F                  | 73.9 °C            | ASTM D648   |
| CLTE - Flow                                                                                             | 3.5E-5 in/in/°F         | 6.3E-5 cm/cm/°C    | ASTM D696   |
| Additional Information                                                                                  | Typical Value (English) | Typical Value (SI) |             |
| Ease of Sizing                                                                                          | Acceptable              | Acceptable         |             |
| 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

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

<sup>2</sup> Type I, 0.20 in/min (5.1 mm/min)

<sup>3</sup> Procedure A, C.125 Dart

<sup>4</sup> Procedure B, C.125 Dart



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