



# Geon™ Vinyl Packaging 2121C

## Rigid Polyvinyl Chloride

### Key Characteristics

| Product Description   |   |
|---|---|
| A Clear Rigid PVC Compound designed specifically for water bottle applications. |   |
| General   |   |
| Material Status   | • Commercial: Active  |
| Regional Availability   | • Africa & Middle East • Europe<br>• Asia Pacific • Latin America • North America |
| Features  | • Food Contact Acceptable • High Gloss • High Impact Resistance                   |
| Uses  | • Bottles • Packaging   |
| Agency Ratings  | • FDA Food Contact, Unspecified Rating  |
| Appearance  | • Clear/Transparent   |
| Forms   | • Pellets   |
| Processing Method   | • Blow Molding  |

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

| Physical  | Typical Value (English) | Typical Value (SI)      | Test Method     |
|---|-------------------------|-------------------------|-----------------|
| Specific Gravity  | 1.32                    | 1.32                    | ASTM D792       |
| Density   | 0.801 g/cm <sup>3</sup> | 0.801 g/cm <sup>3</sup> | ASTM D1505      |
| Mechanical  | Typical Value (English) | Typical Value (SI)      | Test Method     |
| Tensile Modulus <sup>2</sup>  | 394000 psi              | 2720 MPa                | ASTM D638       |
| Tensile Strength <sup>2</sup> (Yield)   | 6000 psi                | 41.4 MPa                | ASTM D638       |
| Flexural Modulus  | 382000 psi              | 2630 MPa                | ASTM D790       |
| Flexural Strength   | 11400 psi               | 78.4 MPa                | ASTM D790       |
| Impact  | Typical Value (English) | Typical Value (SI)      | Test Method     |
| Notched Izod Impact<br>73°F (23°C), 0.125 in (3.18 mm),<br>Injection Molded               | 23 ft·lb/in             | 1200 J/m                | ASTM D256A      |
| Hardness  | Typical Value (English) | Typical Value (SI)      | Test Method     |
| Rockwell Hardness (R-Scale)   | 100                     | 100                     | ASTM D785       |
| Durometer Hardness (Shore D)  | 83                      | 83                      | ASTM D2240      |
| Thermal   | Typical Value (English) | Typical Value (SI)      | Test Method     |
| Deflection Temperature Under Load<br>264 psi (1.8 MPa), Unannealed, 0.125 in<br>(3.18 mm) | 149 °F                  | 65.0 °C                 | ASTM D648       |
| Optical   | Typical Value (English) | Typical Value (SI)      | Test Method     |
| Transmittance   |                         |                         | Internal Method |
| 33.5 mil (851 µm), 400 nm   | 81.0 %                  | 81.0 %                  |                 |
| 33.5 mil (851 µm), 700 nm   | 86.5 %                  | 86.5 %                  |                 |
| Additional Information  | Typical Value (English) | Typical Value (SI)      |                 |
| Blow Molding Temperature  | 390 to 415 °F           | 199 to 213 °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)

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