

**Arnite® Care T1U**
*Envalior - Polybutylene Terephthalate*
**General Information**
**Product Description**

Unreinforced, Medium Viscosity, Injection Molding, Medical grade

**General**

|                   |   |
|-------------------|---|
| Material Status   | • Commercial: Active  |
| Availability      | • Africa & Middle East • Europe • North America<br>• Asia Pacific • Latin America |
| Features          | • Medium Viscosity  |
| Uses              | • Medical/Healthcare Applications   |
| Agency Ratings    | • USP Class VI  |
| Processing Method | • Injection Molding   |
| Resin ID          | • PBT   |

**Properties <sup>1</sup>**

| Physical  | Nominal Value | Unit                   | Test Method   |
|---|---------------|------------------------|---------------|
| Density   | 1.33          | g/cm <sup>3</sup>      | ISO 1183      |
| Melt Mass-Flow Rate (MFR) <sup>2</sup>                  | 27            | g/10 min               | ISO 1133      |
| Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)             | 24            | cm <sup>3</sup> /10min | ISO 1133      |
| Molding Shrinkage                                       |               |                        | ISO 294-4     |
| Across Flow   | 2.0           | %                      |               |
| Flow  | 2.0           | %                      |               |
| Water Absorption (Saturation, 73°F)                     | 0.45          | %                      | ISO 62        |
| Water Absorption (Equilibrium, 73°F, 50% RH)            | 0.18          | %                      | ISO 62        |
| Mechanical  | Nominal Value | Unit                   | Test Method   |
| Tensile Modulus   | 392000        | psi                    | ISO 527-1     |
| Tensile Stress (Yield)                                  | 7980          | psi                    | ISO 527-2     |
| Tensile Strain (Yield)                                  | 3.5           | %                      | ISO 527-2     |
| Nominal Tensile Strain at Break                         | 20            | %                      | ISO 527-2     |
| Impact  | Nominal Value | Unit                   | Test Method   |
| Charpy Notched Impact Strength                          |               |                        | ISO 179/1eA   |
| -22°F   | 2.4           | ft·lb/in <sup>2</sup>  |               |
| 73°F  | 2.4           | ft·lb/in <sup>2</sup>  |               |
| Charpy Unnotched Impact Strength                        |               |                        | ISO 179/1eU   |
| -22°F   | No Break      |                        |               |
| 73°F  | No Break      |                        |               |
| Thermal   | Nominal Value | Unit                   | Test Method   |
| Deflection Temperature Under Load (66 psi, Unannealed)  | 329           | °F                     | ISO 75-2/B    |
| Deflection Temperature Under Load (264 psi, Unannealed) | 131           | °F                     | ISO 75-2/A    |
| Melting Temperature <sup>3</sup>                        | 437           | °F                     | ISO 11357-3   |
| CLTE - Flow   | 5.0E-5        | in/in/°F               | ISO 11359-2   |
| CLTE - Transverse                                       | 5.0E-5        | in/in/°F               | ISO 11359-2   |
| Effective Thermal Diffusivity                           | 7.21E-5       | in <sup>2</sup> /s     |               |
| Electrical  | Nominal Value | Unit                   | Test Method   |
| Volume Resistivity                                      | > 1.0E+13     | ohms·m                 | IEC 62631-3-1 |
| Electric Strength                                       | 690           | V/mil                  | IEC 60243-1   |
| Relative Permittivity                                   |               |                        | IEC 62631-2-1 |
| 100 Hz  | 3.50          |                        |               |
| 1 MHz   | 3.20          |                        |               |



|                                  |                      |                               |
|----------------------------------|----------------------|-------------------------------|
| Dissipation Factor               |                      | IEC 62631-2-1                 |
| 100 Hz                           | 2.0E-3               |                               |
| 1 MHz                            | 0.020                |                               |
| Comparative Tracking Index (CTI) | PLC 0                | UL 746A                       |
| Comparative Tracking Index       | 600 V                | IEC 60112                     |
| <b>Fill Analysis</b>             | <b>Nominal Value</b> | <b>Unit</b>                   |
| Melt Density                     | 1.04                 | g/cm <sup>3</sup>             |
| Melt Specific Heat               | 0.540                | Btu/lb/°F                     |
| Melt Thermal Conductivity        | 0.76                 | Btu·in/hr/ft <sup>2</sup> /°F |
|                                  |                      | ASTM E1461                    |

#### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 2.16 kg

<sup>3</sup> 10°C/min

