

Arnitel® PL380
Envalior - Thermoplastic Copolyester Elastomer
General Information
Product Description

Injection Molding, Food Contact Quality

General

| | |
|-------------------|---|
| Material Status | • Commercial: Active |
| Availability | • Africa & Middle East • Europe • North America • Asia Pacific • Latin America |
| Features | • Food Contact Acceptable |
| Processing Method | • Injection Molding |
| Resin ID | • TPC-ET |

Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|------------------------|-------------|
| Density | 1.16 | g/cm ³ | ISO 1183 |
| Melt Volume-Flow Rate (MVR) (230°C/2.16 kg) | 32 | cm ³ /10min | ISO 1133 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow | 1.8 | % | |
| Flow | 1.6 | % | |
| Water Absorption (Saturation, 73°F) | 7.0 | % | ISO 62 |
| Water Absorption (Equilibrium, 73°F, 50% RH) | 0.40 | % | ISO 62 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 6380 | psi | ISO 527-1 |
| Tensile Stress | | | ISO 527-2 |
| Break | 2320 | psi | |
| Across Flow : Break | 2900 | psi | |
| Tensile Stress | | | ISO 527-2 |
| 5.0% Strain | 319 | psi | |
| 10% Strain | 580 | psi | |
| 50% Strain | 1020 | psi | |
| 100% Strain | 1160 | psi | |
| 300% Strain | 1710 | psi | |
| Tensile Strain | | | ISO 527-2 |
| Break | > 300 | % | |
| Across Flow : Break | 880 | % | |
| Nominal Tensile Strain at Break | 530 | % | ISO 527-2 |
| Flexural Modulus | 7250 | psi | ISO 178 |
| Elastomers | Nominal Value | Unit | Test Method |
| Tear Strength ² | | | ISO 34-1 |
| Across Flow | 554 | lbf/in | |
| Flow | 531 | lbf/in | |
| Impact | Nominal Value | Unit | Test Method |
| Charpy Notched Impact Strength | | | ISO 179/1eA |
| -22°F | No Break | | |
| 73°F | No Break | | |
| Charpy Unnotched Impact Strength | | | ISO 179/1eU |
| -22°F | No Break | | |
| 73°F | No Break | | |
| Notched Izod Impact Strength | | | ISO 180/1A |



| | | | |
|---|--|----------------------------|--------------------|
| -22°F | | No Break | |
| -4°F | | No Break | |
| 73°F | | No Break | |
| Tensile Impact Strength ³ (73°F) | | 85.2 ft·lb/in ² | ISO 8256/1 |
| Hardness | | Nominal Value Unit | Test Method |
| Shore Hardness (Shore D, 3 sec) | | 32 | ISO 868 |
| Thermal | | Nominal Value Unit | Test Method |
| Melting Temperature ⁴ | | 414 °F | ISO 11357-3 |
| CLTE - Flow | | 8.3E-5 in/in/°F | ISO 11359-2 |
| CLTE - Transverse | | 8.3E-5 in/in/°F | ISO 11359-2 |
| RTI Elec | | | UL 746B |
| 0.06 in | | 122 °F | |
| 0.12 in | | 122 °F | |
| RTI Imp | | | UL 746B |
| 0.06 in | | 122 °F | |
| 0.12 in | | 122 °F | |
| RTI Str | | | UL 746B |
| 0.06 in | | 122 °F | |
| 0.12 in | | 122 °F | |
| Electrical | | Nominal Value Unit | Test Method |
| Volume Resistivity | | 1.0E+12 ohms·m | IEC 62631-3-1 |
| Electric Strength | | 510 V/mil | IEC 60243-1 |
| Relative Permittivity | | | IEC 62631-2-1 |
| 100 Hz | | 4.70 | |
| 1 MHz | | 4.40 | |
| Dissipation Factor | | | IEC 62631-2-1 |
| 100 Hz | | 0.031 | |
| 1 MHz | | 0.081 | |
| Comparative Tracking Index | | 600 V | IEC 60112 |

Notes

¹ Typical properties: these are not to be construed as specifications.

² Method B, Angle

³ notched

⁴ 10°C/min

