# VALOX™ 3607U resin

Polybutylene Terephthalate

SABIC Innovative Plastics Europe

## Message:

COMMERCIAL, VALOX 3607U is a UV-stabilized, flame retardant, injection moulding PBT resin, offering excellent weatherability resistance. Applications: powerplugs

| General Information | | | |
|---|---|---|---|
| UL YellowCard | E45329-236625 | | |
| Additive | UV Stabilizer | | |
| Features | Flame Retardant<br>Good UV Resistance<br>Good Weather Resistance | | |
| RoHS Compliance | RoHS Compliant | | |
| Processing Method | Injection Molding | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Density | 1.25 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (250°C/5.0 kg) | 16 | g/10 min | ISO 1133 |
| Melt Volume-Flow Rate (MVR) (250°C/5.0 kg) | 14.0 | cm³/10min | ISO 1133 |
| Molding Shrinkage [1] | | | Internal Method |
| Flow | 1.0 to 1.8 | % | |
| Across Flow | 0.90 to 1.8 | % | |
| Water Absorption | | | ISO 62 |
| Saturation, 23°C | 0.50 | % | |
| Equilibrium, 23°C, 50% RH | 0.14 | % | |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness (R-Scale) | 116 | | ISO 2039-2 |
| Ball Indentation Hardness (H 358/30) | 91.0 | MPa | ISO 2039-1 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 2050 | MPa | ISO 527-2/1 |
| Tensile Stress | | | ISO 527-2/50 |
| Yield | 50.0 | MPa | |
| Break | 45.0 | MPa | |
| Tensile Strain | | | ISO 527-2/50 |
| Yield | 4.7 | % | |
| Break | 100 | % | |
| Flexural Modulus [2] | 2050 | MPa | ISO 178 |
| Flexural Stress | 70.0 | MPa | ISO 178 |

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| Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel) | 30.0 | mg | Internal Method |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength [3] | | | ISO 179/1eA |
| -30°C | 20 | kJ/m² | |
| 23°C | 50 | kJ/m² | |
| Charpy Unnotched Impact Strength [4] | | | ISO 179/1eU |
| -30°C | No Break | | |
| 23°C | No Break | | |
| Notched Izod Impact Strength [5] | | | ISO 180/1A |
| -30°C | 20 | kJ/m² | |
| 23°C | 50 | kJ/m² | |
| Unnotched Izod Impact Strength [6] | | | ISO 180/1U |
| -30°C | No Break | | |
| 23°C | No Break | | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Heat Deflection Temperature [7] | | | |
| 0.45 MPa, Unannealed, 100 mm Span | 110 | °C | ISO 75-2/Be |
| 1.8 MPa, Unannealed, 100 mm Span | 80.0 | °C | ISO 75-2/Ae |
| Vicat Softening Temperature | | | |
| -- | 160 | °C | ISO 306/A50 |
| -- | 125 | °C | ISO 306/B50 |
| -- | 130 | °C | ISO 306/B120 |
| Ball Pressure Test (125°C) | Pass | | IEC 60695-10-2 |
| CLTE | | | ISO 11359-2 |
| Flow : 23 to 80°C | 1.1E-4 | cm/cm/°C | |
| Transverse : 23 to 80°C | 1.1E-4 | cm/cm/°C | |
| RTI Elec | 80.0 | °C | UL 746 |
| RTI Imp | 80.0 | °C | UL 746 |
| RTI Str | 80.0 | °C | UL 746 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Surface Resistivity | > 1.0E+15 | ohms | IEC 60093 |
| Volume Resistivity | > 1.0E+15 | ohms·cm | IEC 60093 |
| Electric Strength (3.20 mm, in Oil) | 16 | kV/mm | IEC 60243-1 |
| Relative Permittivity | | | IEC 60250 |
| 50 Hz | 2.83 | | |
| 60 Hz | 2.83 | | |
| 1 MHz | 2.71 | | |
| Dissipation Factor | | | IEC 60250 |
| 50 Hz | 2.8E-3 | | |
| 60 Hz | 2.8E-3 | | |
| 1 MHz | 0.013 | | |

| | | | |
|---|---|---|---|
| Comparative Tracking Index | 225 | V | IEC 60112 |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Flame Rating (3.00 mm) | V-1 | | UL 94 |
| Glow Wire Flammability Index (1.60 mm) | 850 | °C | IEC 60695-2-12 |
| **Injection** | **Nominal Value** | **Unit** | |
| Drying Temperature | 110 to 120 | °C | |
| Drying Time | 2.0 to 4.0 | hr | |
| Suggested Max Moisture | 0.020 | % | |
| Hopper Temperature | 40.0 to 60.0 | °C | |
| Rear Temperature | 230 to 245 | °C | |
| Middle Temperature | 240 to 255 | °C | |
| Front Temperature | 245 to 265 | °C | |
| Nozzle Temperature | 240 to 260 | °C | |
| Processing (Melt) Temp | 250 to 270 | °C | |
| Mold Temperature | 40.0 to 100 | °C | |

| NOTE | |
|---|---|
| 1. | Tensile Bar |
| 2. | 2.0 mm/min |
| 3. | 80*10*4 sp=62mm |
| 4. | 80*10*4 sp=62mm |
| 5. | 80*10*4 |
| 6. | 80*10*4 |
| 7. | 120*10*4 mm |



## Recommended distributors for this material

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