

Product Texts

VALOX ENH4530 is a 15% glass reinforced, non-chlorinated/brominated flame retardant Polybutylene Terephthalate (PBT) injection moldable grade with excellent chemical resistance. It has a UL94V0@0.80mm flame rating. This is a good candidate for a variety of applications needing a sustainable FR PBT solution.

| Processing/Physical Characteristics | Value | Unit | Test Standard |
|-------------------------------------|-------|------------------------|---------------|
| ISO Data | | | |
| Melt volume-flow rate, MVR | 18 | cm ³ /10min | ISO 1133 |
| Temperature | 265 | °C | - |
| Load | 5 | kg | - |
| ASTM Data | | | |
| Melt Flow Index, MFI | 24 | g/10min | ASTM D 1238 |
| Temperature | 265 | °C | - |
| Load | 5 | kg | - |

| Mechanical properties | Value | Unit | Test Standard |
|--|-------|-------------------|---------------|
| ISO Data | | | |
| Tensile Modulus | 7500 | MPa | ISO 527 |
| Yield stress | 80 | MPa | ISO 527 |
| Yield strain | 2 | % | ISO 527 |
| Stress at break | 80 | MPa | ISO 527 |
| Strain at break | 3 | % | ISO 527 |
| Flexural modulus | 6400 | MPa | ISO 178 |
| Charpy notched impact strength, +23°C | 4 | kJ/m ² | ISO 179/1eA |
| Izod impact strength, +23°C, 4mm | 30 | kJ/m ² | ISO 180/1U |
| Izod impact strength, -30°C, 4mm | 23 | kJ/m ² | ISO 180/1U |
| Izod notched impact strength, +23°C, 4mm | 6 | kJ/m ² | ISO 180/1A |
| Izod notched impact strength, -30°C, 4mm | 6 | kJ/m ² | ISO 180/1A |
| Rockwell hardness | R 98 | - | ISO 2039-2 |
| Ball indentation hardness | 128 | MPa | ISO 2039-1 |
| ASTM Data | | | |
| Tensile Modulus | 7300 | MPa | ASTM D 638 |
| Tensile Strength at Yield | 80 | MPa | ASTM D 638 |
| Tensile Strength at Break | 80 | MPa | ASTM D 638 |
| Elongation at Yield | 2 | % | ASTM D 638 |
| Elongation at Break | 3 | % | ASTM D 638 |
| Flexural Modulus | 5800 | MPa | ASTM D 790 |
| Izod Impact notched, 1/8 in | 50 | J/m | ASTM D 256 |
| Izod Impact notched, Low-Temperature | 50 | J/m | ASTM D 256 |
| Temperature | -30 | °C | - |
| Izod Impact unnotched, 1/8 in | 400 | J/m | ASTM D 256 |

| Thermal properties | Value | Unit | Test Standard |
|--|-------|------|---------------|
| ISO Data | | | |
| Temp. of deflection under load, 1.80 MPa | 200 | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 0.45 MPa | 220 | °C | ISO 75-1/-2 |
| Vicat softening temperature, A | 220 | °C | ISO 306 |
| Vicat softening temperature, B | 205 | °C | ISO 306 |
| Vicat softening temperature, 120°C/h 50N | 205 | °C | ISO 306 |
| ASTM Data | | | |
| DTUL @ 66 psi | 220 | °C | ASTM D 648 |
| DTUL @ 264 psi | 200 | °C | ASTM D 648 |
| Vicat Temperature | 205 | °C | ASTM D 1525 |

| Electrical properties | Value | Unit | Test Standard |
|-----------------------------|-------|-------|---------------|
| ISO Data | | | |
| Relative permittivity, 1MHz | 3.7 | - | IEC 62631-2-1 |
| Dissipation factor, 1MHz | 1500 | E-4 | IEC 62631-2-1 |
| Volume resistivity | 1E13 | Ohm*m | IEC 62631-3-1 |

VALOX™ FR Resin ENH4530 - Americas

PBT-GF15

Saudi Basic Industries Corporation (SABIC)

| | | | |
|---------------------|-------|-------|---------------|
| Surface resistivity | >1E15 | Ohm | IEC 62631-3-2 |
| Electric strength | 28 | kV/mm | IEC 60243-1 |

ASTM Data

| | | | |
|---------------------------------|------|--------|------------|
| Dielectric Strength, Short Time | 17 | kV/mm | ASTM D 149 |
| Dissipation Factor, 1 MHz | 0.15 | - | ASTM D 150 |
| Dielectric Constant, 1 MHz | 3.7 | - | ASTM D 150 |
| Volume Resistivity | 1E15 | Ohm*cm | ASTM D 257 |

| Other properties | Value | Unit | Test Standard |
|------------------------|-------|-------------------|----------------|
| Water absorption | 0.15 | % | Sim. to ISO 62 |
| Humidity absorption | 0.07 | % | Sim. to ISO 62 |
| Density | 1450 | kg/m ³ | ISO 1183 |
| Water Absorption, 24hr | 0.07 | % | ASTM D 570 |
| Density | 1450 | kg/m ³ | ASTM D 792 |

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|-----------|------|---------------|
| Pre-drying - Temperature | 110 - 120 | °C | - |
| Pre-drying - Time | 2 - 4 | h | - |
| Processing humidity | ≤0.02 | % | - |
| Melt temperature | 245 - 260 | °C | - |
| Mold temperature | 40 - 100 | °C | - |
| Feed temperature | 40 - 60 | °C | - |
| Zone 1 | 230 - 240 | °C | - |
| Zone 2 | 235 - 250 | °C | - |
| Zone 3 | 240 - 260 | °C | - |

Characteristics**Processing**

Injection Molding

Additives

Flame retarding agent

Special Characteristics

Flame retardant

Chemical Resistance

General Chemical Resistance

Regional Availability

North America