

SABIC Innovative Plastics Valox® IQ325HP PBT (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

FDA compliant PBT resin, using chemically recycled post consumer PET Bottles. Fit to food contact applications.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Valox-IQ325HP-PBT-Europe-Africa-Middle-East.php

| Physical Properties | Metric | English | Comments |
|--------------------------------|---|---|---|
| Specific Gravity | 1.34 g/cc | 1.34 g/cc | ASTM D792 |
| Density | 1.34 g/cc | 0.0484 lb/in ³ | ISO 1183 |
| Moisture Absorption | 0.0700 % | 0.0700 % | 23 ^o C / 50% RH; ISO 62 |
| Water Absorption at Saturation | 0.16 % | 0.16 % | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.016 - 0.024 cm/cm @Thickness 3.20 mm | 0.016 - 0.024 in/in @Thickness 0.126 in | SABIC Method |
| Melt Flow | 23 g/10 min @Load 2.16 kg, Temperature 250 ^o C | 23 g/10 min @Load 4.76 lb, Temperature 482 ^o F | ASTM D1238 |
| Melt Index of Compound | 20 g/10 min @Load 2.16 kg, Temperature 250 ^o C | 20 g/10 min @Load 4.76 lb, Temperature 482 ^o F | MVR [cm ³ /10 min]; ISO 1133 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------|----------|------------------------------|
| Tensile Strength at Break | 30.0 MPa | 4350 psi | Type I, 50 mm/min; ASTM D638 |
| | 50.0 MPa | 7250 psi | 50 mm/min; ISO 527 |
| Tensile Strength, Yield | 55.0 MPa | 7980 psi | 50 mm/min; ISO 527 |
| | 56.0 MPa | 8120 psi | Type I, 50 mm/min; ASTM D638 |
| Elongation at Break | 14.4 % | 14.4 % | 50 mm/min; ISO 527 |
| | 282.4 % | 282.4 % | Type I, 50 mm/min; ASTM D638 |
| Elongation at Yield | 3.0 % | 3.0 % | 50 mm/min; ISO 527 |
| | 3.2 % | 3.2 % | Type I, 50 mm/min; ASTM D638 |
| Tensile Modulus | 2.03 GPa | 294 ksi | 1 mm/min; ISO 527 |
| | 2.85 GPa | 413 ksi | 5 mm/min; ASTM D638 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|------------------------|------------------------|------------------------------------|
| | 85.0 MPa | 12300 psi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus | 2.45 GPa | 355 ksi | 2 mm/min; ISO 178 |
| | 2.55 GPa | 370 ksi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Izod Impact, Notched | 0.500 J/cm | 0.937 ft-lb/in | ASTM D256 |
| | 0.450 J/cm | 0.843 ft-lb/in | ASTM D256 |
| | @Temperature -30.0 Å°C | @Temperature -22.0 Å°F | |
| Izod Impact, Notched (ISO) | 4.00 kJ/mÅ² | 1.90 ft-lb/inÅ² | 80*10*4; ISO 180/1A |
| | 2.00 kJ/mÅ² | 0.952 ft-lb/inÅ² | 80*10*4; ISO 180/1A |
| | @Temperature -30.0 Å°C | @Temperature -22.0 Å°F | |
| Charpy Impact, Notched | 0.500 J/cmÅ² | 2.38 ft-lb/inÅ² | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
| Dart Drop, Total Energy | 60.0 J | 44.3 ft-lb | ASTM D3763 |
| | @Temperature 23.0 Å°C | @Temperature 73.4 Å°F | |

| Thermal Properties | Metric | English | Comments |
|---|-------------------------------|------------------------------|----------------------------------|
| CTE, linear, Parallel to Flow | 78.0 Åµm/m-Å°C | 43.3 Åµin/in-Å°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| | 78.0 Åµm/m-Å°C | 43.3 Åµin/in-Å°F | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| CTE, linear, Transverse to Flow | 81.0 Åµm/m-Å°C | 45.0 Åµin/in-Å°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| | 81.0 Åµm/m-Å°C | 45.0 Åµin/in-Å°F | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| Deflection Temperature at 1.8 MPa (264 psi) | 50.0 Å°C | 122 Å°F | Flatw 80*10*4 sp=64mm; ISO 75/Af |
| | 50.0 Å°C | 122 Å°F | unannealed; ASTM D648 |
| | @Thickness 3.20 mm | @Thickness 0.126 in | |

| Thermal Properties | 58.0 Â°C Metric | 136 Â°F English | Comments Unfinished, ASTM D648 |
|-----------------------|--------------------|---------------------|-----------------------------------|
| | @Thickness 6.40 mm | @Thickness 0.252 in | |
| Vicat Softening Point | 165 Â°C | 329 Â°F | Rate B/120; ISO 306 |
| | 170 Â°C | 338 Â°F | Rate B/50; ASTM D1525 |
| | 170 Â°C | 338 Â°F | Rate B/50; ISO 306 |

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