

VALOXTM RESIN 325FC

REGION EUROPE

DESCRIPTION

Commercial, VALOX 325FC is compliant with food contact regulations. VALOX 325FC is a general purpose, unreinforced PBT injection moulding resin which contains internal mold release. This new 325FC grade is a good processable resin that exhibits faster and more economical cycle times.

TYPICAL PROPERTY VALUES

Revision 20181012

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------|----------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 60 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 50 mm/min | 60 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 50 mm/min | 7 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 50 mm/min | 15 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2500 | MPa | ASTM D 638 |
| Tensile Stress, yield, 50 mm/min | 60 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 60 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 10 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 15 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2550 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 85 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2400 | MPa | ISO 178 |
| Hardness, H358/30 | 145 | MPa | ISO 2039-1 |
| Hardness, Rockwell R | 117 | - | ISO 2039-2 |
| IMPACT | | | |
| Charpy Impact, unnotched, 23°C | NB | kJ/m ² | ISO 179/2C |
| Charpy Impact, unnotched, -30°C | 80 | kJ/m ² | ISO 179/2C |
| Izod Impact, unnotched, 23°C | NB | J/m | ASTM D 4812 |
| Izod Impact, unnotched, -30°C | NB | J/m | ASTM D 4812 |
| Izod Impact, notched, 23°C | 38 | J/m | ASTM D 256 |
| Izod Impact, notched, 0°C | 36 | J/m | ASTM D 256 |
| Izod Impact, notched, -30°C | 36 | J/m | ASTM D 256 |
| Izod Impact, unnotched 80*10*4 +23°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, unnotched 80*10*4 -30°C | 100 | kJ/m ² | ISO 180/1U |
| Izod Impact, notched 80*10*4 +23°C | 4 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 0°C | 4 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 4 | kJ/m ² | ISO 180/1A |
| Charpy Impact, notched, 23°C | 4 | kJ/m ² | ISO 179/2C |
| Charpy Impact, notched, -30°C | 4 | kJ/m ² | ISO 179/2C |
| THERMAL | | | |
| Vicat Softening Temp, Rate A/50 | 220 | °C | ASTM D 1525 |
| Vicat Softening Temp, Rate B/50 | 185 | °C | ASTM D 1525 |
| Ball Pressure Test, 125°C +/- 2°C | PASSES | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate A/50 | 220 | °C | ISO 306 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------------------------|--------------|
| Vicat Softening Temp, Rate B/50 | 185 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 185 | °C | ISO 306 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 150 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 50 | °C | ISO 75/Af |
| PHYSICAL | | | |
| Specific Gravity | 1.31 | - | ASTM D 792 |
| Mold Shrinkage on Tensile Bar, flow | 2 – 2.6 | % | SABIC method |
| Mold Shrinkage on Tensile Bar, xflow | 0.9 – 1.8 | % | SABIC method |
| Density | 1.31 | g/cm ³ | ISO 1183 |
| Water Absorption, (23°C/sat) | 0.34 | % | ISO 62 |
| Moisture Absorption (23°C / 50% RH) | 0.08 | % | ISO 62 |
| Melt Volume Rate, MVR at 250°C/2.16 kg | 20 | cm ³ /10 min | ISO 1133 |
| Melt Volume Rate, MVR at 250°C/5.0 kg | 50 | cm ³ /10 min | ISO 1133 |
| Melt Viscosity, 260°C, 1500 sec-1 | 165 | Pa-s | ISO 11443 |
| INJECTION MOLDING | | | |
| Drying Temperature | 110 – 120 | °C | |
| Drying Time | 2 – 4 | hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 250 – 270 | °C | |
| Nozzle Temperature | 240 – 260 | °C | |
| Front - Zone 3 Temperature | 245 – 265 | °C | |
| Middle - Zone 2 Temperature | 240 – 255 | °C | |
| Rear - Zone 1 Temperature | 230 – 245 | °C | |
| Hopper Temperature | 40 – 60 | °C | |
| Mold Temperature | 40 – 100 | °C | |

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