# POCAN® B 3215 000000

Polybutylene Terephthalate

LANXESS GmbH

## Message:

PBT, 10 % glass fibers, injection molding

| General Information | | | |
|---|---|---|---|
| UL YellowCard | E245249-100586882 | | |
| Filler / Reinforcement | Glass Fiber,10% Filler by Weight | | |
| Processing Method | Injection Molding | | |
| Multi-Point Data | Viscosity vs. Shear Rate (ISO 11403-2) | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| | 1.38 | | |
| Density (23°C) | 1.38 | g/cm³ | ISO 1183 |
| Apparent Density | 0.70 | g/cm³ | ISO 60 |
| Melt Volume-Flow Rate (MVR) (260°C/2.16 kg) | 30.0 | cm³/10min | ISO 1133 |
| Molding Shrinkage | | | ISO 2577 |
| Across Flow : 260°C, 2.00 mm [1] | 1.1 | % | |
| Across Flow : 120°C, 4 hr, 2.00 mm [2] | 0.10 | % | |
| Flow : 260°C, 2.00 mm [3] | 0.90 | % | |
| Flow : 120°C, 4 hr, 2.00 mm [4] | 0.10 | % | |
| Water Absorption | | | ISO 62 |
| | 0.40 | | |
| Saturation, 23°C | 0.40 | % | |
| | 0.20 | | |
| Equilibrium, 23°C, 50% RH | 0.20 | % | |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Ball Indentation Hardness | 150 | MPa | ISO 2039-1 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | | | |
| 23°C | 4750 | MPa | ASTM D638 |
| 23°C | 4900 | MPa | ISO 527-2/1 |

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|---|---|---|---|
| Tensile Strength | | | |
| Break, 23°C | 95.1 | MPa | ASTM D638 |
| Break, 23°C | 90.0 | MPa | ISO 527-2/5 |
| Tensile Strain (Break, 23°C) | 4.0 | % | ISO 527-2/5 |
| Flexural Modulus | | | |
| 23°C | 3990 | MPa | ASTM D790 |
| 23°C [5] | 4600 | MPa | ISO 178/A |
| Flexural Strength | | | |
| 23°C | 138 | MPa | ASTM D790 |
| 3.5% Strain,23°C | 135 | MPa | ISO 178/A |
| 23°C [6] | 145 | MPa | ISO 178/A |
| Flexural Strain at Flexural Strength (23°C) [7] | 5.1 | % | ISO 178/A |
| Halving Interval | | | IEC 60216 |
| Electric Strength | 11.4 | °C | |
| Tensile Impact Strength | 9.3 | °C | |
| Tensile Strength | 14.0 | °C | |
| Temperature Index | | | IEC 60216 |
| Electric Strength, 20000 hr | 160 | °C | |
| Tensile Impact Strength, 20000 hr | 140 | °C | |
| Tensile Strength, 20000 hr | 150 | °C | |
| Electrolytical Corrosion (23°C) | A 1 | | IEC 60426 |
| ISO Shortname | PBT, GHMR, 09-050, GF10 | | ISO 7792 |
| | 0.0 to 0.020 | | |
| Residual Moisture Content | 0.0 to 0.020 | % | Karl Fisher |

| Impact | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Charpy Notched Impact Strength | | | ISO 179/1eA |
| -30°C | < 10 | $kJ/m^2$ | |
| 23°C | < 10 | $kJ/m^2$ | |
| Charpy Unnotched Impact Strength | | | ISO 179/1eU |
| -30°C | 25 | $kJ/m^2$ | |
| 23°C | 25 | $kJ/m^2$ | |
| Notched Izod Impact Strength | | | ISO 180/1A |
| -40°C | < 10 | $kJ/m^2$ | |
| -30°C | < 10 | $kJ/m^2$ | |
| 23°C | < 10 | $kJ/m^2$ | |
| Unnotched Izod Impact Strength | | | ISO 180/1U |
| -30°C | 20 | $kJ/m^2$ | |
| 23°C | 20 | $kJ/m^2$ | |
| Multi-Axial Instrumented Impact Energy | | | ISO 6603-2 |
| -30°C | 1.50 | J | |

| | | | |
|---|---|---|---|
| 23°C | 1.50 | J | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Heat Deflection Temperature | | | |
| 0.45 MPa, Unannealed | 215 | °C | ISO 75-2/B |
| 1.8 MPa, Unannealed | 190 | °C | ISO 75-2/A |
| Vicat Softening Temperature | 205 | °C | ISO 306/B120 |
| Ball Pressure Test (212°C) | Pass | | IEC 60695-10-2 |
| Melting Temperature [8] | 222 | °C | ISO 11357-3 |
| CLTE | | | ISO 11359-2 |
| Flow : 23 to 55°C | 5.0E-5 | cm/cm/°C | |
| Transverse : 23 to 55°C | 1.3E-4 | cm/cm/°C | |
| RTI Elec | 140 | °C | UL 746 |
| RTI Imp | 125 | °C | UL 746 |
| RTI Str | 140 | °C | UL 746 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Surface Resistivity | > 1.0E+15 | ohms | IEC 60093 |
| Volume Resistivity (23°C) | > 1.0E+15 | ohms·cm | IEC 60093 |
| Electric Strength (23°C, 1.00 mm) | 30 | kV/mm | IEC 60243-1 |
| Relative Permittivity | | | IEC 60250 |
| 23°C, 100 Hz | 3.60 | | |
| 23°C, 1 MHz | 3.40 | | |
| Dissipation Factor | | | IEC 60250 |
| 23°C, 100 Hz | 1.5E-3 | | |
| 23°C, 1 MHz | 0.018 | | |
| Comparative Tracking Index (Solution A) | 600 | V | IEC 60112 |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Flame Rating | | | UL 94 |
| 0.800 mm | HB | | |
| 1.60 mm | HB | | |
| Glow Wire Flammability Index (2.00 mm) | 750 | °C | IEC 60695-2-12 |
| Oxygen Index [9] | 20 | % | ISO 4589-2 |
| **Injection** | **Nominal Value** | **Unit** | **Test Method** |
| Drying Temperature - Circulation Dryer | 120 | °C | |
| | 4.0 to 8.0 | | |
| Drying Time - Circulation Dryer | 4.0 to 8.0 | hr | |
| Processing (Melt) Temp | 250 to 270 | °C | |
| Mold Temperature | 80.0 to 100 | °C | |
| **NOTE** | | | |
| 1. | 60x60x2mm, 80°C MT, 600 bar | | |
| 2. | 60x60x2mm | | |

| | |
|---|---|
| 3. | 60x60x2mm, 80°C MT, 600 bar |
| 4. | 60x60x2mm |
| 5. | 2.0 mm/min |
| 6. | 2.0 mm/min |
| 7. | 2 mm/min |
| 8. | 10°C/min |
| 9. | Procedure A |

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