

# POCAN® KU 2-7003 POS042 000000

Polybutylene Terephthalate

LANXESS GmbH

## Message:

PBT, non-reinforced, injection molding

| General Information                                          |                      |                        |              |
|--------------------------------------------------------------|----------------------|------------------------|--------------|
| Agency Ratings                                               | EC 1907/2006 (REACH) |                        |              |
| Processing Method                                            | Injection molding    |                        |              |
| Physical                                                     | Nominal Value        | Unit                   | Test Method  |
| Density (23°C)                                               | 1.30                 | g/cm <sup>3</sup>      | ISO 1183     |
| Apparent Density                                             | 0.80                 | g/cm <sup>3</sup>      | ISO 60       |
| Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)                  | 60.0                 | cm <sup>3</sup> /10min | ISO 1133     |
| Molding Shrinkage                                            |                      |                        | ISO 2577     |
| Vertical flow direction: 260°C, 2.00mm <sup>1</sup>          | 1.7                  | %                      | ISO 2577     |
| Vertical flow direction: 120°C, 4 hours, 2.00mm <sup>2</sup> | 0.30                 | %                      | ISO 2577     |
| Flow direction: 260°C, 2.00mm <sup>3</sup>                   | 1.7                  | %                      | ISO 2577     |
| Flow direction: 120°C, 4 hours, 2.00mm <sup>4</sup>          | 0.30                 | %                      | ISO 2577     |
| Hardness                                                     | Nominal Value        | Unit                   | Test Method  |
| Ball Indentation Hardness                                    | 120                  | MPa                    | ISO 2039-1   |
| Mechanical                                                   | Nominal Value        | Unit                   | Test Method  |
| Tensile Modulus                                              |                      |                        |              |
| 23°C                                                         | 2720                 | MPa                    | ASTM D638    |
| 23°C                                                         | 2800                 | MPa                    | ISO 527-2/1  |
| Tensile Stress                                               |                      |                        |              |
| Yield, 23°C                                                  | 55.0                 | MPa                    | ISO 527-2/50 |
| Fracture, 23°C                                               | 48.3                 | MPa                    | ASTM D638    |
| Tensile Strain                                               |                      |                        |              |
| Yield, 23°C                                                  | 8.0                  | %                      | ISO 527-2/50 |
| Fracture, 23°C                                               | 38                   | %                      | ASTM D638    |
| Nominal Tensile Strain at Break (23°C)                       | > 20                 | %                      | ISO 527-2/50 |
| Flexural Modulus                                             |                      |                        |              |
| 23°C                                                         | 2380                 | MPa                    | ASTM D790    |
| 23°C <sup>5</sup>                                            | 2700                 | MPa                    | ISO 178/A    |
| Flexural Strength                                            |                      |                        |              |
| 23°C                                                         | 89.6                 | MPa                    | ASTM D790    |
| 3.5% strain, 23°C                                            | 80.0                 | MPa                    | ISO 178/A    |
| 23°C <sup>6</sup>                                            | 90.0                 | MPa                    | ISO 178/A    |
| Flexural Strain at Flexural Strength <sup>7</sup> (23°C)     | 6.0                  | %                      | ISO 178/A    |

|                                         |                             |                   |                    |
|-----------------------------------------|-----------------------------|-------------------|--------------------|
| ISO Shortname                           | PBT, GHR, 09-030            |                   | ISO 7792           |
| Residual Moisture Content               | 0.0 - 0.020                 | %                 | Karl Fisher        |
| <b>Impact</b>                           | <b>Nominal Value</b>        | <b>Unit</b>       | <b>Test Method</b> |
| Charpy Notched Impact Strength          |                             |                   | ISO 179/1eA        |
| -30°C                                   | < 10                        | kJ/m <sup>2</sup> | ISO 179/1eA        |
| 23°C                                    | < 10                        | kJ/m <sup>2</sup> | ISO 179/1eA        |
| Charpy Unnotched Impact Strength        |                             |                   | ISO 179/1eU        |
| -30°C                                   | 100                         | kJ/m <sup>2</sup> | ISO 179/1eU        |
| 23°C                                    | 200                         | kJ/m <sup>2</sup> | ISO 179/1eU        |
| Notched Izod Impact                     |                             |                   | ISO 180/1A         |
| -40°C                                   | < 10                        | kJ/m <sup>2</sup> | ISO 180/1A         |
| -30°C                                   | < 10                        | kJ/m <sup>2</sup> | ISO 180/1A         |
| 23°C                                    | < 10                        | kJ/m <sup>2</sup> | ISO 180/1A         |
| <b>Thermal</b>                          | <b>Nominal Value</b>        | <b>Unit</b>       | <b>Test Method</b> |
| Heat Deflection Temperature             |                             |                   |                    |
| 0.45 MPa, not annealed                  | 160                         | °C                | ISO 75-2/B         |
| 1.8 MPa, not annealed                   | 60.0                        | °C                | ISO 75-2/A         |
| Melting Temperature <sup>8</sup>        | 225                         | °C                | ISO 11357-3        |
| Linear thermal expansion coefficient    |                             |                   | ISO 11359-2        |
| Flow: 23 to 55°C                        | 1.2E-4                      | cm/cm/°C          | ISO 11359-2        |
| Lateral: 23 to 55°C                     | 1.2E-4                      | cm/cm/°C          | ISO 11359-2        |
| <b>Electrical</b>                       | <b>Nominal Value</b>        | <b>Unit</b>       | <b>Test Method</b> |
| Comparative Tracking Index (Solution A) | 600                         | V                 | IEC 60112          |
| <b>Injection</b>                        | <b>Nominal Value</b>        | <b>Unit</b>       | <b>Test Method</b> |
| Drying Temperature - Circulation Dryer  | 120                         | °C                |                    |
| Drying Time - Circulation Dryer         | 4.0 - 8.0                   | hr                |                    |
| Processing (Melt) Temp                  | 250 - 260                   | °C                |                    |
| Mold Temperature                        | 80.0 - 100                  | °C                |                    |
| <b>NOTE</b>                             |                             |                   |                    |
| 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                    |                   |                    |

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