

# Pocan<sup>®</sup> B1305

## PBT

Injection Molding, Unreinforced, General purpose

Print Date: 2024-09-21

| PROPERTIES                                | TYPICAL DATA | UNIT                   | TEST METHOD    |
|---|--------------|------------------------|----------------|
| <b>RHEOLOGICAL PROPERTIES</b>             |              |                        |                |
|   | <b>VALUE</b> |                        |                |
| Melt volume-flow rate                     | 47           | cm <sup>3</sup> /10min | ISO 1133       |
| Temperature                               | 250          | °C                     | ISO 1133       |
| Load                                      | 2.16         | kg                     | ISO 1133       |
| Molding shrinkage (normal)                | 2            | %                      | ISO 294-4      |
| Molding shrinkage (parallel)              | 2            | %                      | ISO 294-4      |
| <b>MECHANICAL PROPERTIES</b>              |              |                        |                |
|   | <b>VALUE</b> |                        |                |
| Tensile modulus                           | 2800         | MPa                    | ISO 527-1/-2   |
| Yield stress                              | 60           | MPa                    | ISO 527-1/-2   |
| Yield strain                              | 9            | %                      | ISO 527-1/-2   |
| Flexural modulus                          | 2700         | MPa                    | ISO 178        |
| Flexural strength                         | 90           | MPa                    | ISO 178        |
| Flexural strain at flexural strength      | 6            | %                      | ISO 178-A      |
| Charpy impact strength (+23°C)            | 180          | kJ/m <sup>2</sup>      | ISO 179/1eU    |
| Charpy impact strength (-30°C)            | 150          | kJ/m <sup>2</sup>      | ISO 179/1eU    |
| Charpy notched impact strength (+23°C)    | <10          | kJ/m <sup>2</sup>      | ISO 179/1eA    |
| Charpy notched impact strength (-30°C)    | <10          | kJ/m <sup>2</sup>      | ISO 179/1eA    |
| Izod impact strength (+23°C)              | 125          | kJ/m <sup>2</sup>      | ISO 180/1U     |
| Izod impact strength (-30°C)              | 90           | kJ/m <sup>2</sup>      | ISO 180-1U     |
| <b>THERMAL PROPERTIES</b>                 |              |                        |                |
|   | <b>VALUE</b> |                        |                |
| Melting temperature (10°C/min)            | 225          | °C                     | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 65           | °C                     | ISO 75-1/-2    |

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## Property Data

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| <i>PROPERTIES</i>                            | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|--|---------------------|-------------|--------------------|
| Temp. of deflection under load (0.45 MPa)    | 155                 | °C          | ISO 75-1/-2        |
| Coeff. of linear therm. expansion (parallel) | 1.1                 | E-4/°C      | ISO 11359-1/-2     |
| Coeff. of linear therm. expansion (normal)   | 1.1                 | E-4/°C      | ISO 11359-1/-2     |
| Burning Behav. at 0.75 mm nom. thickn.       | HB                  | class       | IEC 60695-11-10    |
| Thickness tested                             | 0.75                | mm          | IEC 60695-11-10    |
| Burning Behav. at 1.5 mm nom. thickn.        | HB                  | class       | IEC 60695-11-10    |
| Thickness tested                             | 1.5                 | mm          | IEC 60695-11-10    |
| Burning Behav. at 3.0 mm nom. thickn.        | HB                  | class       | IEC 60695-11-10    |
| Thickness tested                             | 3                   | mm          | IEC 60695-11-10    |
| Oxygen index                                 | 24                  | %           | ISO 4589-1/-2      |
| Glow Wire Flammability Index GWFI            | 750                 | °C          | IEC 60695-2-12     |
| GWFI (Thickness (1) tested)                  | 2                   | mm          | IEC 60695-2-12     |

### *ELECTRICAL PROPERTIES*

#### *VALUE*

|                                  |       |       |               |
|----------------------------------|-------|-------|---------------|
| Relative permittivity (100Hz)    | 3.4   | –     | IEC 62631-2-1 |
| Relative permittivity (1 MHz)    | 3.2   | –     | IEC 62631-2-1 |
| Dissipation factor (100 Hz)      | 15    | E-4   | IEC 62631-2-1 |
| Dissipation factor (1 MHz)       | 190   | E-4   | IEC 62631-2-1 |
| Volume resistivity               | >1E13 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity              | >1E15 | Ohm   | IEC 62631-3-2 |
| Electric strength                | 30    | kV/mm | IEC 60243-1   |
| Comparative tracking index       | 600   | V     | IEC 60112     |
| Comparative tracking index (PLC) | 0     | class | UL 746A       |

### *OTHER PROPERTIES*

#### *VALUE*

|                     |      |                   |                |
|---------------------|------|-------------------|----------------|
| Water absorption    | 0.5  | %                 | Sim. to ISO 62 |
| Humidity absorption | 0.2  | %                 | Sim. to ISO 62 |
| Density             | 1310 | kg/m <sup>3</sup> | ISO 1183       |

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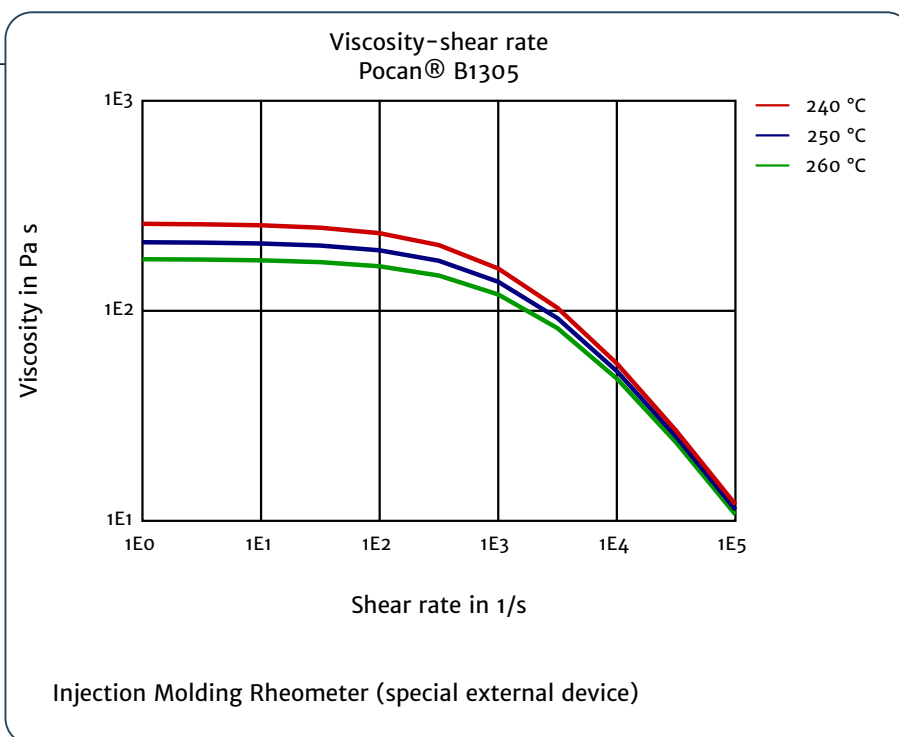
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|--|--------------|------|----------------------|
| <b>PROCESSING RECOMMENDATIONS</b>        |              |      |                      |
| Drying temperature circulating air dryer | 120          | °C   |                      |
| Drying time circulating air dryer        | 4-8          | h    |                      |
| Residual moisture content                | 0.00-0.02    | %    | acc. to Karl Fischer |
| Melt temperature (Tmin – Tmax)           | 250-270      | °C   |                      |
| Mold temperature                         | 80-100       | °C   |                      |

### Viscosity-shear rate



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