

# Datasheet

## Pocan T7391 000000

PBT+PET, 45% glass fibers, injection molding, improved surface finish, increased temperature peak load

ISO Shortname: ISO 20028-PBT+PET,GF45,GHMR,09-160

| Property  | Test Condition                        | Unit                      | Standard       | guide value <sup>1</sup> |
|---|---------------------------------------|---------------------------|----------------|--------------------------|
| <b>Rheological properties</b>                         |                                       |                           |                |                          |
| C Melt volume-flow rate                               | 260 °C; 5 kg                          | cm <sup>3</sup> /(10 min) | ISO 1133-1     | 30                       |
| C Molding shrinkage, parallel                         | 60x60x2; 270 °C / MT<br>90°C; 600 bar | %                         | ISO 294-4      | 0.2                      |
| C Molding shrinkage, transverse                       | 60x60x2; 270 °C / MT<br>90°C; 600 bar | %                         | ISO 294-4      | 0.8                      |
| Post- shrinkage, parallel                             | 60x60x2; 120 °C; 4 h                  | %                         | ISO 294-4      | 0.1                      |
| Post- shrinkage, transverse                           | 60x60x2; 120 °C; 4 h                  | %                         | ISO 294-4      | 0.1                      |
| <b>Mechanical properties (23 °C/50 % r. h.)</b>       |                                       |                           |                |                          |
| C Tensile modulus                                     | 1 mm/min                              | MPa                       | ISO 527-1,-2   | 16000                    |
| C Tensile Stress at break                             | 5 mm/min                              | MPa                       | ISO 527-1,-2   | 160                      |
| C Tensile Strain at break                             | 5 mm/min                              | %                         | ISO 527-1,-2   | 1.9                      |
| C Tensile creep modulus                               | 1 h                                   | MPa                       | ISO 899-1      | 16500                    |
| C Tensile creep modulus                               | 1000 h                                | MPa                       | ISO 899-1      | 15000                    |
| C Charpy impact strength                              | 23 °C                                 | kJ/m <sup>2</sup>         | ISO 179-1eU    | 60                       |
| C Charpy impact strength                              | -30 °C                                | kJ/m <sup>2</sup>         | ISO 179-1eU    | 65                       |
| C Charpy notched impact strength                      | 23 °C                                 | kJ/m <sup>2</sup>         | ISO 179-1eA    | <10                      |
| C Charpy notched impact strength                      | -30 °C                                | kJ/m <sup>2</sup>         | ISO 179-1eA    | <10                      |
| Izod impact strength                                  | 23 °C                                 | kJ/m <sup>2</sup>         | ISO 180-1U     | 55                       |
| Izod impact strength                                  | -30 °C                                | kJ/m <sup>2</sup>         | ISO 180-1U     | 60                       |
| Izod notched impact strength                          | 23 °C                                 | kJ/m <sup>2</sup>         | ISO 180-1A     | <10                      |
| Izod notched impact strength                          | -30 °C                                | kJ/m <sup>2</sup>         | ISO 180-1A     | <10                      |
| Flexural modulus                                      | 2 mm/min                              | MPa                       | ISO 178-A      | 15500                    |
| Flexural strength                                     | 2 mm/min                              | MPa                       | ISO 178-A      | 260                      |
| Flexural strain at flexural strength                  | 2 mm/min                              | %                         | ISO 178-A      | 2.1                      |
| Ball indentation hardness                             |                                       | N/mm <sup>2</sup>         | ISO 2039-1     | 250                      |
| <b>Thermal properties</b>                             |                                       |                           |                |                          |
| C Melting temperature                                 | 10 °C/min                             | °C                        | ISO 11357-1,-3 | 225 - 250                |
| C Temperature of deflection under load                | 1.80 MPa                              | °C                        | ISO 75-1,-2    | 205                      |
| C Temperature of deflection under load                | 0.45 MPa                              | °C                        | ISO 75-1,-2    | 225                      |
| Vicat softening temperature                           | 50 N; 120 °C/h                        | °C                        | ISO 306        | 210                      |
| C Coefficient of linear thermal expansion, parallel   | 23 to 55 °C                           | 10 <sup>-4</sup> /K       | ISO 11359-1,-2 | 0.2                      |
| C Coefficient of linear thermal expansion, transverse | 23 to 55 °C                           | 10 <sup>-4</sup> /K       | ISO 11359-1,-2 | 0.8                      |
| C Burning behavior UL 94                              | 1.5 mm                                | Class                     | UL 94          | HB                       |
| C Burning behavior UL 94                              | 0.75 mm                               | Class                     | UL 94          | HB                       |
| C Oxygen index  | Method A                              | %                         | ISO 4589-2     | 21                       |

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| Property  | Test Condition | Unit               | Standard             | guide value <sup>1</sup> |
|---|----------------|--------------------|----------------------|--------------------------|
| Thermal conductivity                            | 23 °C          | W/(m·K)            | ISO 8302             | 0.27                     |
| Resistance to heat (ball pressure test)         |                | °C                 | IEC 60695-10-2       | 220                      |
| Temperature index (Tensile strength)            | 20000 h        | °C                 | IEC 60216-1          | 155                      |
| Halving interval (Tensile strength)             |                | °C                 | IEC 60216-1          | 10.2                     |
| Temperature index (Tensile impact strength)     | 20000 h        | °C                 | IEC 60216-1          | 150                      |
| Halving interval (Tensile impact strength)      |                | °C                 | IEC 60216-1          | 13.5                     |
| Temperature index (Electric strength)           | 20000 h        | °C                 | IEC 60216-1          | 155                      |
| Halving interval (Electric strength)            |                | °C                 | IEC 60216-1          | 10.2                     |
| Glow wire test (GWFI)                           | 2.0 mm         | °C                 | IEC 60695-2-12       | 750                      |
| <b>Electrical properties (23 °C/50 % r. h.)</b> |                |                    |                      |                          |
| C Relative permittivity                         | 100 Hz         | -                  | IEC 60250            | 4.3                      |
| C Relative permittivity                         | 1 MHz          | -                  | IEC 60250            | 4.2                      |
| C Dissipation factor                            | 100 Hz         | 10 <sup>-4</sup>   | IEC 60250            | 20                       |
| C Dissipation factor                            | 1 MHz          | 10 <sup>-4</sup>   | IEC 60250            | 140                      |
| C Volume resistivity                            |                | Ohm·m              | IEC 62631-3          | >1E13                    |
| C Surface resistivity                           |                | Ohm                | IEC 62631-3          | >1E15                    |
| C Electric strength                             | 1 mm           | kV/mm              | IEC 60243-1          | 28                       |
| C Comparative tracking index CTI                | Solution A     | Rating             | IEC 60112            | 275                      |
| Electrolytic corrosion                          |                | Rating             | IEC 60426            | A 1                      |
| <b>Other properties (23 °C)</b>                 |                |                    |                      |                          |
| C Water absorption (Saturation value)           | Water at 23 °C | %                  | ISO 62               | 0.3                      |
| C Water absorption (Equilibrium value)          | 23 °C; 50 % RH | %                  | ISO 62               | 0.1                      |
| C Density                                       |                | kg/m <sup>3</sup>  | ISO 1183             | 1690                     |
| Bulk density                                    |                | kg/m <sup>3</sup>  | ISO 60               | 800                      |
| <b>Material specific properties</b>             |                |                    |                      |                          |
| C Viscosity number                              |                | cm <sup>3</sup> /g | ISO 1628-5           | 80                       |
| <b>Processing conditions for test specimens</b> |                |                    |                      |                          |
| C Injection molding-Melt temperature            |                | °C                 | ISO 294              | 270                      |
| C Injection molding-Mold temperature            |                | °C                 | ISO 294              | 90                       |
| <b>Processing recommendations</b>               |                |                    |                      |                          |
| Drying temperature circulating air dryer        |                | °C                 | -                    | 120                      |
| Drying time circulating air dryer               |                | h                  | -                    | 4-8                      |
| Residual moisture content                       |                | %                  | Acc. to Karl Fischer | 0.00-0.02                |
| Melt temperature (Tmin - Tmax)                  |                | °C                 | -                    | 260-280                  |
| Mold temperature                                |                | °C                 | -                    | 80-100                   |

Notes

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### **Pocan T7391 000000**

**1** Typical properties: these are not to be construed as specifications

**C** These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

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