

# Pocan<sup>®</sup> DP1105

## PBT

Injection Molding, Unreinforced, Improved flow

| PROPERTIES                                | TYPICAL DATA | UNIT                   | TEST METHOD    |
|-------------------------------------------|--------------|------------------------|----------------|
| <b>RHEOLOGICAL PROPERTIES</b>             |              |                        |                |
|                                           | VALUE        |                        |                |
| Melt volume–flow rate                     | 42           | cm <sup>3</sup> /10min | ISO 1133       |
| Temperature                               | 250          | °C                     | ISO 1133       |
| Load                                      | 1.2          | kg                     | ISO 1133       |
| Molding shrinkage (normal)                | 2.4          | %                      | ISO 294–4      |
| Molding shrinkage (parallel)              | 2.2          | %                      | ISO 294–4      |
| <b>MECHANICAL PROPERTIES</b>              |              |                        |                |
|                                           | VALUE        |                        |                |
| Tensile modulus                           | 2850         | MPa                    | ISO 527–1/–2   |
| Yield stress                              | 65           | MPa                    | ISO 527–1/–2   |
| Yield strain                              | 9            | %                      | ISO 527–1/–2   |
| Nominal strain at break                   | 10           | %                      | ISO 527–1/–2   |
| Flexural modulus                          | 2750         | MPa                    | ISO 178        |
| Flexural strength                         | 90           | MPa                    | ISO 178        |
| Flexural strain at flexural strength      | 6.5          | %                      | ISO 178–A      |
| Charpy impact strength (+23°C)            | 135          | kJ/m <sup>2</sup>      | ISO 179/1eU    |
| Charpy impact strength (–30°C)            | 110          | kJ/m <sup>2</sup>      | ISO 179/1eU    |
| Izod impact strength (+23°C)              | 80           | kJ/m <sup>2</sup>      | ISO 180/1U     |
| Izod impact strength (–30°C)              | 70           | kJ/m <sup>2</sup>      | ISO 180–1U     |
| <b>THERMAL PROPERTIES</b>                 |              |                        |                |
|                                           | VALUE        |                        |                |
| Melting temperature (10°C/min)            | 223          | °C                     | ISO 11357–1/–3 |
| Temp. of deflection under load (1.80 MPa) | 65           | °C                     | ISO 75–1/–2    |
| Temp. of deflection under load (0.45 MPa) | 160          | °C                     | ISO 75–1/–2    |

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|----------------------------------------------|--------------|--------|-----------------|
| Coeff. of linear therm. expansion (parallel) | 1            | E-4/°C | ISO 11359-1/-2  |
| Coeff. of linear therm. expansion (normal)   | 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 |
| Oxygen index                                 | 25.1         | %      | ISO 4589-1/-2   |
| Glow Wire Flammability Index GWFI            | 700          | °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)   | 14    | E-4   | IEC 62631-2-1 |
| Dissipation factor (1 MHz)    | 224   | 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             | 30.2  | kV/mm | IEC 60243-1   |
| Comparative tracking index    | 600   | V     | IEC 60112     |

| OTHER PROPERTIES    | VALUE |       |                |
|---------------------|-------|-------|----------------|
| Water absorption    | 0.5   | %     | Sim. to ISO 62 |
| Humidity absorption | 0.2   | %     | Sim. to ISO 62 |
| Density             | 1310  | kg/m³ | ISO 1183       |

| PROCESSING RECOMMENDATIONS               | VALUE     |    |                      |
|------------------------------------------|-----------|----|----------------------|
| 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 |

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|--------------------------------|--------------|------|-------------|
| Melt temperature (Tmin – Tmax) | 250–270      | °C   |             |
| Mold temperature               | 80–100       | °C   |             |

Viscosity–shear rate

