

## PIBITER® NRV10 - PBT

### Description

GF10 Polybutylene terephthalate , 10 % glass fibre reinforced, preliminary datasheet.

| Physical properties | Value | Unit              | Test Standard |
|---------------------|-------|-------------------|---------------|
| Density             | 1450  | kg/m <sup>3</sup> | ISO 1183      |
| Melt flow rate, MFR | 30    | g/10min           | ISO 1133      |
| MFR temperature     | 250   | °C                | ISO 1133      |
| MFR load            | 2.16  | kg                | ISO 1133      |

| Mechanical properties                | Value | Unit              | Test Standard |
|--------------------------------------|-------|-------------------|---------------|
| Tensile modulus                      | 4500  | MPa               | ISO 527-2/1A  |
| Tensile stress at break, 5mm/min     | 65    | MPa               | ISO 527-2/1A  |
| Tensile strain at break, 5mm/min     | 2.2   | %                 | ISO 527-2/1A  |
| Flexural strength, 23°C              | 4200  | MPa               | ISO 178       |
| Charpy notched impact strength, 23°C | 2.8   | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Izod impact notched, 23°C            | 3.2   | kJ/m <sup>2</sup> | ISO 180/1A    |

| Thermal properties               | Value | Unit  | Test Standard |
|----------------------------------|-------|-------|---------------|
| DTUL at 1.8 MPa                  | 158   | °C    | ISO 75-1, -2  |
| Flammability @1.6mm nom. thickn. | HB    | class | UL 94         |

### Typical injection moulding processing conditions

| Pre Drying                                      | Value     | Unit | Test Standard |
|-------------------------------------------------|-----------|------|---------------|
| Necessary low maximum residual moisture content | 0.02      | %    | -             |
| Drying time                                     | 2 - 4     | h    | -             |
| Drying temperature                              | 120 - 140 | °C   | -             |
| Temperature                                     | Value     | Unit | Test Standard |
| Hopper temperature                              | 20 - 50   | °C   | -             |
| Feeding zone temperature                        | 190 - 200 | °C   | -             |
| Zone1 temperature                               | 250 - 260 | °C   | -             |
| Zone2 temperature                               | 250 - 260 | °C   | -             |
| Zone3 temperature                               | 255 - 265 | °C   | -             |
| Zone4 temperature                               | 255 - 265 | °C   | -             |
| Nozzle temperature                              | 260 - 270 | °C   | -             |
| Melt temperature                                | 260 - 270 | °C   | -             |
| Mold temperature                                | 75 - 100  | °C   | -             |
| Hot runner temperature                          | 260 - 270 | °C   | -             |
| Speed                                           | Value     | Unit | Test Standard |
| Injection speed                                 | fast      | -    | -             |
| Screw Speed                                     | Value     | Unit | Test Standard |
| Screw speed diameter, 25mm                      | 90        | RPM  | -             |
| Screw speed diameter, 40mm                      | 75        | RPM  | -             |
| Screw speed diameter, 55mm                      | 60        | RPM  | -             |

