

# Pocan<sup>®</sup> BF4225

## PBT–GF20 FR(17)

20% Glass Reinforced, Injection Molding, Flame Retardant

| <i>PROPERTIES</i>                         | <i>TYPICAL DATA</i> | <i>UNIT</i>            | <i>TEST METHOD</i> |
|---|---------------------|------------------------|--------------------|
| <b><i>RHEOLOGICAL PROPERTIES</i></b>      |                     |                        |                    |
|   | <b><i>VALUE</i></b> |                        |                    |
| Melt volume–flow rate                     | 19                  | cm <sup>3</sup> /10min | ISO 1133           |
| Temperature                               | 260                 | °C                     | ISO 1133           |
| Load                                      | 2.16                | kg                     | ISO 1133           |
| Molding shrinkage (normal)                | 1.2                 | %                      | ISO 294–4          |
| Molding shrinkage (parallel)              | 0.5                 | %                      | ISO 294–4          |
| <b><i>MECHANICAL PROPERTIES</i></b>       |                     |                        |                    |
|   | <b><i>VALUE</i></b> |                        |                    |
| Tensile modulus                           | 8300                | MPa                    | ISO 527–1/–2       |
| Stress at break                           | 120                 | MPa                    | ISO 527–1/–2       |
| Strain at break                           | 2.5                 | %                      | ISO 527–1/–2       |
| Flexural modulus                          | 8100                | MPa                    | ISO 178            |
| Flexural strength                         | 180                 | MPa                    | ISO 178            |
| Flexural strain at flexural strength      | 3.1                 | %                      | ISO 178–A          |
| Charpy impact strength (+23°C)            | 45                  | kJ/m <sup>2</sup>      | ISO 179/1eU        |
| Charpy impact strength (–30°C)            | 40                  | kJ/m <sup>2</sup>      | ISO 179/1eU        |
| Charpy notched impact strength (+23°C)    | 4.8                 | kJ/m <sup>2</sup>      | ISO 179/1eA        |
| Charpy notched impact strength (–30°C)    | 4.8                 | kJ/m <sup>2</sup>      | ISO 179/1eA        |
| Izod impact strength (+23°C)              | 40                  | kJ/m <sup>2</sup>      | ISO 180/1U         |
| Izod impact strength (–30°C)              | 35                  | kJ/m <sup>2</sup>      | ISO 180–1U         |
| <b><i>THERMAL PROPERTIES</i></b>          |                     |                        |                    |
|   | <b><i>VALUE</i></b> |                        |                    |
| Melting temperature (10°C/min)            | 225                 | °C                     | ISO 11357–1/–3     |
| Temp. of deflection under load (1.80 MPa) | 200                 | °C                     | ISO 75–1/–2        |

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|--|---------------------|-------------------|--------------------|
| Temp. of deflection under load (0.45 MPa)    | 220                 | °C                | ISO 75-1/-2        |
| Coeff. of linear therm. expansion (parallel) | 0.3                 | 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.       | V-0                 | class             | IEC 60695-11-10    |
| Thickness tested                             | 0.75                | mm                | IEC 60695-11-10    |
| Burning Behav. at 1.5 mm nom. thickn.        | V-0                 | class             | IEC 60695-11-10    |
| Thickness tested                             | 1.5                 | mm                | IEC 60695-11-10    |
| Burning Behav. at 3.0 mm nom. thickn.        | V-0                 | class             | IEC 60695-11-10    |
| Thickness tested                             | 3                   | mm                | IEC 60695-11-10    |
| Glow Wire Flammability Index GWFI            | 960                 | °C                | IEC 60695-2-12     |
| GWFI (Thickness (1) tested)                  | 0.75                | mm                | IEC 60695-2-12     |
| Glow Wire Flammability Index GWFI            | 960                 | °C                | IEC 60695-2-12     |
| GWFI (Thickness (2) tested)                  | 1.5                 | mm                | IEC 60695-2-12     |
| Glow Wire Ignition Temperature GWIT          | 725                 | °C                | IEC 60695-2-13     |
| GWIT (Thickness (1) tested)                  | 0.75                | mm                | IEC 60695-2-13     |
| Glow Wire Ignition Temperature GWIT          | 725                 | °C                | IEC 60695-2-13     |
| GWIT (Thickness (2) tested)                  | 1.5                 | mm                | IEC 60695-2-13     |
| Glow Wire Ignition Temperature GWIT          | 725                 | °C                | IEC 60695-2-13     |
| GWIT (Thickness (3) tested)                  | 3                   | mm                | IEC 60695-2-13     |
| <b><i>ELECTRICAL PROPERTIES</i></b>          | <b><i>VALUE</i></b> |                   |                    |
| Relative permittivity (100Hz)                | 3.8                 | –                 | IEC 62631-2-1      |
| Relative permittivity (1 MHz)                | 3.6                 | –                 | IEC 62631-2-1      |
| Electric strength                            | 29                  | kV/mm             | IEC 60243-1        |
| Comparative tracking index                   | 175                 | V                 | IEC 60112          |
| Comparative tracking index (PLC)             | 2                   | class             | UL 746A            |
| <b><i>OTHER PROPERTIES</i></b>               | <b><i>VALUE</i></b> |                   |                    |
| Density                                      | 1590                | kg/m <sup>3</sup> | ISO 1183           |

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|--|---------------------|-------------|----------------------|
| <b><i>PROCESSING RECOMMENDATIONS</i></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)           | 240–260             | °C          |                      |
| Mold temperature                         | 80–100              | °C          |                      |