

# Durethan® BG30XFN01

## PA6—(GF+GB)30 FR(40+72)

Injection Molding, 30% Glass Fiber/Glass Beads, Flame Retardant (halogen free), Heat Stabilized, Improved flow, Excellent Surface Properties

| PROPERTIES                                   | TYPICAL DATA      | UNIT   | TEST METHOD     |
|----------------------------------------------|-------------------|--------|-----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                |                   |        |                 |
|                                              | <b>DRY / COND</b> |        |                 |
| Molding shrinkage (parallel)                 | 0.4 / *           | %      | ISO 294-4       |
| Molding shrinkage (normal)                   | 0.7 / *           | %      | ISO 294-4       |
| <b>MECHANICAL PROPERTIES</b>                 |                   |        |                 |
|                                              | <b>DRY / COND</b> |        |                 |
| Tensile modulus                              | 7400 / 3500       | MPa    | ISO 527-1/-2    |
| Stress at break                              | 85 / 50           | MPa    | ISO 527-1/-2    |
| Strain at break                              | 3 / 7             | %      | ISO 527-1/-2    |
| Flexural modulus                             | 7000 / 3700       | MPa    | ISO 178         |
| Flexural strength                            | 145 / 90          | MPa    | ISO 178         |
| Charpy impact strength (+23°C)               | 40 / 45           | kJ/m²  | ISO 179/1eU     |
| Charpy impact strength (-30°C)               | 35 / 35           | kJ/m²  | ISO 179/1eU     |
| Charpy notched impact strength (+23°C)       | <10 / 10          | kJ/m²  | ISO 179/1eA     |
| Charpy notched impact strength (-30°C)       | <10 / <10         | kJ/m²  | ISO 179/1eA     |
| Izod notched impact strength (+23°C)         | <10 / 10          | kJ/m²  | ISO 180/1A      |
| <b>THERMAL PROPERTIES</b>                    |                   |        |                 |
|                                              | <b>DRY / COND</b> |        |                 |
| Melting temperature (10°C/min)               | 222 / *           | °C     | ISO 11357-1/-3  |
| Temp. of deflection under load (1.80 MPa)    | 190 / *           | °C     | ISO 75-1/-2     |
| Temp. of deflection under load (0.45 MPa)    | 214 / *           | °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)   | 0.8 / *           | E-4/°C | ISO 11359-1/-2  |
| Burning Behav. at 1.5 mm nom. thickn.        | V-0 / *           | class  | IEC 60695-11-10 |
| Thickness tested                             | 1.5 / *           | mm     | IEC 60695-11-10 |

Property Data

Durethan® BG30XFN01

| PROPERTIES                             | TYPICAL DATA | UNIT       | TEST METHOD          |
|----------------------------------------|--------------|------------|----------------------|
| Burning Behav. at 3.0 mm nom. thickn.  | V-0 / *      | class      | IEC 60695-11-10      |
| Thickness tested                       | 3 / *        | mm         | IEC 60695-11-10      |
| Burning Behav. at 0.75 mm nom. thickn. | V-0 / *      | class      | IEC 60695-11-10      |
| Thickness tested                       | 0.75 / *     | mm         | IEC 60695-11-10      |
| Oxygen index                           | 34.6 / *     | %          | ISO 4589-1/-2        |
| 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       |
| ELECTRICAL PROPERTIES                  |              | DRY / COND |                      |
| Electric strength                      | 32 / -       | kV/mm      | IEC 60243-1          |
| Comparative tracking index             | 575 / -      | V          | IEC 60112            |
| OTHER PROPERTIES                       |              | DRY / COND |                      |
| Water absorption                       | 5.3 / *      | %          | Sim. to ISO 62       |
| Humidity absorption                    | 1.6 / *      | %          | Sim. to ISO 62       |
| Density                                | 1390 / -     | kg/m³      | ISO 1183             |
| PROCESSING RECOMMENDATIONS             |              | VALUE      |                      |
| Drying temperature dry air dryer       | 80           | °C         |                      |
| Drying time dry air dryer              | 2-6          | h          |                      |
| Residual moisture content              | 0.03-0.07    | %          | acc. to Karl Fischer |
| Melt temperature (Tmin – Tmax)         | 250-270      | °C         |                      |
| Mold temperature                       | 80-100       | °C         |                      |