

Durethan[®] BKV30

PA6–GF30

30% Glass Reinforced, Injection Molding

| <i>PROPERTIES</i> | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|--|---------------------|-------------------|--------------------|
| <i>RHEOLOGICAL PROPERTIES</i> | | | |
| | <i>DRY / COND</i> | | |
| Molding shrinkage (parallel) | 0.25 / * | % | ISO 294–4 |
| Molding shrinkage (normal) | 0.75 / * | % | ISO 294–4 |
| <i>MECHANICAL PROPERTIES</i> | | | |
| | <i>DRY / COND</i> | | |
| Tensile modulus | 9800 / 6100 | MPa | ISO 527–1/–2 |
| Stress at break | 170 / 105 | MPa | ISO 527–1/–2 |
| Strain at break | 3 / 6 | % | ISO 527–1/–2 |
| Flexural modulus | 8600 / 5100 | MPa | ISO 178 |
| Flexural strength | 275 / 170 | MPa | ISO 178 |
| Charpy impact strength (+23°C) | 80 / 95 | kJ/m ² | ISO 179/1eU |
| Charpy impact strength (–30°C) | 70 / 70 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 12 / 20 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength (–30°C) | 10 / 10 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength (+23°C) | 13 / 20 | kJ/m ² | ISO 180/1A |
| <i>THERMAL PROPERTIES</i> | | | |
| | <i>DRY / COND</i> | | |
| Melting temperature (10°C/min) | 220 / * | °C | ISO 11357–1/–3 |
| Temp. of deflection under load (1.80 MPa) | 200 / * | °C | ISO 75–1/–2 |
| Temp. of deflection under load (0.45 MPa) | 215 / * | °C | ISO 75–1/–2 |
| Coeff. of linear therm. expansion (parallel) | 0.2 / * | 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. | HB / * | class | IEC 60695–11–10 |
| Thickness tested | 1.5 / * | mm | IEC 60695–11–10 |

Property Data

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| <i>PROPERTIES</i> | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|--|---------------------|-------------|--------------------|
| Burning Behav. at 3.0 mm nom. thickn. | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 3 / * | mm | IEC 60695-11-10 |
| Burning Behav. at 0.75 mm nom. thickn. | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 0.75 / * | mm | IEC 60695-11-10 |
| Oxygen index | 22 / * | % | ISO 4589-1/-2 |
| Glow Wire Flammability Index GWFI | 600 / - | °C | IEC 60695-2-12 |
| GWFI (Thickness (1) tested) | 2 / - | mm | IEC 60695-2-12 |

ELECTRICAL PROPERTIES

DRY / COND

| | | | |
|-------------------------------|-------------|-------|---------------|
| Relative permittivity (100Hz) | 4 / 10 | - | IEC 62631-2-1 |
| Relative permittivity (1 MHz) | 4 / 5 | - | IEC 62631-2-1 |
| Dissipation factor (100 Hz) | 50 / 2000 | E-4 | IEC 62631-2-1 |
| Dissipation factor (1 MHz) | 150 / 1200 | E-4 | IEC 62631-2-1 |
| Volume resistivity | 1E13 / 1E10 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity | * / 1E12 | Ohm | IEC 62631-3-2 |
| Electric strength | 40 / 35 | kV/mm | IEC 60243-1 |
| Comparative tracking index | 600 / - | V | IEC 60112 |

OTHER PROPERTIES

DRY / COND

| | | | |
|---------------------|----------|-------------------|----------------|
| Water absorption | 7 / * | % | Sim. to ISO 62 |
| Humidity absorption | 2.1 / * | % | Sim. to ISO 62 |
| Density | 1360 / - | kg/m ³ | ISO 1183 |

MATERIAL SPECIFIC PROPERTIES

DRY / COND

| | | | |
|------------------|---------|--------------------|---------------------|
| Viscosity number | 140 / * | cm ³ /g | ISO 307, 1157, 1628 |
|------------------|---------|--------------------|---------------------|

PROCESSING RECOMMENDATIONS

VALUE

| | | | |
|----------------------------------|-----|----|--|
| Drying temperature dry air dryer | 80 | °C | |
| Drying time dry air dryer | 2-6 | h | |

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|--------------------------------|---------------------|-------------|----------------------|
| Residual moisture content | 0.03–0.12 | % | acc. to Karl Fischer |
| Melt temperature (Tmin – Tmax) | 270–290 | °C | |
| Mold temperature | 80–120 | °C | |