

# Durethan® BKV30XTS3

## PA6–GF30

30% Glass Reinforced, Injection Molding, Heat Stabilized

Print Date: 2024–12–10

| PROPERTIES                                   | TYPICAL DATA      | UNIT              | TEST METHOD     |
|--|-------------------|-------------------|-----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                |                   |                   |                 |
|  | <b>DRY / COND</b> |                   |                 |
| Molding shrinkage (parallel)                 | 0.25 / *          | %                 | ISO 294–4       |
| Molding shrinkage (normal)                   | 0.7 / *           | %                 | ISO 294–4       |
| <b>MECHANICAL PROPERTIES</b>                 |                   |                   |                 |
|  | <b>DRY / COND</b> |                   |                 |
| Tensile modulus                              | 10100 / 5500      | MPa               | ISO 527–1/–2    |
| Stress at break                              | 185 / 80          | MPa               | ISO 527–1/–2    |
| Strain at break                              | 3.5 / 5           | %                 | ISO 527–1/–2    |
| Flexural modulus                             | 9400 / 5500       | MPa               | ISO 178         |
| Flexural strength                            | 270 / 140         | MPa               | ISO 178         |
| Tensile modulus (200°C)                      | 3120              | MPa               | ISO 527–1/–2    |
| Charpy impact strength (+23°C)               | 80 / 90           | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Charpy impact strength (–30°C)               | 60 / 60           | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Charpy notched impact strength (+23°C)       | 11 / 19           | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Charpy notched impact strength (–30°C)       | <10 / <10         | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Izod notched impact strength (+23°C)         | 12 / 20           | kJ/m <sup>2</sup> | ISO 180/1A      |
| <b>THERMAL PROPERTIES</b>                    |                   |                   |                 |
|  | <b>DRY / COND</b> |                   |                 |
| Melting temperature (10°C/min)               | 221 / *           | °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)   | 1.1 / *           | E–4/°C            | ISO 11359–1/–2  |
| Burning Behav. at 1.5 mm nom. thickn.        | HB / *            | class             | IEC 60695–11–10 |

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## Property Data

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| PROPERTIES                             | TYPICAL DATA | UNIT  | TEST METHOD     |
|--|--------------|-------|-----------------|
| Thickness tested                       | 1.5 / *      | mm    | IEC 60695-11-10 |
| 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 |
| Glow Wire Flammability Index GWFI      | 725 / -      | °C    | IEC 60695-2-12  |
| GWFI (Thickness (1) tested)            | 0.8 / -      | mm    | IEC 60695-2-12  |
| Glow Wire Flammability Index GWFI      | 725 / -      | °C    | IEC 60695-2-12  |
| GWFI (Thickness (2) tested)            | 1.5 / -      | mm    | IEC 60695-2-12  |
| Glow Wire Ignition Temperature GWIT    | 750 / -      | °C    | IEC 60695-2-13  |
| GWIT (Thickness (1) tested)            | 0.8 / -      | mm    | IEC 60695-2-13  |
| Glow Wire Ignition Temperature GWIT    | 750 / -      | °C    | IEC 60695-2-13  |
| GWIT (Thickness (2) tested)            | 1.5 / -      | mm    | IEC 60695-2-13  |

## ELECTRICAL PROPERTIES

### DRY / COND

|                               |                  |       |               |
|-------------------------------|------------------|-------|---------------|
| Relative permittivity (100Hz) | 3.65 / 9.78      | -     | IEC 62631-2-1 |
| Relative permittivity (1 MHz) | 4.66 / 4.08      | -     | IEC 62631-2-1 |
| Dissipation factor (100 Hz)   | 0.03 / 0.12      | E-4   | IEC 62631-2-1 |
| Dissipation factor (1 MHz)    | 0.03 / 0.09      | E-4   | IEC 62631-2-1 |
| Volume resistivity            | 3.88E12 / 9.6E12 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity           | * / >1E15        | Ohm   | IEC 62631-3-2 |
| Electric strength             | 32.9 / 27.6      | kV/mm | IEC 60243-1   |
| Comparative tracking index    | 500 / -          | V     | IEC 60112     |

## OTHER PROPERTIES

### DRY / COND

|         |          |       |          |
|---------|----------|-------|----------|
| Density | 1360 / - | kg/m³ | ISO 1183 |
|---------|----------|-------|----------|

## PROCESSING RECOMMENDATIONS

### VALUE

|                                  |    |    |  |
|----------------------------------|----|----|--|
| Drying temperature dry air dryer | 80 | °C |  |
|----------------------------------|----|----|--|

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## Property Data

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| <i>PROPERTIES</i>                 | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i>   |
|-----------------------------------|---------------------|-------------|----------------------|
| Drying time dry air dryer         | 2-6                 | h           |                      |
| Residual moisture content         | 0.03-0.12           | %           | acc. to Karl Fischer |
| Melt temperature (Tmin – Tmax)    | 270-290             | °C          |                      |
| Mold temperature                  | 80-100              | °C          |                      |
| admissible residence time at Tmax | <5                  | min         |                      |

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