

# Durethan® ECOBKV50H2.0

## PA6—GF50

50% Glass Reinforced, Injection Molding, Heat Stabilized, Recycled Content

### Sustainability

Mass balanced  
Recycled based

| PROPERTIES                                   | TYPICAL DATA | UNIT   | TEST METHOD     |
|----------------------------------------------|--------------|--------|-----------------|
| <b>MECHANICAL PROPERTIES</b>                 |              |        |                 |
| Tensile modulus                              | 16300 / 9800 | MPa    | ISO 527-1/-2    |
| Stress at break                              | 220 / 140    | MPa    | ISO 527-1/-2    |
| Strain at break                              | 3 / 5        | %      | ISO 527-1/-2    |
| Flexural modulus                             | 15100 / 9700 | MPa    | ISO 178         |
| Flexural strength                            | 360 / 230    | MPa    | ISO 178         |
| Tensile modulus (200°C)                      | 4780         | MPa    | ISO 527-1/-2    |
| Charpy impact strength (+23°C)               | 100 / 100    | kJ/m²  | ISO 179/1eU     |
| Charpy impact strength (-30°C)               | 85 / 80      | kJ/m²  | ISO 179/1eU     |
| Charpy notched impact strength (+23°C)       | 20 / 25      | kJ/m²  | ISO 179/1eA     |
| Charpy notched impact strength (-30°C)       | 15 / 13      | kJ/m²  | ISO 179/1eA     |
| Izod notched impact strength (+23°C)         | 20 / 25      | kJ/m²  | ISO 180/1A      |
| <b>THERMAL PROPERTIES</b>                    |              |        |                 |
| Melting temperature (10°C/min)               | 222 / *      | °C     | ISO 11357-1/-3  |
| Temp. of deflection under load (1.80 MPa)    | 205 / *      | °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)   | 0.7 / *      | E-4/°C | ISO 11359-1/-2  |
| Burning Behav. at 1.5 mm nom. thickn.        | HB / *       | class  | IEC 60695-11-10 |

Durethan® ECOBKV50H2.0

| 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 |
| Oxygen index                           | 24 / *       | %     | ISO 4589-1/-2   |
| Glow Wire Flammability Index GWFI      | 650 / –      | °C    | IEC 60695-2-12  |
| GWFI (Thickness (1) tested)            | 2 / –        | mm    | IEC 60695-2-12  |

| ELECTRICAL PROPERTIES         | DRY / COND   |       |               |
|-------------------------------|--------------|-------|---------------|
| Relative permittivity (100Hz) | 5.3 / 14.2   | –     | IEC 62631-2-1 |
| Relative permittivity (1 MHz) | 4.3 / 5      | –     | IEC 62631-2-1 |
| Dissipation factor (100 Hz)   | 360 / 3190   | E-4   | IEC 62631-2-1 |
| Dissipation factor (1 MHz)    | 240 / 890    | E-4   | IEC 62631-2-1 |
| Volume resistivity            | >1E13 / 1E11 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity           | * / 1E13     | Ohm   | IEC 62631-3-2 |
| Electric strength             | 35 / 26      | kV/mm | IEC 60243-1   |
| Comparative tracking index    | 550 / –      | V     | IEC 60112     |

| OTHER PROPERTIES    | DRY / COND |       |                |
|---------------------|------------|-------|----------------|
| Water absorption    | 5 / *      | %     | Sim. to ISO 62 |
| Humidity absorption | 1.5 / *    | %     | Sim. to ISO 62 |
| Density             | 1570 / –   | kg/m³ | ISO 1183       |

| MATERIAL SPECIFIC PROPERTIES | DRY / COND |       |                     |
|------------------------------|------------|-------|---------------------|
| Viscosity number             | 140 / *    | cm³/g | ISO 307, 1157, 1628 |

| PROCESSING RECOMMENDATIONS       | VALUE |    |  |
|----------------------------------|-------|----|--|
| Drying temperature dry air dryer | 80    | °C |  |

Property Data

Durethan® ECOBKV50H2.0

| PROPERTIES                     | TYPICAL DATA | UNIT | TEST METHOD          |
|--------------------------------|--------------|------|----------------------|
| 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               | 80–120       | °C   |                      |