

# Datasheet

## Durethan BKV50H3.0EF 703163

PA 6, 50% glass fibers, injection molding, improved flowability, heat-aging stabilized

ISO Shortname: ISO 16396-PA 6,GF50,GHR,S10-160

| Property                                 | Test Condition       | Unit  | Standard       | guide value <sup>1</sup> |       |
|--|----------------------|-------|----------------|--------------------------|-------|
|  |                      |       |                | d.a.m.                   | cond. |
| Rheological properties                   |                      |       |                |                          |       |
| C Molding shrinkage, parallel            | 60x60x2; 600 bar     | %     | ISO 294-4      | 0.3                      |       |
| C Molding shrinkage, transverse          | 60x60x2; 600 bar     | %     | ISO 294-4      | 0.7                      |       |
| Post- shrinkage, parallel                | 60x60x2; 120 °C; 4 h | %     | ISO 294-4      | 0.1                      |       |
| Post- shrinkage, transverse              | 60x60x2; 120 °C; 4 h | %     | ISO 294-4      | 0.2                      |       |
| Mechanical properties (23 °C/50 % r. h.) |                      |       |                |                          |       |
| C Tensile modulus                        | 1 mm/min             | MPa   | ISO 527-1,-2   | 16700                    | 11000 |
| C Tensile Stress at break                | 5 mm/min             | MPa   | ISO 527-1,-2   | 220                      | 140   |
| C Tensile Strain at break                | 5 mm/min             | %     | ISO 527-1,-2   | 2.5                      | 4     |
| C Charpy impact strength                 | 23 °C                | kJ/m² | ISO 179-1eU    | 90                       | 90    |
| C Charpy impact strength                 | -30 °C               | kJ/m² | ISO 179-1eU    | 90                       | 80    |
| C Charpy notched impact strength         | 23 °C                | kJ/m² | ISO 179-1eA    | 15                       | 20    |
| C Charpy notched impact strength         | -30 °C               | kJ/m² | ISO 179-1eA    | 15                       | 15    |
| Izod impact strength                     | 23 °C                | kJ/m² | ISO 180-1U     | 80                       | 85    |
| Izod impact strength                     | -30 °C               | kJ/m² | ISO 180-1U     | 80                       | 75    |
| Izod notched impact strength             | 23 °C                | kJ/m² | ISO 180-1A     | 15                       | 20    |
| Izod notched impact strength             | -30 °C               | kJ/m² | ISO 180-1A     | 15                       | 15    |
| Flexural modulus                         | 2 mm/min             | MPa   | ISO 178-A      | 17000                    | 11700 |
| Flexural strength                        | 2 mm/min             | MPa   | ISO 178-A      | 345                      | 225   |
| Flexural strain at flexural strength     | 2 mm/min             | %     | ISO 178-A      | 3                        | 4     |
| C Puncture maximum force                 | 23 °C                | N     | ISO 6603-2     | 950                      |       |
| C Puncture maximum force                 | -30 °C               | N     | ISO 6603-2     | 850                      |       |
| C Puncture energy                        | 23 °C                | J     | ISO 6603-2     | 3.6                      |       |
| C Puncture energy                        | -30 °C               | J     | ISO 6603-2     | 2.8                      |       |
| Thermal properties                       |                      |       |                |                          |       |
| C Melting temperature                    | 10 °C/min            | °C    | ISO 11357-1,-3 | 222                      |       |
| C Temperature of deflection under load   | 1.80 MPa             | °C    | ISO 75-1,-2    | 212                      |       |
| C Temperature of deflection under load   | 0.45 MPa             | °C    | ISO 75-1,-2    | 220                      |       |
| Other properties (23 °C)                 |                      |       |                |                          |       |
| C Density                                |                      | kg/m³ | ISO 1183       | 1600                     |       |
| Bulk density                             |                      | kg/m³ | ISO 60         | 700                      |       |
| Processing conditions for test specimens |                      |       |                |                          |       |
| C Injection molding-Melt temperature     |                      | °C    | ISO 294        | 280                      |       |
| C Injection molding-Mold temperature     |                      | °C    | ISO 294        | 80                       |       |

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| Property                         | Test Condition | Unit | Standard             | guide value <sup>1</sup> |
|----------------------------------|----------------|------|----------------------|--------------------------|
|                                  |                |      |                      | d.a.m. cond.             |
| Processing recommendations       |                |      |                      |                          |
| Drying temperature dry air dryer |                | °C   | -                    | 80                       |
| Drying time dry air dryer        |                | h    | -                    | 2-6                      |
| Residual moisture content        |                | %    | Acc. to Karl Fischer | 0.03-0.12                |
| Melt temperature (Tmin - Tmax)   |                | °C   | -                    | 270-290                  |
| Mold temperature                 |                | °C   | -                    | 80-120                   |

### Notes

**1** Typical properties: these are not to be construed as specifications

**C** These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

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