

# Durethan<sup>®</sup> BKV30FN04

PA6-GF30 FR(40)

30% Glass Fiber Reinforced, Injection Molding, Flame Retardant (halogen free), Heat Stabilized

Print Date: 2025-08-21

| PROPERTIES                                   | TYPICAL DATA | UNIT   | TEST METHOD     |
|--|--------------|--------|-----------------|
| RHEOLOGICAL PROPERTIES                       | DRY / COND   |        |                 |
| Molding shrinkage (parallel)                 | 0.2 / *      | %      | ISO 294-4       |
| Molding shrinkage (normal)                   | 0.7 / *      | %      | ISO 294-4       |
|  |              |        |                 |
| MECHANICAL PROPERTIES                        | DRY / COND   |        |                 |
| Tensile modulus                              | 10300 / 6700 | MPa    | ISO 527-1/-2    |
| Stress at break                              | 130 / 90     | MPa    | ISO 527-1/-2    |
| Strain at break                              | 3/6          | %      | ISO 527-1/-2    |
| Flexural modulus                             | 10200 / 6600 | MPa    | ISO 178         |
| Flexural strength                            | 230 / 158    | MPa    | ISO 178         |
| Tensile modulus (200°C)                      | 2730         | MPa    | ISO 527-1/-2    |
| Charpy impact strength (+23°C)               | 60 / 68      | kJ/m²  | ISO 179/1eU     |
| Charpy impact strength (-30°C)               | 55 / 50      | kJ/m²  | ISO 179/1eU     |
| Charpy notched impact strength (+23°C)       | 10 / 13      | kJ/m²  | ISO 179/1eA     |
| Charpy notched impact strength (-30°C)       | 9/-          | kJ/m²  | ISO 179/1eA     |
| Izod notched impact strength (+23°C)         | 10 / 13      | kJ/m²  | ISO 180/1A      |
|  |              |        |                 |
| THERMAL PROPERTIES                           | DRY / COND   |        |                 |
| Melting temperature (10°C/min)               | 220 / *      | °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)    | 219 / *      | °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.        | V-0 / *      | class  | IEC 60695-11-10 |

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|--|----------------|----------|-----------------|
| Thickness tested                       | 1.5 / *        | mm       | IEC 60695-11-10 |
| 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 0.4 mm nom. thickn.  | V-0 / *        | class    | IEC 60695-11-10 |
| Thickness tested                       | 0.4 / *        | 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                           | 32 / *         | %        | ISO 4589-1/-2   |
| Glow Wire Flammability Index GWFI      | 960 / -        | °C       | IEC 60695-2-12  |
| GWFI (Thickness (1) tested)            | 0.4 / -        | mm       | IEC 60695-2-12  |
| Glow Wire Flammability Index GWFI      | 960 / -        | °C       | IEC 60695-2-12  |
| GWFI (Thickness (2) tested)            | 0.75 / -       | mm       | IEC 60695-2-12  |
| Glow Wire Ignition Temperature GWIT    | 775 / –        | °C       | IEC 60695-2-13  |
| GWIT (Thickness (1) tested)            | 0.4 / -        | mm       | IEC 60695-2-13  |
| Glow Wire Ignition Temperature GWIT    | 775 / –        | °C       | IEC 60695-2-13  |
| GWIT (Thickness (2) tested)            | 0.75 / –       | mm       | IEC 60695-2-13  |
| ELECTRICAL PROPERTIES                  | DRY / COND     |          |                 |
| Relative permittivity (100Hz)          | 4/8            | _        | IEC 62631-2-1   |
| Relative permittivity (1 MHz)          | 3.6 / 3.9      |          | IEC 62631–2–1   |
| Dissipation factor (100 Hz)            | 145 / 1130     | E-4      | IEC 62631–2–1   |
| Dissipation factor (1 MHz)             | 155 / 655      | F-4      | IEC 62631–2–1   |
| Volume resistivity                     | >1E13 / 2.1E11 | Ohm*m    | IEC 62631–3–1   |
| Electric strength                      | 40 / 37        | kV/mm    | IEC 60243-1     |
| Comparative tracking index             | 600 / -        | V        | IEC 60112       |
| comparative a doming mack              |                | <u> </u> |                 |
| OTHER PROPERTIES                       | DRY / COND     |          |                 |
| Water absorption                       | 4.6 / *        | %        | Sim. to ISO 62  |
| Humidity absorption                    | 1.5 / *        | %        | Sim. to ISO 62  |

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| Density                          | 1420 / –     | 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<br>Fischer |
| Melt temperature (Tmin - Tmax)   | 250-280      | °C    |                         |
| Mold temperature                 | 70–90        | °C    |                         |

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