

**Durethan® BKV30W1 000000**  
**PA6-GF30**

Envalior

Injection Molding, 30% Glass Reinforced

ISO 1043 PA6-GF30

| Mechanical Properties                   | dry / cond  | Unit              | Test Standard |
|-----------------------------------------|-------------|-------------------|---------------|
| <b>ISO Data</b>                         |             |                   |               |
| Tensile Modulus                         | 9800 / 6100 | MPa               | ISO 527       |
| Stress at Break                         | 180 / 110   | MPa               | ISO 527       |
| Strain at Break                         | 3 / 7       | %                 | ISO 527       |
| Tensile Creep Modulus, 1h               | * / 5100    | MPa               | ISO 899-1     |
| Tensile Creep Modulus, 1000h            | * / 4100    | MPa               | ISO 899-1     |
| Impact Strength (Charpy), +23°C         | 80 / 90     | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C         | 70 / 70     | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 13 / 20     | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Notched Impact Strength (Charpy), -30°C | 10 / 10     | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Puncture energy, +23°C                  | 8 / 14      | J                 | ISO 6603-2    |
| Puncture energy, -30°C                  | 6 / -       | J                 | ISO 6603-2    |

| Thermal Properties                          | dry / cond | Unit  | Test Standard  |
|---------------------------------------------|------------|-------|----------------|
| <b>ISO Data</b>                             |            |       |                |
| Melting Temperature (10°C/min)              | 222 / *    | °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 | 20 / *     | E-6/K | ISO 11359-1/-2 |
| Coeff. of Linear Therm. Expansion, normal   | 80 / *     | E-6/K | ISO 11359-1/-2 |
| Burning Behav. at 1.5 mm Nom. Thickn.       | HB / *     | class | UL 94          |
| Thickness tested                            | 1.5 / *    | mm    | -              |
| Oxygen index                                | 22 / *     | %     | ISO 4589-1/-2  |

| Electrical Properties        | dry / cond  | Unit  | Test Standard |
|------------------------------|-------------|-------|---------------|
| <b>ISO Data</b>              |             |       |               |
| Relative permittivity, 100Hz | 4 / 10      | -     | IEC 62631-2-1 |
| Relative permittivity, 1MHz  | 4 / 4       | -     | IEC 62631-2-1 |
| Dissipation Factor, 100Hz    | 50 / 2000   | E-4   | IEC 62631-2-1 |
| Dissipation Factor, 1MHz     | 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 / -     | -     | IEC 60112     |

| Other Properties    | dry / cond | Unit              | Test Standard  |
|---------------------|------------|-------------------|----------------|
| <b>ISO Data</b>     |            |                   |                |
| Water Absorption    | 7 / *      | %                 | Sim. to ISO 62 |
| Humidity absorption | 2.1 / *    | %                 | Sim. to ISO 62 |
| Density             | 1360 / -   | kg/m <sup>3</sup> | ISO 1183       |

| Material Specific Properties | dry / cond | Unit               | Test Standard       |
|------------------------------|------------|--------------------|---------------------|
| <b>ISO Data</b>              |            |                    |                     |
| Viscosity number             | 140 / *    | cm <sup>3</sup> /g | ISO 307, 1157, 1628 |

| Test specimen production            | Value | Unit | Test Standard |
|-------------------------------------|-------|------|---------------|
| <b>ISO Data</b>                     |       |      |               |
| Injection Molding, melt temperature | 280   | °C   | ISO 294       |
| Injection Molding, mold temperature | 80    | °C   | ISO 294       |

| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 80        | °C   | -             |
| Pre-drying - Time                           | 2 - 6     | h    | -             |
| Processing humidity                         | ≤0.12     | %    | -             |
| Melt temperature                            | 270 - 290 | °C   | -             |
| Mold temperature                            | 80 - 120  | °C   | -             |

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#### Characteristics

##### Processing

Injection Molding

##### Additives

Release agent

##### Delivery form

Pellets

##### Special Characteristics

UV stablized

#### Injection Molding

##### PREPROCESSING

Residual moisture content: 0.03 - 0.12%

Drying temperature dry air dryer: 80 °C

Drying time dry air dryer 2 - 6 h

##### PROCESSING

Melt temperature (Tmin - Tmax): 270 - 290 °C

Mold temperature: 80 - 120 °C