

# Durethan® BKV30H3.0EF 901510

## PA6-GF30

Envalior

Injection Molding, 30% Glass Reinforced, Heat Stabilized, Improved flow

ISO 1043 PA6-GF30

| Rheological properties      | dry / cond | Unit | Test Standard   |
|-----------------------------|------------|------|-----------------|
| <b>ISO Data</b>             |            |      |                 |
| Molding shrinkage, parallel | 0.2 / *    | %    | ISO 294-4, 2577 |
| Molding shrinkage, normal   | 0.7 / *    | %    | ISO 294-4, 2577 |

| Mechanical Properties                   | dry / cond  | Unit              | Test Standard |
|-----------------------------------------|-------------|-------------------|---------------|
| <b>ISO Data</b>                         |             |                   |               |
| Tensile Modulus                         | 9400 / 5500 | MPa               | ISO 527       |
| Stress at Break                         | 170 / 100   | MPa               | ISO 527       |
| Strain at Break                         | 3 / 5.8     | %                 | ISO 527       |
| Impact Strength (Charpy), +23°C         | 65 / 80     | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Impact Strength (Charpy), -30°C         | 55 / 55     | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 11 / 15     | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Notched Impact Strength (Charpy), -30°C | - / 10      | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Puncture - maximum force, +23°C         | 750 / 1050  | N                 | ISO 6603-2    |
| Puncture - maximum force, -30°C         | 650 / 750   | N                 | ISO 6603-2    |
| Puncture energy, +23°C                  | 1.7 / 4.6   | J                 | ISO 6603-2    |
| Puncture energy, -30°C                  | 1.3 / 1.4   | J                 | ISO 6603-2    |

| Thermal Properties                          | dry / cond | Unit  | Test Standard  |
|---------------------------------------------|------------|-------|----------------|
| <b>ISO Data</b>                             |            |       |                |
| Melting Temperature (10°C/min)              | 221 / *    | °C    | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa)   | 210 / *    | °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   | 100 / *    | E-6/K | ISO 11359-1/-2 |

| Electrical Properties        | dry / cond     | Unit  | Test Standard |
|------------------------------|----------------|-------|---------------|
| <b>ISO Data</b>              |                |       |               |
| Relative permittivity, 100Hz | 3.63 / 4.04    | -     | IEC 62631-2-1 |
| Relative permittivity, 1MHz  | 4.43 / 9.23    | -     | IEC 62631-2-1 |
| Dissipation Factor, 100Hz    | 0.02 / 0.08    | E-4   | IEC 62631-2-1 |
| Dissipation Factor, 1MHz     | 0.03 / 0.13    | E-4   | IEC 62631-2-1 |
| Volume Resistivity           | >1E13 / 7.7E10 | Ohm*m | IEC 62631-3-1 |
| Surface Resistivity          | * / 4.1E14     | Ohm   | IEC 62631-3-2 |
| Electric Strength            | 31.6 / 29.1    | 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       |

| Test specimen production            | Value | Unit | Test Standard |
|-------------------------------------|-------|------|---------------|
| <b>ISO Data</b>                     |       |      |               |
| Injection Molding, melt temperature | 270   | °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                            | 260 - 280 | °C   | -             |
| Mold temperature                            | 80 - 120  | °C   | -             |

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#### Characteristics

##### Processing

Injection Molding

##### Special Characteristics

Heat aging stabilized

##### Delivery form

Pellets

#### 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): 260 - 280 °C

Mold temperature: 80 - 120 °C