# Durethan ECOBKV40H2.0 901510

**PA 6, 40% glass fibers, injection molding, heat-aging stabilized, 100% recycling-GF according to ecoloop-certificate EC-2021-EL-079**

**ISO Shortname:** ISO 16396-PA 6,GF40,GHR,S14-120

| Property | Test Condition | Unit | Standard | guide value d.a.m. | guide value cond. |
|---|---|---|---|---|---|
| **Rheological properties** | | | | | |
| Molding shrinkage, parallel | 150x105x3; 280 °C / MT 80 °C; 400 bar | % | acc. ISO 2577 | 0.16 | |
| Molding shrinkage, transverse | 150x105x3; 280 °C / MT 80 °C; 400 bar | % | acc. ISO 2577 | 0.85 | |
| Post- shrinkage, parallel | 150x105x3; 120 °C; 4 h | % | acc. ISO 2577 | 0.03 | |
| Post- shrinkage, transverse | 150x105x3; 120 °C; 4 h | % | acc. ISO 2577 | 0.07 | |
| **Mechanical properties (23 °C/50 % r. h.)** | | | | | |
| C Tensile modulus | 1 mm/min | MPa | ISO 527-1,-2 | 11900 | 7800 |
| C Tensile Stress at break | 5 mm/min | MPa | ISO 527-1,-2 | 195 | 130 |
| C Tensile Strain at break | 5 mm/min | % | ISO 527-1,-2 | 3.0 | 6.0 |
| C Charpy impact strength | 23 °C | kJ/m² | ISO 179-1eU | 95 | 90 |
| C Charpy impact strength | -30 °C | kJ/m² | ISO 179-1eU | 85 | 70 |
| C Charpy notched impact strength | 23 °C | kJ/m² | ISO 179-1eA | 15 | 20 |
| Izod notched impact strength | 23 °C | kJ/m² | ISO 180-1A | 18 | 24 |
| Izod notched impact strength | -30 °C | kJ/m² | ISO 180-1A | 13 | 11 |
| Flexural modulus | 2 mm/min | MPa | ISO 178-A | 11200 | 7300 |
| Flexural strength | 2 mm/min | MPa | ISO 178-A | 310 | 200 |
| Flexural strain at flexural strength | 2 mm/min | % | ISO 178-A | 4.0 | 5.0 |
| Flexural stress at 3.5 % strain | 2 mm/min | MPa | ISO 178-A | 305 | 170 |
| **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 | 200 | |
| C Temperature of deflection under load | 0.45 MPa | °C | ISO 75-1,-2 | 215 | |
| Vicat softening temperature | 50 N; 120 °C/h | °C | ISO 306 | > 200 | |
| C Burning behavior UL 94 | 1.5 mm | Class | UL 94 | HB | |
| Glow wire test (GWFI) | 2.0 mm | °C | IEC 60695-2-12 | 650 | |
| **Electrical properties (23 °C/50 % r. h.)** | | | | | |
| C Relative permittivity | 100 Hz | - | IEC 60250 | 4.0 | 10 |
| C Relative permittivity | 1 MHz | - | IEC 60250 | 4.0 | 5.0 |
| C Dissipation factor | 100 Hz | $10^{-4}$ | IEC 60250 | 50 | 2500 |
| C Dissipation factor | 1 MHz | $10^{-4}$ | IEC 60250 | 150 | 1200 |
| C Volume resistivity | | Ohm·m | IEC 60093 | 1E13 | 1E09 |
| C Surface resistivity | | Ohm | IEC 60093 | 1E14 | 1E10 |
| C Electric strength | 1 mm | kV/mm | IEC 60243-1 | 40 | 35 |
| C Comparative tracking index CTI | Solution A | Rating | IEC 60112 | 400 | |
| **Other properties (23 °C)** | | | | | |
| C Water absorption (Saturation value) | Water at 23 °C | % | ISO 62 | 6.0 | |
| C Water absorption (Equilibrium value) | 23 °C; 50 % RH | % | ISO 62 | 1.8 | |
| C Density | | kg/m³ | ISO 1183 | 1460 | |

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|---|---|---|---|---|---|---|
| **Processing conditions for test specimens** | | | | | | |
| C | Injection molding-Melt temperature | | °C | ISO 294 | 280 | |
| C | Injection molding-Mold temperature | | °C | ISO 294 | 80 | |
| **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 | |

**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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**LANXESS** Corporation | Pittsburgh, PA 15275

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