

Durethan® AKV30HRH2.0

PA66–GF30

30% Glass Reinforced, Injection Molding, Heat Stabilized, Hydrolysis resistant

| PROPERTIES | TYPICAL DATA | UNIT | TEST METHOD |
|--|-------------------|-------------------|-----------------|
| RHEOLOGICAL PROPERTIES | | | |
| | DRY / COND | | |
| Molding shrinkage (parallel) | 0.44 / * | % | ISO 294–4 |
| Molding shrinkage (normal) | 0.94 / * | % | ISO 294–4 |
| MECHANICAL PROPERTIES | | | |
| | DRY / COND | | |
| Tensile modulus | 9700 / 6100 | MPa | ISO 527–1/–2 |
| Stress at break | 180 / 120 | MPa | ISO 527–1/–2 |
| Strain at break | 3.5 / 8 | % | ISO 527–1/–2 |
| Flexural modulus | 9300 / 5700 | MPa | ISO 178 |
| Flexural strength | 280 / 180 | MPa | ISO 178 |
| Tensile modulus (200°C) | 3620 | MPa | ISO 527–1/–2 |
| Charpy impact strength (+23°C) | 75 / 85 | kJ/m ² | ISO 179/1eU |
| Charpy impact strength (–30°C) | 65 / 75 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 10 / 20 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength (–30°C) | <10 / <10 | kJ/m ² | ISO 179/1eA |
| Izod notched impact strength (–40°C) | <10 / <10 | kJ/m ² | ISO 180/1A |
| THERMAL PROPERTIES | | | |
| | DRY / COND | | |
| Melting temperature (10°C/min) | 262 / * | °C | ISO 11357–1/–3 |
| Temp. of deflection under load (1.80 MPa) | 245 / * | °C | ISO 75–1/–2 |
| Temp. of deflection under load (0.45 MPa) | 250 / * | °C | ISO 75–1/–2 |
| Coeff. of linear therm. expansion (parallel) | 0.3 / * | E–4/°C | ISO 11359–1/–2 |
| Coeff. of linear therm. expansion (normal) | 0.9 / * | E–4/°C | ISO 11359–1/–2 |
| Burning Behav. at 3.0 mm nom. thickn. | HB / * | class | IEC 60695–11–10 |

Property Data

Durethan® AKV30HRH2.0

| <i>PROPERTIES</i> | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|--|---------------------|-------------|--------------------|
| Thickness tested | 3 / * | mm | IEC 60695-11-10 |
| Burning Behav. at 0.75 mm nom. thickn. | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 0.75 / * | mm | IEC 60695-11-10 |
| Oxygen index | 26 / * | % | ISO 4589-1/-2 |
| Glow Wire Flammability Index GWFI | 650 / - | °C | IEC 60695-2-12 |
| GWFI (Thickness (1) tested) | 2 / - | mm | IEC 60695-2-12 |

ELECTRICAL PROPERTIES

DRY / COND

| | | | |
|-------------------------------|------------|-------|---------------|
| Relative permittivity (100Hz) | 4 / 12 | - | IEC 62631-2-1 |
| Relative permittivity (1 MHz) | 3.6 / 4.5 | - | IEC 62631-2-1 |
| Dissipation factor (100 Hz) | 80 / 3000 | E-4 | IEC 62631-2-1 |
| Dissipation factor (1 MHz) | 160 / 900 | E-4 | IEC 62631-2-1 |
| Volume resistivity | 1E13 / 1E9 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity | * / 1E13 | Ohm | IEC 62631-3-2 |
| Electric strength | 35 / 30 | kV/mm | IEC 60243-1 |
| Comparative tracking index | 450 / - | V | IEC 60112 |

OTHER PROPERTIES

DRY / COND

| | | | |
|---------------------|----------|-------------------|----------------|
| Water absorption | 5.5 / * | % | Sim. to ISO 62 |
| Humidity absorption | 2 / * | % | Sim. to ISO 62 |
| Density | 1360 / - | kg/m ³ | ISO 1183 |

MATERIAL SPECIFIC PROPERTIES

DRY / COND

| | | | |
|------------------|---------|--------------------|---------------------|
| Viscosity number | 153 / * | cm ³ /g | ISO 307, 1157, 1628 |
|------------------|---------|--------------------|---------------------|

PROCESSING RECOMMENDATIONS

VALUE

| | | | |
|----------------------------------|-----------|----|----------------------|
| Drying temperature dry air dryer | 80 | °C | |
| Drying time dry air dryer | 2-6 | h | |
| Residual moisture content | 0.03-0.12 | % | acc. to Karl Fischer |

Property Data

Durethan[®] AKV30HRH2.0

| <i>PROPERTIES</i> | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|--------------------------------|---------------------|-------------|--------------------|
| Melt temperature (Tmin – Tmax) | 280–300 | °C | |
| Mold temperature | 80–120 | °C | |