

# Durethan® AKV30FN04

## (PA66+PA6)–GF30 FR(40)

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

Print Date: 2025–06–04

| PROPERTIES                                   | TYPICAL DATA      | UNIT   | TEST METHOD     |
|--|-------------------|--------|-----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                |                   |        |                 |
|  | <b>DRY / COND</b> |        |                 |
| Molding shrinkage (parallel)                 | 0.3 / *           | %      | ISO 294–4       |
| Molding shrinkage (normal)                   | 0.8 / *           | %      | ISO 294–4       |
| <b>MECHANICAL PROPERTIES</b>                 |                   |        |                 |
|  | <b>DRY / COND</b> |        |                 |
| Tensile modulus                              | 10500 / 6500      | MPa    | ISO 527–1/–2    |
| Stress at break                              | 138 / 87          | MPa    | ISO 527–1/–2    |
| Strain at break                              | 2.9 / 5.7         | %      | ISO 527–1/–2    |
| Flexural modulus                             | 10100 / 6300      | MPa    | ISO 178         |
| Flexural strength                            | 230 / 150         | MPa    | ISO 178         |
| Tensile modulus (200°C)                      | 3320              | MPa    | ISO 527–1/–2    |
| Charpy impact strength (+23°C)               | 65 / 70           | kJ/m²  | ISO 179/1eU     |
| Charpy impact strength (–30°C)               | 60 / 60           | kJ/m²  | ISO 179/1eU     |
| Charpy notched impact strength (+23°C)       | <10 / 11          | kJ/m²  | ISO 179/1eA     |
| Charpy notched impact strength (–30°C)       | <10 / <10         | kJ/m²  | ISO 179/1eA     |
| Izod notched impact strength (+23°C)         | <10 / 12          | kJ/m²  | ISO 180/1A      |
| <b>THERMAL PROPERTIES</b>                    |                   |        |                 |
|  | <b>DRY / COND</b> |        |                 |
| Melting temperature (10°C/min)               | 260 / *           | °C     | ISO 11357–1/–3  |
| Temp. of deflection under load (1.80 MPa)    | 230 / *           | °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) | 0.2 / *           | E–4/°C | ISO 11359–1/–2  |
| Coeff. of linear therm. expansion (normal)   | 0.7 / *           | 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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| PROPERTIES                             | TYPICAL DATA | UNIT  | TEST METHOD     |
|--|--------------|-------|-----------------|
| 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                           | 34 / *       | %     | 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    | 750 / -      | °C    | IEC 60695-2-13  |
| GWIT (Thickness (1) tested)            | 0.4 / -      | mm    | IEC 60695-2-13  |
| Glow Wire Ignition Temperature GWIT    | 750 / -      | °C    | IEC 60695-2-13  |
| GWIT (Thickness (2) tested)            | 0.75 / -     | mm    | IEC 60695-2-13  |

## ELECTRICAL PROPERTIES

DRY / COND

|                               |                |       |               |
|-------------------------------|----------------|-------|---------------|
| Relative permittivity (100Hz) | 4 / 7.3        | -     | IEC 62631-2-1 |
| Relative permittivity (1 MHz) | 3.4 / 3.9      | -     | IEC 62631-2-1 |
| Dissipation factor (100 Hz)   | 200 / 1090     | E-4   | IEC 62631-2-1 |
| Dissipation factor (1 MHz)    | 175 / 555      | E-4   | IEC 62631-2-1 |
| Volume resistivity            | >1E13 / 2.7E11 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity           | * / 2.7E14     | Ohm   | IEC 62631-3-2 |
| Electric strength             | 40 / 36        | kV/mm | IEC 60243-1   |
| Comparative tracking index    | 600 / -        | V     | IEC 60112     |

## OTHER PROPERTIES

DRY / COND

|                  |         |   |                |
|------------------|---------|---|----------------|
| Water absorption | 4.4 / * | % | Sim. to ISO 62 |
|------------------|---------|---|----------------|

## Property Data

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| <i>PROPERTIES</i>   | <i>TYPICAL DATA</i> | <i>UNIT</i>       | <i>TEST METHOD</i> |
|---------------------|---------------------|-------------------|--------------------|
| Humidity absorption | 1.4 / *             | %                 | Sim. to ISO 62     |
| Density             | 1420 / –            | kg/m <sup>3</sup> | ISO 1183           |

| <i>PROCESSING RECOMMENDATIONS</i> | <i>VALUE</i> |    |                      |
|-----------------------------------|--------------|----|----------------------|
| 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 Fischer |
| Melt temperature (Tmin – Tmax)    | 265–285      | °C |                      |
| Mold temperature                  | 80–100       | °C |                      |

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