

# Durethan® AKV35H3.0

## PA66—GF35

35% Glass Reinforced, Injection Molding, Heat Stabilized

| PROPERTIES                                   | TYPICAL DATA      | UNIT   | TEST METHOD     |
|----------------------------------------------|-------------------|--------|-----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                |                   |        |                 |
|                                              | <b>DRY / COND</b> |        |                 |
| Molding shrinkage (parallel)                 | 0.37 / *          | %      | ISO 294-4       |
| Molding shrinkage (normal)                   | 1.06 / *          | %      | ISO 294-4       |
| <b>MECHANICAL PROPERTIES</b>                 |                   |        |                 |
|                                              | <b>DRY / COND</b> |        |                 |
| Tensile modulus                              | 11200 / 7500      | MPa    | ISO 527-1/-2    |
| Stress at break                              | 200 / 135         | MPa    | ISO 527-1/-2    |
| Strain at break                              | 3 / 5             | %      | ISO 527-1/-2    |
| Flexural modulus                             | 10500 / 7000      | MPa    | ISO 178         |
| Flexural strength                            | 300 / 220         | MPa    | ISO 178         |
| Tensile modulus (200°C)                      | 3980              | MPa    | ISO 527-1/-2    |
| Charpy impact strength (+23°C)               | 85 / 90           | kJ/m²  | ISO 179/1eU     |
| Charpy impact strength (-30°C)               | 70 / 75           | kJ/m²  | ISO 179/1eU     |
| Charpy notched impact strength (+23°C)       | 12 / 20           | kJ/m²  | ISO 179/1eA     |
| Charpy notched impact strength (-30°C)       | 10 / 10           | kJ/m²  | ISO 179/1eA     |
| Izod notched impact strength (+23°C)         | 12 / 15           | kJ/m²  | ISO 180/1A      |
| <b>THERMAL PROPERTIES</b>                    |                   |        |                 |
|                                              | <b>DRY / COND</b> |        |                 |
| Melting temperature (10°C/min)               | 263 / *           | °C     | ISO 11357-1/-3  |
| Temp. of deflection under load (1.80 MPa)    | 250 / *           | °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)   | 1 / *             | E-4/°C | ISO 11359-1/-2  |
| Burning Behav. at 1.5 mm nom. thickn.        | HB / *            | class  | IEC 60695-11-10 |



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|----------------------------------------|--------------|-------|-----------------|
| Thickness tested                       | 1.5 / *      | mm    | IEC 60695-11-10 |
| Burning Behav. at 3.0 mm nom. thickn.  | HB / *       | class | IEC 60695-11-10 |
| 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                           | 23 / *       | %     | ISO 4589-1/-2   |
| Glow Wire Flammability Index GWFI      | 600 / -      | °C    | IEC 60695-2-12  |
| GWFI (Thickness (1) tested)            | 2 / -        | mm    | IEC 60695-2-12  |

| ELECTRICAL PROPERTIES         | DRY / COND |       |               |
|-------------------------------|------------|-------|---------------|
| Relative permittivity (100Hz) | 5 / -      | -     | IEC 62631-2-1 |
| Relative permittivity (1 MHz) | 4 / -      | -     | IEC 62631-2-1 |
| Dissipation factor (100 Hz)   | 300 / -    | E-4   | IEC 62631-2-1 |
| Dissipation factor (1 MHz)    | 270 / -    | E-4   | IEC 62631-2-1 |
| Volume resistivity            | 1E13 / -   | Ohm*m | IEC 62631-3-1 |
| Electric strength             | 39 / -     | kV/mm | IEC 60243-1   |
| Comparative tracking index    | 600 / -    | V     | IEC 60112     |

| OTHER PROPERTIES    | DRY / COND |       |                |
|---------------------|------------|-------|----------------|
| Water absorption    | 5 / *      | %     | Sim. to ISO 62 |
| Humidity absorption | 1.8 / *    | %     | Sim. to ISO 62 |
| Density             | 1410 / -   | kg/m³ | ISO 1183       |

| 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 |
| Melt temperature (Tmin – Tmax)   | 280-300   | °C |                      |



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|------------------|--------------|------|-------------|
| Mold temperature | 80–120       | °C   |             |

