

# Akulon<sup>®</sup> Ultraflow K–FPG8

## PA6–I–GF40

Glass Reinforced, High Flow

| PROPERTIES                                   | TYPICAL DATA      | UNIT              | TEST METHOD    |
|----------------------------------------------|-------------------|-------------------|----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                |                   |                   |                |
|                                              | <b>DRY / COND</b> |                   |                |
| Molding shrinkage (parallel)                 | 0.36 / *          | %                 | ISO 294–4      |
| Molding shrinkage (normal)                   | 0.89 / *          | %                 | ISO 294–4      |
| <b>MECHANICAL PROPERTIES</b>                 |                   |                   |                |
|                                              | <b>DRY / COND</b> |                   |                |
| Tensile modulus                              | 11500 / 7300      | MPa               | ISO 527–1/–2   |
| Stress at break                              | 175 / 110         | MPa               | ISO 527–1/–2   |
| Strain at break                              | 3.5 / 7           | %                 | ISO 527–1/–2   |
| Charpy impact strength (+23°C)               | 90 / 100          | kJ/m <sup>2</sup> | ISO 179/1eU    |
| Charpy impact strength (–30°C)               | 90 / 95           | kJ/m <sup>2</sup> | ISO 179/1eU    |
| Charpy notched impact strength (+23°C)       | 20 / 30           | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy notched impact strength (–30°C)       | 13 / 13           | kJ/m <sup>2</sup> | ISO 179/1eA    |
| <b>THERMAL PROPERTIES</b>                    |                   |                   |                |
|                                              | <b>DRY / COND</b> |                   |                |
| Melting temperature (10°C/min)               | 220 / *           | °C                | ISO 11357–1/–3 |
| Temp. of deflection under load (1.80 MPa)    | 200 / *           | °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) | 0.2 / *           | E–4/°C            | ISO 11359–1/–2 |
| Coeff. of linear therm. expansion (normal)   | 0.65 / *          | E–4/°C            | ISO 11359–1/–2 |
| <b>ELECTRICAL PROPERTIES</b>                 |                   |                   |                |
|                                              | <b>DRY / COND</b> |                   |                |
| Relative permittivity (100Hz)                | 3.5 / 14          | –                 | IEC 62631–2–1  |
| Relative permittivity (1 MHz)                | 3.3 / 4.5         | –                 | IEC 62631–2–1  |
| Dissipation factor (100 Hz)                  | 90 / 3000         | E–4               | IEC 62631–2–1  |

Property Data

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| PROPERTIES                 | TYPICAL DATA | UNIT  | TEST METHOD    |
|----------------------------|--------------|-------|----------------|
| Dissipation factor (1 MHz) | 150 / 1200   | E-4   | IEC 62631-2-1  |
| Volume resistivity         | >1E13 / 1E11 | Ohm*m | IEC 62631-3-1  |
| Surface resistivity        | - / 1E14     | Ohm   | IEC 62631-3-2  |
| Electric strength          | 25 / 20      | kV/mm | IEC 60243-1    |
| Comparative tracking index | - / 600      | V     | IEC 60112      |
| OTHER PROPERTIES           | DRY / COND   |       |                |
| Water absorption           | 5.7 / *      | %     | Sim. to ISO 62 |
| Humidity absorption        | 1.7 / *      | %     | Sim. to ISO 62 |
| Density                    | 1410 / -     | kg/m³ | ISO 1183       |