

# Akulon<sup>®</sup> K222–KGV4/A

## PA6–GF20 FR(30)

20% Glass Reinforced, Heat Stabilized, Flame Retardant (halogen–phosphorous–free)

| PROPERTIES                                | TYPICAL DATA      | UNIT              | TEST METHOD     |
|-------------------------------------------|-------------------|-------------------|-----------------|
| <b>RHEOLOGICAL PROPERTIES</b>             |                   |                   |                 |
|                                           | <b>DRY / COND</b> |                   |                 |
| Molding shrinkage (parallel)              | 0.6 / *           | %                 | ISO 294–4       |
| Molding shrinkage (normal)                | 1 / *             | %                 | ISO 294–4       |
| <b>MECHANICAL PROPERTIES</b>              |                   |                   |                 |
|                                           | <b>DRY / COND</b> |                   |                 |
| Tensile modulus                           | 6000 / 2500       | MPa               | ISO 527–1/–2    |
| Stress at break                           | 85 / 45           | MPa               | ISO 527–1/–2    |
| Strain at break                           | 3.6 / 15          | %                 | ISO 527–1/–2    |
| Flexural modulus                          | 5700 / 2500       | MPa               | ISO 178         |
| Flexural strength                         | 140 / 65          | MPa               | ISO 178         |
| Charpy impact strength (+23°C)            | 45 / 110          | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Charpy impact strength (–30°C)            | 35 / 35           | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Charpy notched impact strength (+23°C)    | 3.3 / 7           | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Charpy notched impact strength (–30°C)    | 3 / 3             | 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) | 140 / *           | °C                | ISO 75–1/–2     |
| Temp. of deflection under load (0.45 MPa) | 210 / *           | °C                | ISO 75–1/–2     |
| Burning Behav. at 1.5 mm nom. thickn.     | V–2 / *           | class             | IEC 60695–11–10 |
| Thickness tested                          | 1.5 / *           | mm                | IEC 60695–11–10 |
| Burning Behav. at 3.0 mm nom. thickn.     | V–2 / *           | class             | IEC 60695–11–10 |
| Thickness tested                          | 3 / *             | mm                | IEC 60695–11–10 |
| Burning Behav. at 0.75 mm nom. thickn.    | V–2 / *           | class             | IEC 60695–11–10 |

Property Data

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| PROPERTIES                        | TYPICAL DATA | UNIT | TEST METHOD     |
|-----------------------------------|--------------|------|-----------------|
| Thickness tested                  | 0.75 / *     | mm   | IEC 60695–11–10 |
| Glow Wire Flammability Index GWFI | 960 / –      | °C   | IEC 60695–2–12  |
| GWFI (Thickness (1) tested)       | 1.6 / –      | mm   | IEC 60695–2–12  |
| Glow Wire Flammability Index GWFI | 960 / –      | °C   | IEC 60695–2–12  |
| GWFI (Thickness (2) tested)       | 1 / –        | mm   | IEC 60695–2–12  |

| ELECTRICAL PROPERTIES         | DRY / COND  |       |               |
|-------------------------------|-------------|-------|---------------|
| Relative permittivity (100Hz) | 4.3 / 10    | –     | IEC 62631–2–1 |
| Relative permittivity (1 MHz) | 3.8 / 3.9   | –     | IEC 62631–2–1 |
| Dissipation factor (100 Hz)   | 130 / 3000  | E–4   | IEC 62631–2–1 |
| Dissipation factor (1 MHz)    | 210 / 1000  | 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             | 30 / 25     | kV/mm | IEC 60243–1   |
| Comparative tracking index    | 575 / *     | V     | IEC 60112     |

| OTHER PROPERTIES    | DRY / COND |       |                |
|---------------------|------------|-------|----------------|
| Water absorption    | 6.5 / *    | %     | Sim. to ISO 62 |
| Humidity absorption | 2 / *      | %     | Sim. to ISO 62 |
| Density             | 1340 / –   | kg/m³ | ISO 1183       |