

# Akulon<sup>®</sup> S223–HG3

## PA66–GF15

15% Glass Fiber Reinforced, Heat Stabilized

Print Date: 2025–10–04

| PROPERTIES                                   | TYPICAL DATA | UNIT              | TEST METHOD     |
|--|--------------|-------------------|-----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                |              | <b>DRY / COND</b> |                 |
| Molding shrinkage (parallel)                 | 1 / *        | %                 | ISO 294–4       |
| Molding shrinkage (normal)                   | 1.5 / *      | %                 | ISO 294–4       |
| <b>MECHANICAL PROPERTIES</b>                 |              | <b>DRY / COND</b> |                 |
| Tensile modulus                              | 6200 / 4000  | MPa               | ISO 527–1/–2    |
| Stress at break                              | 125 / 80     | MPa               | ISO 527–1/–2    |
| Strain at break                              | 3 / 6        | %                 | ISO 527–1/–2    |
| Flexural modulus                             | 5500 / 3200  | MPa               | ISO 178         |
| Flexural strength                            | 205 / 110    | MPa               | ISO 178         |
| Tensile modulus (200°C)                      | 1750         | MPa               | ISO 527–1/–2    |
| Charpy impact strength (+23°C)               | 40 / 50      | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Charpy impact strength (–30°C)               | 35 / 40      | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Charpy notched impact strength (+23°C)       | 6 / 8        | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Charpy notched impact strength (–30°C)       | 5 / 4        | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Izod notched impact strength (+23°C)         | 5 / 7        | kJ/m <sup>2</sup> | 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)    | 240 / *      | °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) | 0.4 / *      | 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 1.5 mm nom. thickn.        | HB / *       | 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.  | 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 |

| ELECTRICAL PROPERTIES         | DRY / COND  |       |               |
|-------------------------------|-------------|-------|---------------|
| Relative permittivity (100Hz) | 4 / 9       | –     | IEC 62631–2–1 |
| Relative permittivity (1 MHz) | 4 / 4       | –     | IEC 62631–2–1 |
| Dissipation factor (100 Hz)   | 80 / 1300   | E–4   | IEC 62631–2–1 |
| Dissipation factor (1 MHz)    | 150 / 700   | E–4   | IEC 62631–2–1 |
| Volume resistivity            | 1E13 / 1E10 | Ohm*m | IEC 62631–3–1 |
| Surface resistivity           | – / 1E12    | 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    | 7 / *      | %     | Sim. to ISO 62 |
| Humidity absorption | 2.2 / *    | %     | Sim. to ISO 62 |
| Density             | 1240 / *   | kg/m³ | ISO 1183       |

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