

# Akulon<sup>®</sup> F223-D

## Property Data

PA6

Low/Medium Viscosity

| Properties                                   | Typical Data | Unit              | Test Method     |
|----------------------------------------------|--------------|-------------------|-----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                |              |                   |                 |
|                                              | dry / cond   |                   |                 |
| Molding shrinkage (parallel)                 | 0.95 / *     | %                 | ISO 294-4       |
| Molding shrinkage (normal)                   | 0.95 / *     | %                 | ISO 294-4       |
| <b>MECHANICAL PROPERTIES</b>                 |              |                   |                 |
|                                              | dry / cond   |                   |                 |
| Tensile modulus                              | 3200 / 1000  | MPa               | ISO 527-1/-2    |
| Yield stress                                 | 85 / 45      | MPa               | ISO 527-1/-2    |
| Yield strain                                 | 4 / 25       | %                 | ISO 527-1/-2    |
| Nominal strain at break                      | 20 / >50     | %                 | ISO 527-1/-2    |
| Flexural modulus                             | 2600 / -     | MPa               | ISO 178         |
| Flexural strength                            | 100 / -      | MPa               | ISO 178         |
| Charpy impact strength (+23°C)               | N / N        | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Charpy impact strength (-30°C)               | N / N        | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Charpy notched impact strength (+23°C)       | 8 / 35       | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Charpy notched impact strength (-30°C)       | 5 / 5        | kJ/m <sup>2</sup> | ISO 179/1eA     |
| <b>THERMAL PROPERTIES</b>                    |              |                   |                 |
|                                              | dry / cond   |                   |                 |
| Melting temperature (10°C/min)               | 220 / *      | °C                | ISO 11357-1/-3  |
| Temp. of deflection under load (1.80 MPa)    | 65 / *       | °C                | ISO 75-1/-2     |
| Temp. of deflection under load (0.45 MPa)    | 185 / *      | °C                | ISO 75-1/-2     |
| Coeff. of linear therm. expansion (parallel) | 0.9 / *      | 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.        | V-2 / *      | class             | IEC 60695-11-10 |
| Thickness tested                             | 1.5 / *      | mm                | IEC 60695-11-10 |
| Burning Behav. at thickness h                | V-2 / *      | class             | IEC 60695-11-10 |
| Thickness tested                             | 0.75 / *     | mm                | IEC 60695-11-10 |
| Oxygen index                                 | 26 / *       | %                 | ISO 4589-1/-2   |
| <b>ELECTRICAL PROPERTIES</b>                 |              |                   |                 |
|                                              | dry / cond   |                   |                 |
| Relative permittivity (100Hz)                | 3.4 / 15     | -                 | IEC 60250       |
| Relative permittivity (1 MHz)                | 3.1 / 4.7    | -                 | IEC 60250       |
| Dissipation factor (100 Hz)                  | 65 / 3900    | E-4               | IEC 60250       |
| Dissipation factor (1 MHz)                   | 165 / 1300   | E-4               | IEC 60250       |
| Volume resistivity                           | 1E13 / 1E10  | Ohm*m             | IEC 60093       |
| Surface resistivity                          | * / 1E14     | Ohm               | IEC 60093       |
| Electric strength                            | 30 / 20      | kV/mm             | IEC 60243-1     |
| Comparative tracking index                   | * / 600      | -                 | IEC 60112       |
| <b>OTHER PROPERTIES</b>                      |              |                   |                 |
|                                              | dry / cond   |                   |                 |
| Water absorption                             | 10 / *       | %                 | Sim. to ISO 62  |

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|                     |                 |                   |                |
|---------------------|-----------------|-------------------|----------------|
| Humidity absorption | <b>2.8 / *</b>  | %                 | Sim. to ISO 62 |
| Density             | <b>1130 / -</b> | kg/m <sup>3</sup> | ISO 1183       |

## MATERIAL SPECIFIC PROPERTIES

dry / cond

|                  |                |                    |                     |
|------------------|----------------|--------------------|---------------------|
| Viscosity number | <b>129 / *</b> | cm <sup>3</sup> /g | ISO 307, 1157, 1628 |
|------------------|----------------|--------------------|---------------------|

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