

Akulon® F223-D

PA6

Low/Medium Viscosity

Print Date: 2019-02-05

| Properties | Typical Data | Unit | Test Method |
|--|--------------|-------------------|-----------------|
| Rheological properties | | | |
| | dry / cond | | |
| Molding shrinkage (parallel) | 1.1 / * | % | ISO 294-4 |
| Molding shrinkage (normal) | 1.1 / * | % | ISO 294-4 |
| Mechanical properties | | | |
| | dry / cond | | |
| Tensile modulus | 3200 / 1000 | MPa | ISO 527-1/-2 |
| Nominal strain at break | 20 / >50 | % | ISO 527-1/-2 |
| Yield stress | 85 / 45 | MPa | ISO 527-1/-2 |
| Yield strain | 4 / 25 | % | 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 ² | ISO 179/1eU |
| Charpy impact strength (-30°C) | N / N | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | 8 / 35 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength (-30°C) | 5 / 5 | kJ/m ² | ISO 179/1eA |
| Thermal properties | | | |
| | dry / cond | | |
| Melting temperature (10°C/min) | 220 / * | °C | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 60 / * | °C | ISO 75-1/-2 |
| Temp. of deflection under load (0.45 MPa) | 160 / * | °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 |

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| Properties | Typical Data | Unit | Test Method |
|-------------------------------------|--------------|-------|-----------------|
| 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 |
| Glow Wire Flammability Index GWFI | 800 / - | °C | IEC 60695-2-12 |
| GWFI (Thickness (1) tested) | 1.5 / - | mm | IEC 60695-2-12 |
| Glow Wire Ignition Temperature GWIT | 775 / - | °C | IEC 60695-2-13 |
| GWIT (Thickness (1) tested) | 1.5 / - | mm | IEC 60695-2-13 |

Electrical properties

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 | V | IEC 60112 |

Other properties

dry / cond

| | | | |
|---------------------|----------|-------------------|----------------|
| Water absorption | 10 / * | % | Sim. to ISO 62 |
| Humidity absorption | 2.8 / * | % | Sim. to ISO 62 |
| Density | 1130 / - | kg/m ³ | ISO 1183 |

Material specific properties

dry / cond

| | | | |
|------------------|---------|--------------------|---------------------|
| Viscosity number | 129 / * | cm ³ /g | ISO 307, 1157, 1628 |
|------------------|---------|--------------------|---------------------|

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