

Akulon[®] F223-D

PA6

Low/Medium Viscosity, General purpose, Injection Molding, Food Contact Quality

Print Date: 2024-10-15

| 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 | 87 / 45 | MPa | ISO 527-1/-2 |
| Yield strain | 4 / 25 | % | ISO 527-1/-2 |
| Flexural modulus | 2850 / 900 | MPa | ISO 178 |
| Flexural strength | 120 / 35 | 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) | 4.5 / 35 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength (-30°C) | 2.5 / 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) | 150 / * | °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) | 0.9 / * | 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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| <i>PROPERTIES</i> | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|--|--------------------------|-------------------|--------------------|
| 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 |
| Thickness tested | 0.75 / * | mm | IEC 60695-11-10 |
| Oxygen index | 26 / * | % | ISO 4589-1/-2 |
| Glow Wire Flammability Index GWFI | 900 / - | °C | IEC 60695-2-12 |
| GWFI (Thickness (1) tested) | 1.5 / - | mm | IEC 60695-2-12 |
| Glow Wire Flammability Index GWFI | 875 / - | °C | IEC 60695-2-12 |
| GWFI (Thickness (2) tested) | 0.75 / - | mm | IEC 60695-2-12 |
| Glow Wire Ignition Temperature GWIT | 825 / - | °C | IEC 60695-2-13 |
| GWIT (Thickness (1) tested) | 1.5 / - | mm | IEC 60695-2-13 |
| Glow Wire Ignition Temperature GWIT | 875 / - | °C | IEC 60695-2-13 |
| GWIT (Thickness (2) tested) | 1 / - | mm | IEC 60695-2-13 |
| <i>ELECTRICAL PROPERTIES</i> | <i>DRY / COND</i> | | |
| Relative permittivity (100Hz) | 3.2 / 14 | - | IEC 62631-2-1 |
| Relative permittivity (1 MHz) | 3 / 4.5 | - | IEC 62631-2-1 |
| Dissipation factor (100 Hz) | 50 / 3000 | E-4 | IEC 62631-2-1 |
| Dissipation factor (1 MHz) | 150 / 1200 | E-4 | IEC 62631-2-1 |
| Volume resistivity | 1E13 / 1E10 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity | - / 1E14 | Ohm | IEC 62631-3-2 |
| Electric strength | 28 / 20 | kV/mm | IEC 60243-1 |
| Comparative tracking index | - / 600 | V | IEC 60112 |
| <i>OTHER PROPERTIES</i> | <i>DRY / COND</i> | | |
| Water absorption | 10 / * | % | Sim. to ISO 62 |
| Humidity absorption | 2.8 / * | % | Sim. to ISO 62 |
| Density | 1130 / - | kg/m ³ | ISO 1183 |

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|-------------------------------------|---------------------|--------------------|------------------------|
| MATERIAL SPECIFIC PROPERTIES | DRY / COND | | |
| Viscosity number | 132 / * | cm ³ /g | ISO 307, 1157, 1628 |

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