

Envalior Akulon® K222-KGMV14

The Akulon® product portfolio is engineered for optimum performance to suit different processing techniques and end use markets. Akulon Nylon 6 is used for extrusion applications including barrier film, stock shapes, convoluted tubes, and monofilament. Akulon XP is a high-productivity, high-performance PA6 grade for film extrusion processes.

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 lb/in ³	ISO 1183
Water Absorption	6.8 %	6.8 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	2.0 %	2.0 %	Humidity Absorption; Sim. to ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	90.0 MPa	13100 psi	ISO 527-1/-2
Elongation at Break	2.5 %	2.5 %	ISO 527-1/-2
Tensile Modulus	7.00 GPa	1020 ksi	ISO 527-1/-2
Charpy Impact Unnotched	3.50 J/cm ² @Temperature -30.0 °C	16.7 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	4.00 J/cm ² @Temperature 23.0 °C	19.0 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.400 J/cm ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	0.500 J/cm ² @Temperature 23.0 °C	2.38 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Dielectric Constant	3.8 @Frequency 1e+6 Hz	3.8 @Frequency 1e+6 Hz	IEC 60250
	4.2 @Frequency 100 Hz	4.2 @Frequency 100 Hz	IEC 60250
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.0090 @Frequency 100 Hz	0.0090 @Frequency 100 Hz	IEC 60250
	0.019 @Frequency 1e+6 Hz	0.019 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	475 V	475 V	IEC 60112

Thermal Properties	Metric	English	Comments
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Melting Point	220 °C	428 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	210 °C	410 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	170 °C	338 °F	ISO 75-1/-2
UL RTI, Electrical	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	UL746B
	65.0 °C @Thickness 0.750 mm	149 °F @Thickness 0.0295 in	UL746B
UL RTI, Mechanical with Impact	65.0 °C @Thickness 0.750 mm	149 °F @Thickness 0.0295 in	UL746B
	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	UL746B
UL RTI, Mechanical without Impact	65.0 °C @Thickness 1.50 mm	149 °F @Thickness 0.0591 in	UL746B
	65.0 °C @Thickness 0.750 mm	149 °F @Thickness 0.0295 in	UL746B
Flammability, UL94	V-2 @Thickness 1.60 mm	V-2 @Thickness 0.0630 in	IEC 60695-11-10
	V-2 @Thickness 0.750 mm	V-2 @Thickness 0.0295 in	IEC 60695-11-10

Descriptive Properties

Flame Retardant	Yes
Flame Retarding Agent	Yes
Heat Stabilized or Stable to Heat	Yes
Injection Molding	Yes
Release Agent	Yes
With Fillers	Yes