

BASF Ultramid® A3K R01 Nylon

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Product Description: Ultramid® A3K R01 is an unreinforced easy flowing, injection molding grade PA66. Applications; Typical applications include fast processing high stress technical parts or electrically insulating parts.

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in ³	ISO 1183
Water Absorption	2.8 %	2.8 %	Equilibrium, 50% RH; ISO 62
Water Absorption at Saturation	8.5 %	8.5 %	ISO 62
Maximum Moisture Content	0.20	0.20	
Linear Mold Shrinkage, Flow	0.014 cm/cm	0.014 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.017 cm/cm	0.017 in/in	ISO 294-4
Melt Flow	120 g/10 min @Load 5.00 kg, Temperature 275 °C	120 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	84.8 MPa	12300 psi	ISO 527-2
Elongation at Break	30 %	30 %	ISO 527-2
Elongation at Yield	5.0 %	5.0 %	ISO 527-2
Tensile Modulus	3.10 GPa	450 ksi	ISO 527-1
Flexural Modulus	2.90 GPa	421 ksi	ISO 178
Izod Impact, Notched (ISO)	5.25 kJ/m ²	2.50 ft-lb/in ²	ISO 180
	5.67 kJ/m ²	2.70 ft-lb/in ²	ISO 180
Charpy Impact Unnotched	NB @Temperature -40.0 °C	NB @Temperature -40.0 °F	ISO 179
	NB @Temperature 22.8 °C	NB @Temperature 73.0 °F	ISO 179
Charpy Impact, Notched	0.441 J/cm ² @Temperature -40.0 °C	2.10 ft-lb/in ² @Temperature -40.0 °F	ISO 179
	0.483 J/cm ² @Temperature 22.8 °C	2.30 ft-lb/in ² @Temperature 73.0 °F	ISO 179

Electrical Properties	Metric	English	Comments
Dielectric Strength	22.0 kV/mm	560 kV/in	IEC 60243-1
Comparative Tracking Index	600 V	600 V	IEC 60112