

BASF Ultramid® C3U PA66/6 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6/66 , Nylon 66/6, Unreinforced

Material Notes:

Ultramid C3U is an injection molding, general purpose PA66/6 grade with improved flame retardance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-C3U-PA666-Dry.php

Physical Properties	Metric	English	Comments
Density	1.16 g/cc	0.0419 lb/in ³	ISO 1183
Water Absorption	8.0 - 9.0 %	8.0 - 9.0 %	ISO 62
Moisture Absorption at Equilibrium	2.6 - 3.2 %	2.6 - 3.2 %	23°C/50% R.H.; ISO 62
Viscosity Test	150 cm ³ /g	150 cm ³ /g	Viscosity number; ISO 307
Linear Mold Shrinkage	0.0080 cm/cm	0.0080 in/in	
Melt Flow	162 g/10 min @Load 5.00 kg, Temperature 275 °C	162 g/10 min @Load 11.0 lb, Temperature 527 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	75.0 MPa	10900 psi	50mm/min; ISO 527
Elongation at Yield	4.0 %	4.0 %	50mm/min; ISO 527
Modulus of Elasticity	3.50 GPa	508 ksi	ISO 527
Flexural Modulus	3.00 GPa	435 ksi	ISO 178
Izod Impact, Notched (ISO)	4.50 kJ/m ²	2.14 ft-lb/in ²	ISO 180/A
	3.50 kJ/m ² @Temperature -30.0 °C	1.67 ft-lb/in ² @Temperature -22.0 °F	ISO 180/A
Charpy Impact Unnotched	8.00 J/cm ²	38.1 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179/1eA
	0.400 J/cm ² @Temperature -30.0 °C	1.90 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	60.0 - 100 µm/m-°C	33.3 - 55.6 µin/in-°F	ISO 11359-1/-2

Thermal Properties	Metric @Temperature 23.0 - 80.0 °C	English @Temperature 73.4 - 176 °F	Comments
CTE, linear, Transverse to Flow	60.0 - 120 µm/m-°C @Temperature 23.0 - 80.0 °C	33.3 - 66.7 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-1/-2
Specific Heat Capacity	1.70 J/g-°C	0.406 BTU/lb-°F	
Thermal Conductivity	0.330 W/m-K	2.29 BTU-in/hr-ft²-°F	DIN 52612
Melting Point	243 °C	469 °F	DIN 53765
Maximum Service Temperature, Air	107 °C	225 °F	for 50% loss of tensile strength after 20,000 hr
	123 °C	253 °F	for 50% loss of tensile strength after 5,000 hr
	200 °C	392 °F	
Deflection Temperature at 0.46 MPa (66 psi)	210 °C	410 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	70.0 °C	158 °F	ISO 75
Flammability, UL94	V-0 @Thickness >=0.400 mm	V-0 @Thickness >=0.0157 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Dielectric Constant	3.6 @Frequency 1.00e+6 Hz	3.6 @Frequency 1.00e+6 Hz	IEC 60250
Dissipation Factor	0.020 @Frequency 1.00e+6 Hz	0.020 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	Test Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	250 - 270 °C	482 - 518 °F	Injection-molding/Extrusion
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	Injection-molding

Descriptive Properties	Value	Comments
Color	Natural	

Descriptive Properties	Value	Comments
Commercial Status	North America and Europe	
Impact Modified	No	
Primary Processing Technique	Injection Molding	

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