



Ultramid® Advanced N3U40G6 LS BK23326

BASF Corporation - Polyamide 9T

Monday, November 4, 2019

General Information

Product Description

Preliminary Product - Ultramid Advanced N3U40G6 LS BK23326 is a partially aromatic, 30% glassfiber reinforced and flame retardant polyphthalamide for injection molding with outstanding electrical and mechanical properties, good long-term thermal stability and excellent chemical resistance for highly stressed parts. The flame retardant is without halogens and highly stable against migration and weathering. This material has high toughness, stiffness, extremely low water absorption and outstanding dimensional stability. It features high flowability and allows filling of complex parts with thin wall thickness. It is easily processable with excellent melt stability.

General

Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Additive	• Flame Retardant		
Features	• Aromatic	• Good Thermal Stability	• High Melt Stability
	• Chemical Resistant	• Good Weather Resistance	• High Stiffness
	• Flame Retardant	• Halogen Free	• High Toughness
	• Good Electrical Properties	• High Dimensional Stability	• Low to No Migration
	• Good Processability	• High Flow	• Low to No Water Absorption
Uses	• Thin-walled Parts		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.44	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR)				ISO 1133
325°C/5.0 kg	30	--	cm ³ /10min	
Molding Shrinkage				ISO 294-4
Across Flow	0.95	--	%	
Flow	0.35	--	%	
Water Absorption				ISO 62
Saturation, 73°F	2.0	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	1.52E+6	1.52E+6	psi	ISO 527-2
Tensile Stress (Break, 73°F)	20300	18900	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.2	2.2	%	ISO 527-2
Flexural Modulus (73°F)	1.52E+6	1.52E+6	psi	ISO 178
Flexural Stress (73°F)	31900	30500	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
73°F	3.3	3.3	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
-22°F	29	--	ft·lb/in ²	
73°F	29	24	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	500	--	°F	

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Thermal	Dry	Conditioned	Unit	Test Method
Melting Temperature (DSC)	572	--	°F	ISO 3146
CLTE - Flow	1.1E-5	2.8E-5 to 3.1E-5	in/in/°F	
RTI Elec				UL 746
0.016 in	185	--	°F	
0.030 in	185	--	°F	
0.06 in	185	--	°F	
0.12 in	185	--	°F	
RTI Imp				UL 746
0.016 in	185	--	°F	
0.030 in	185	--	°F	
0.06 in	185	--	°F	
0.12 in	185	--	°F	
RTI Str				UL 746
0.016 in	185	--	°F	
0.030 in	185	--	°F	
0.06 in	185	--	°F	
0.12 in	185	--	°F	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+17	1.0E+17	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	3.70	3.80		IEC 60250
Dissipation Factor (1 MHz)	0.011	0.016		IEC 60250
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.016 in	V-0	--		
0.030 in	V-0	--		
0.06 in	• V-0 • 5VA	--		
0.12 in	• V-0 • 5VA	--		

Processing Information

Injection	Dry	Unit
Drying Temperature - Desiccant Dryer	248	°F
Drying Time	8.0	hr
Suggested Max Moisture	0.050	%
Processing (Melt) Temp	590 to 644	°F
Mold Temperature	212 to 320	°F

Notes

¹ Typical properties: these are not to be construed as specifications.