



Ultramid® A3L HP BK20465

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3L HP BK20465 is an unreinforced, heat stabilized, impact modified, high flow, nylon 66 for injection molding. This grade has excellent flow and improved ambient and low temperature toughness.

Applications

Typical applications include fasteners and clamps.

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• Heat Stabilizer • Impact Modifier
Features	• Heat Stabilized • Impact Modified • Oil Resistant • High Flow • Low Temperature Toughness
Uses	• Fasteners
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• GM GMW16447P-PA66-T2 Color: Black
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.10	--	g/cm ³	ISO 1183
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	354000	199000	psi	ISO 527-2
Tensile Stress (Yield, 73°F)	9140	6380	psi	ISO 527-2
Tensile Stress (Break, 73°F)	7110	5950	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	6.2	25	%	ISO 527-2
Nominal Tensile Strain at Break 73°F	28	> 50	%	ISO 527-2
Flexural Modulus (73°F)	331000	167000	psi	ISO 178
Flexural Stress (73°F)	12300	6530	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-22°F	6.7	5.2	ft·lb/in ²	
73°F	9.0	13	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
-22°F	No Break	No Break		
73°F	No Break	No Break		
Notched Izod Impact Strength				ISO 180
-40°F	5.7	4.5	ft·lb/in ²	
73°F	8.6	14	ft·lb/in ²	

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Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 66 psi, Unannealed	385	--	°F	ISO 75-2/B
Heat Deflection Temperature 264 psi, Unannealed	158	--	°F	ISO 75-2/A
Melting Temperature (DSC)	500	--	°F	ISO 3146
RTI Elec				UL 746
0.030 in	284	--	°F	
0.12 in	284	--	°F	
RTI Imp				UL 746
0.030 in	221	--	°F	
0.12 in	221	--	°F	
RTI Str				UL 746
0.030 in	230	--	°F	
0.12 in	230	--	°F	
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.030 in	HB	--		
0.12 in	HB	--		

Processing Information

Injection	Dry	Unit
Drying Temperature	140	°F
Drying Time	1.0 to 2.0	hr
Suggested Max Moisture	0.040 to 0.20	%
Processing (Melt) Temp	550 to 581	°F
Mold Temperature	140 to 212	°F
Injection Pressure	5080 to 18100	psi
Injection Rate	Fast	
Back Pressure	0.00 to 50.8	psi
Screw Speed	40 to 80	rpm
Screw Compression Ratio	3.0:1.0 to 4.0:1.0	

Notes

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