



Ultramid® A3L HP UV

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3L HP UV is an unreinforced, impact modified, UV stabilized, 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	• Impact Modifier • UV Stabilizer
Features	• Good Toughness • Impact Modified • Oil Resistant • High Flow • Low Temperature Toughness • UV Stabilized
Uses	• Fasteners
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• FORD WSK-M4D706-A • FORD WSS-M4D706-B1 • GM GMW16558P-PA66-T1 • FORD WSS-M4D706-A4 • GM GMW16558P-PA66-T1 Color: Black • GM GMW16558P-PA66-T1 Color: Natural
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.10	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	340000	psi	ISO 527-2
Tensile Stress (Yield, 73°F)	8510	psi	ISO 527-2
Tensile Strain (Yield, 73°F)	13	%	ISO 527-2
Nominal Tensile Strain at Break (73°F)	30	%	ISO 527-2
Flexural Modulus (73°F)	318000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F	5.2	ft-lb/in ²	
73°F	8.1	ft-lb/in ²	
Charpy Unnotched Impact Strength			ISO 179
-22°F	No Break		
73°F	No Break		
Notched Izod Impact Strength			ISO 180
-40°F	5.7	ft-lb/in ²	
73°F	8.1	ft-lb/in ²	

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Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	378	°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	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.030 in	HB		
0.12 in	HB		

Processing Information

Injection	Nominal Value	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	5000 to 18000	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.