



Ultramid® A3WC4 HP

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3WC4 HP is a 20 wt. % short carbon fiber reinforced, heat stabilized, high flow PA66 injection molding grade. The Ultramid A3WC4 HP has excellent mechanical properties and is suitable for large injection molded components.

General

Material Status	• Commercial: Active
Availability	• North America
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight
Additive	• Heat Stabilizer
Features	• Heat Stabilized • High Flow • Oil Resistant
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.22	--	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) 275°C/5.0 kg	38	--	cm ³ /10min	ISO 1133
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (73°F)	2.76E+6	2.02E+6	psi	ISO 527-2
Tensile Stress (Break, 73°F)	37000	26800	psi	ISO 527-2
Tensile Strain (Break, 73°F)	2.2	3.0	%	ISO 527-2
Flexural Modulus (73°F)	2.39E+6	1.87E+6	psi	ISO 178
Flexural Stress (73°F)	49300	38600	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179
-22°F	3.3	--	ft·lb/in ²	
73°F	3.8	3.7	ft·lb/in ²	
Charpy Unnotched Impact Strength				ISO 179
-22°F	26	22	ft·lb/in ²	
73°F	29	--	ft·lb/in ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 264 psi, Unannealed	491	--	°F	ISO 75-2/A
Melting Temperature (DSC)	500	--	°F	ISO 3146

Processing Information

Injection	Dry Unit
Drying Temperature	176 °F
Drying Time	4.0 hr
Suggested Max Moisture	0.080 %
Processing (Melt) Temp	545 to 599 °F

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Injection	Dry	Unit
Mold Temperature	176 to 203	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Moderate	
Back Pressure	49.3 to 75.4	psi

Notes

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