Ultramid® A3WC8

BASF Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Ultramid A3WC8 is a 40 wt. % short carbon fiber reinforced, heat stabilized, high flow PA66 injection molding grade.

General		
Material Status	• Commercial: Active	
Availability	• North America	
Filler / Reinforcement	• Carbon Fiber, 40% Filler by Weight	
Additive	• Heat Stabilizer	
Features	• Heat Stabilized	• High Flow
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	1.33	--	g/cm³	ISO 1183
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus				ISO 527-2
73°F	5.53E+6	3.97E+6	psi	
176°F	2.81E+6	2.49E+6	psi	
248°F	2.20E+6	1.90E+6	psi	
302°F	1.96E+6	1.65E+6	psi	
Tensile Stress				ISO 527-2
Break, 73°F	42800	37000	psi	
Break, 176°F	29400	24400	psi	
Break, 248°F	22500	18900	psi	
Break, 302°F	18900	16000	psi	
Tensile Strain				ISO 527-2
Break, 73°F	1.2	2.1	%	
Break, 176°F	2.1	2.3	%	
Break, 248°F	2.3	2.4	%	
Break, 302°F	2.4	2.6	%	
Flexural Modulus (73°F)	5.03E+6	--	psi	ISO 178
Flexural Stress (73°F)	70200	--	psi	ISO 178
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179
-40°F	4.3	--	ft·lb/in²	
73°F	5.2	--	ft·lb/in²	
Charpy Unnotched Impact Strength				ISO 179
-40°F	39	--	ft·lb/in²	
73°F	40	--	ft·lb/in²	
Notched Izod Impact Strength				ISO 180
-40°F	4.3	--	ft·lb/in²	

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Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/A
264 psi, Unannealed	493	--	°F	
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
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.