

Ultramid® A3WG6 HRX

Polyamide 66

BASF Corporation

Message:

Glass fibre reinforced injection moulding grade with enhanced resistance to hydrolysis and heat ageing. I.e.: for applications in the automotive cooling circuit.

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 30% filler by weight		
Features		Good heat aging resistance		
		Hydrolysis resistance		
		Oil resistance		
Uses		Application in Automobile Field		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS compliance		
Forms		Particle		
Processing Method		Injection molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.37	--	g/cm ³	ISO 1183
Apparent Density	0.70	--	g/cm ³	
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	10.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 294-4
Vertical flow direction	1.2	--	%	ISO 294-4
Flow direction	0.40	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	5.6 - 6.3	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.5 - 1.9	--	%	ISO 62
Viscosity Number (96% H ₂ SO ₄)	160	--	cm ³ /g	ISO 307
Mold Shrinkage - constrained ¹	0.40 - 0.50	--	%	
Polymer Abbreviation	PA66-GF30	--		
Screw Speed			mm/sec	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	9500	6000	MPa	ISO 527-2
Tensile Stress (Break)	185	110	MPa	ISO 527-2
Tensile Strain (Break)	3.7	7.2	%	ISO 527-2
Flexural Modulus	9200	5800	MPa	ISO 178
Flexural Stress	285	185	MPa	ISO 178

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	8.0	--	kJ/m ²	ISO 179/1eA
23°C	11	15	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	75	75	kJ/m ²	ISO 179/1eU
23°C	90	95	kJ/m ²	ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	260	--	°C	ISO 75-2/B
1.8 MPa, not annealed	245	--	°C	ISO 75-2/A
Melting Temperature	260	--	°C	ISO 11357-3
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0		hr	
Suggested Max Moisture	0.15		%	
Hopper Temperature	80.0		°C	
Rear Temperature	290		°C	
Middle Temperature	290		°C	
Front Temperature	290		°C	
Nozzle Temperature	290		°C	
Processing (Melt) Temp	280 - 300		°C	
Mold Temperature	80.0 - 90.0		°C	
Injection instructions				
Residence Time : <10 min				
NOTE				

1. Test box with central gating, dimensions of base (107*47*1,5) mm, processing conditions: TM = 290°C, TW = 80°C

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