

Ultramid® B3WGM24 sw23228

Polyamide 6

BASF Corporation

Message:

Glass-fibre and mineral reinforced heat stabilised injection moulding grade for industrial parts having medium to highrigidity and high dimensional stability, used e.g. for automobile engine covers, housings and automotive door handles.

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 10% filler by weight Mineral filler, 20% filler by weight		
Additive		heat stabilizer		
Features		Good dimensional stability Rigidity, high Oil resistance Thermal Stability		
Uses		Handle Industrial components Application in Automobile Field Shell		
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)	40.0	--	cm ³ /10min	ISO 1133
Molding Shrinkage				ISO 294-4
Vertical flow direction	0.61	--	%	ISO 294-4
Flow direction	0.40	--	%	ISO 294-4
Water Absorption				ISO 62
Saturated, 23°C	6.9 - 7.5	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.1 - 2.5	--	%	ISO 62
Viscosity Number (96% H2SO4)	145	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method

Tensile Modulus	9300	4200	MPa	ISO 527-2
Tensile Stress (Break)	120	55.0	MPa	ISO 527-2
Tensile Strain (Break)	3.0	10	%	ISO 527-2
Flexural Modulus	8400	--	MPa	ISO 178
Flexural Stress	180	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	5.0	5.0	kJ/m ²	ISO 179/1eA
23°C	7.0	13	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	50	45	kJ/m ²	ISO 179/1eU
23°C	52	60	kJ/m ²	ISO 179/1eU
Notched Izod Impact				ISO 180/A
-30°C	4.5	4.5	kJ/m ²	ISO 180/A
23°C	6.0	13	kJ/m ²	ISO 180/A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	215	--	°C	ISO 75-2/B
1.8 MPa, not annealed	195	--	°C	ISO 75-2/A
Melting Temperature	220	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow: 23 to 80°C	3.4E-5 - 3.8E-5	--	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	6.0E-5 - 1.1E-4	--	cm/cm/°C	ISO 11359-2
Specific Heat	1300	--	J/kg/°C	
Maximum operating temperature-short cycle operation	180	--	°C	
Automotive Materials (> 1.00 mm)	Passed	--		FMVSS 302
Screw Speed			mm/sec	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+10	--	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Relative Permittivity (1 MHz)	3.90	6.20		IEC 60250
Dissipation Factor (1 MHz)	0.020	0.20		IEC 60250
Comparative Tracking Index (Solution A)	400	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.60 mm)	HB	--		UL 94
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	260	°C
Middle Temperature	270	°C
Front Temperature	280	°C
Nozzle Temperature	280	°C
Processing (Melt) Temp	270 - 290	°C
Mold Temperature	80.0 - 90.0	°C

Injection instructions

Residence time : <10 min

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