Ultramid® B3UGM210

Polyamide 6

BASF Corporation

Message:

Halogen- and phosphorus-free injection molding grade with very high rigidity, low smoke density and outstanding electrical properties.

General Information	
UL YellowCard	E41871-233717
Filler / Reinforcement	Glass fiber reinforced material, 10% filler by weight Mineral filler, 50% filler by weight
Additive	Flame retardancy
Features	Low Halogen Content Rigidity, high Good electrical performance Phosphorus content, low (to none) Oil resistance Flame retardancy
Agency Ratings	EC 1907/2006 (REACH)
RoHS Compliance	RoHS compliance
Forms	Particle
Processing Method	Injection molding
Resin ID (ISO 1043)	PA6-GF10 M50 Fr

Physical	Dry	Conditioned	Unit	Test Method
Density	1.67	--	g/cm³	ISO 1183
Apparent Density	0.75	--	g/cm³	
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	25.0	--	cm³/10min	ISO 1133
Water Absorption (Equilibrium, 23°C, 50% RH)	1.0 - 1.4	--	%	ISO 62
Mold shrinkage-Test box (1.50 mm)	0.50	--	%	
Conventional Index of Toxicity - 25 kW/m²	0.400	--		ISO 5659-2
Fire Performance - UL94+HAI+HWI [1]	> 750.0	--	µm	UL 746C
French Railway Standard - fire and smoke classification	I3 / F2	--		NF F16-101
Smoke density-DS (max, 20 min), 25 kW/m²	10	--		ISO 5659-2
Hot Wire Test (> 750.0 µm)	2.00	--		ASTM D3874

Screw Speed			mm/sec	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	11000	6500	MPa	ISO 527-2
Tensile Stress (Yield)	110	80.0	MPa	ISO 527-2
Tensile Strain (Break)	1.8	2.5	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Unnotched Impact Strength	30	30	kJ/m^2	ISO 179/1eU
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 (DSC)	220	--	°C	ISO 3146
RTI Elec (1.50 mm)	130	--	°C	UL 746
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Dielectric Constant (1 MHz)	4.50	5.00		IEC 60250
Dissipation Factor (1 MHz)	0.015	0.050		IEC 60250
Comparative Tracking Index (Solution A)	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.750 mm	V-2	--		UL 94
> 1.50 mm	V-0	--		UL 94
Glow Wire Flammability Index (1.00 mm)	960	--	°C	IEC 60695-2-12
Oxygen Index	> 45	--	%	ISO 4589-2
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	280		°C	
Middle Temperature	290		°C	
Front Temperature	300		°C	
Nozzle Temperature	300		°C	
Processing (Melt) Temp	290 - 310		°C	
Mold Temperature	80.0 - 90.0		°C	
Injection instructions				
Residence time : <10 min				
NOTE				

1.	For Electrical Insulation/Barrier with close proximity (< 0,8 mm) to uninsulated live parts according to UL 746C

Recommended distributors for this material

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