Ultramid® HPN 9233G HS BK-102

Polyamide 6

BASF Corporation

Message:

Ultramid HPN 9233G HS BK-102 is a heat stabilized, pigmented black, 33% glass reinforced PA6 injection molding grade resin in the High Productivity Nylon Series developed for improved cycle times while maintaining excellent properties. It exhibits high strength, rigidity and heat resistance. Surface appearance has been improved, cycle times reduced and creep resistance retained. This heat stabilizer version extends the retention of mechanical properties at elevated temperatures while maintaining excellent chemical resistance to greases, oils and hydrocarbons.
Applications
Ultramid HPN 9233G HS BK-102 is generally recommended for applications such as window locks, valve bodies, chair shells, door and window hardware, connectors, switch components, relay parts, terminal blocks, power tool housings, gears, chainsaws, blowers, trimmer housings and automotive housings.

General Information	
UL YellowCard	E36632-231189
Filler / Reinforcement	Glass Fiber,33% Filler by Weight
Additive	Heat Stabilizer
Features	Fast Molding Cycle Good Chemical Resistance Good Creep Resistance Grease Resistant Heat Stabilized High Heat Resistance High Rigidity High Strength Hydrocarbon Resistant Oil Resistant
Uses	Automotive Applications Connectors Electrical Parts Gears Housings Power/Other Tools Switches Valves/Valve Parts
Agency Ratings	EC 1907/2006 (REACH)
RoHS Compliance	RoHS Compliant
Appearance	Black
Forms	Pellets
Processing Method	Injection Molding

Physical	Nominal Value	Unit	Test Method

Specific Gravity	1.39	g/cm³	ASTM D792, ISO 1183
Molding Shrinkage - Flow (3.18 mm)	0.30	%	
Water Absorption			
24 hr	1.1	%	ASTM D570
23°C, 24 hr	1.1	%	ISO 62
Saturation	6.4	%	ASTM D570
Saturation, 23°C	6.4	%	ISO 62
Equilibrium, 50% RH	1.8	%	ASTM D570
Equilibrium, 23°C, 50% RH	1.8	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	120		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break, 23°C)	175	MPa	ASTM D638, ISO 527-2
Tensile Elongation (Break, 23°C)	3.0	%	ASTM D638, ISO 527-2
Flexural Modulus			
23°C	9380	MPa	ASTM D790
23°C	8400	MPa	ISO 178
Flexural Strength (23°C)	265	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			
23°C	95	J/m	ASTM D256
-40°C	7.0	kJ/m²	ISO 180
23°C	9.5	kJ/m²	ISO 180
Drop Impact Resistance (23°C)	4.61	J	Internal Method
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, Unannealed	174	°C	ISO 75-2/B
1.8 MPa, Unannealed	208	°C	ASTM D648
1.8 MPa, Unannealed	54.0	°C	ISO 75-2/A
Peak Melting Temperature	220	°C	ASTM D3418, ISO 3146
CLTE - Flow	3.8E-5	cm/cm/°C	ASTM E831
RTI Elec			UL 746
0.710 mm	130	°C	
1.50 mm	140	°C	
3.00 mm	140	°C	
6.00 mm	140	°C	
RTI Imp			UL 746
0.710 mm	115	°C	
1.50 mm	115	°C	
3.00 mm	120	°C	
6.00 mm	120	°C	
RTI Str			UL 746

0.710 mm	140	°C	
1.50 mm	140	°C	
3.00 mm	140	°C	
6.00 mm	140	°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity			
1.50 mm	> 1.0E+13	ohms·cm	ASTM D257
--	> 1.0E+13	ohms·cm	IEC 60093
Dielectric Strength [1] (1.50 mm)	22	kV/mm	ASTM D149
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
1.50 mm	HB		
3.00 mm	HB		
6.00 mm	HB		
Injection	**Nominal Value**	**Unit**	
Drying Temperature	83.0	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.15	%	
Processing (Melt) Temp	270 to 295	°C	
Mold Temperature	80.0 to 95.0	°C	
Injection Pressure	3.50 to 12.5	MPa	
Injection Rate	Fast		
NOTE			
1.	Method A (Short-Time)		

Recommended distributors for this material

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