

Ultramid® 8234G HS BK-102

Polyamide 6

BASF Corporation

Message:

Ultramid 8234G HS BK-102 is heat stabilized, pigmented black, 44% glass reinforced PA6 injection molding compound offering the highest level of strength, stiffness, high temperature performance and dimensional stability. Its resistance to creep under load is excellent. It maintains its inherent chemical resistance to greases, oils and hydrocarbons. It is available in natural and black versions. Pigmented and weatherable versions may be offered on a case by case basis.

Ultramid 8234G HS BK-102 is generally recommended for applications such as consumer power tool housings, cattle ear taggers, luggage frames, fans and pressure regulator housings.

General Information				
UL YellowCard		E36632-231132		
Filler / Reinforcement		Glass Fiber,44% Filler by Weight		
Additive		Heat Stabilizer		
Features		Good Chemical Resistance		
		Good Creep Resistance		
		Good Dimensional Stability		
		Grease Resistant		
		Heat Stabilized		
		High Heat Resistance		
		High Stiffness		
		High Strength		
		Hydrocarbon Resistant		
		Oil Resistant		
Uses		Housings		
		Luggage		
		Power/Other Tools		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS Compliant		
Appearance		Black		
		Natural Color		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity	1.49	--	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage - Flow (3.18 mm)	0.20	--	%	
Water Absorption				

24 hr	0.90	--	%	ASTM D570
23°C, 24 hr	0.90	--	%	ISO 62
Saturation	5.2	--	%	ASTM D570
Saturation, 23°C	5.2	--	%	ISO 62
Equilibrium, 50% RH	1.5	--	%	ASTM D570
Equilibrium, 23°C, 50% RH	1.5	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness (R-Scale)	121	--		ASTM D785
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Strength				
Break, 23°C	193	145	MPa	ASTM D638
Break, 23°C	195	--	MPa	ISO 527-2
Tensile Elongation				
Break, 23°C	2.0	6.0	%	ASTM D638
Break, 23°C	2.0	--	%	ISO 527-2
Flexural Modulus				
-40°C	12300	14700	MPa	ASTM D790
23°C	11700	6560	MPa	ASTM D790
65°C	7000	--	MPa	ASTM D790
121°C	4830	--	MPa	ASTM D790
23°C	11800	--	MPa	ISO 178
Flexural Strength				
-40°C	450	410	MPa	ASTM D790
23°C	352	212	MPa	ASTM D790
65°C	220	--	MPa	ASTM D790
90°C	160	--	MPa	ASTM D790
121°C	138	--	MPa	ASTM D790
23°C	290	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	15	--	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	70	--	kJ/m ²	ISO 179
Notched Izod Impact				
23°C	130	--	J/m	ASTM D256
23°C	14	--	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	220	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	210	--	°C	ASTM D648, ISO 75-2/A
Peak Melting Temperature	220	--	°C	ASTM D3418, ISO 3146

CLTE - Flow	3.1E-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	
RTI Imp				UL 746
0.710 mm	95.0	--	°C	
1.50 mm	105	--	°C	
3.00 mm	105	--	°C	
RTI Str				UL 746
0.710 mm	130	--	°C	
1.50 mm	140	--	°C	
3.00 mm	140	--	°C	
Flammability	Dry	Conditioned		Test Method
Flame Rating				UL 94
1.50 mm	HB	--		
3.00 mm	HB	--		
Additional Information	Dry	Conditioned	Unit	Test Method
Drop Weight Impact Strength (23°C)	3.25	--	J	Internal Method
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	2.0 to 4.0		hr	
Suggested Max Moisture	0.060		%	
Processing (Melt) Temp	280 to 305		°C	
Mold Temperature	80.0 to 95.0		°C	
Injection Pressure	3.50 to 12.5		MPa	
Injection Rate	Fast			

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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