

Ultramid® 8202 HS BK-102

Polyamide 6

BASF Corporation

Message:

Ultramid 8202 HS BK-102 is an unreinforced, heat stabilized, pigmented black, low viscosity, general purpose injection molding PA6 exhibiting excellent fluidity for filling thin sections. It possesses the combination of strength, stiffness and toughness properties as well as excellent chemical, thermal and abrasion resistance. The heat stabilizer system extends its retention of properties at elevated temperatures.

Applications

Ultramid 8202 HS BK-102 is generally recommended for applications such as drapery hardware, gears, fittings, furniture casters, bearings, handles, clips and fasteners.

General Information				
Additive		Heat Stabilizer		
Features	General Purpose			
	Good Abrasion Resistance			
	Good Chemical Resistance			
	Good Flow			
	Good Stiffness			
	Good Strength			
	Good Toughness			
	Heat Stabilized			
	Homopolymer			
	Low Viscosity			
	Medium Heat Resistance			
Uses	Bearings			
	Fasteners			
	Fittings			
	Furniture			
	Gears			
	Handles			
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS Compliant		
Appearance		Black		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Specific Gravity	1.13	--	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage - Flow (3.18 mm)	1.2	--	%	
Water Absorption				

24 hr	1.6	--	%	ASTM D570
23°C, 24 hr	1.6	--	%	ISO 62
Saturation	9.5	--	%	ASTM D570
Saturation, 23°C	9.5	--	%	ISO 62
Equilibrium, 50% RH	2.7	--	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.7	--	%	ISO 62
Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness (R-Scale)	119	--		ASTM D785
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3100	970	MPa	ISO 527-2
Tensile Strength (Yield, 23°C)	85.0	36.0	MPa	ASTM D638, ISO 527-2
Tensile Elongation				
Yield, 23°C	4.0	16	%	ASTM D638, ISO 527-2
Break, 23°C	50	> 100	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	25	> 50	%	ISO 527-2
Flexural Modulus				
23°C	2830	--	MPa	ASTM D790
23°C	2650	770	MPa	ISO 178
Flexural Strength				
23°C	108	35.0	MPa	ASTM D790
23°C	90.0	25.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	3.0	--	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break	--		ISO 179
Notched Izod Impact				
23°C	55	--	J/m	ASTM D256
-40°C	4.0	--	kJ/m ²	ISO 180
23°C	5.5	--	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	178	--	°C	ASTM D648
1.8 MPa, Unannealed	65.0	--	°C	ASTM D648
1.8 MPa, Unannealed	60.0	--	°C	ISO 75-2/A
Peak Melting Temperature	220	--	°C	ASTM D3418, ISO 3146
CLTE - Flow	8.3E-5	--	cm/cm/°C	ASTM E831
RTI Elec				UL 746
0.710 mm	130	--	°C	

1.50 mm	130	--	°C
3.00 mm	130	--	°C
6.00 mm	130	--	°C
RTI Imp			UL 746
0.710 mm	95.0	--	°C
1.50 mm	105	--	°C
3.00 mm	105	--	°C
6.00 mm	105	--	°C
RTI Str			UL 746
0.710 mm	95.0	--	°C
1.50 mm	105	--	°C
3.00 mm	105	--	°C
6.00 mm	105	--	°C
Flammability	Dry	Conditioned	Test Method
Flame Rating			UL 94
0.710 mm	V-2	--	
1.50 mm	V-2	--	
3.00 mm	V-2	--	
6.00 mm	V-2	--	
Injection	Dry	Unit	
Drying Temperature	80.0		°C
Drying Time	2.0 to 4.0		hr
Suggested Max Moisture	0.15		%
Processing (Melt) Temp	240 to 285		°C
Mold Temperature	65.0 to 80.0		°C
Injection Pressure	3.50 to 12.5		MPa
Injection Rate	Fast		

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