

Ultramid® 8202C HS BK-102

Polyamide 6

BASF Corporation

Message:

Ultramid 8202C HS BK-102 is a heat stabilized, low viscosity, pigmented black, PA6, injection molding homopolymer possessing a modified crystalline structure for increased property performance and faster cycles. It is also available in non-heat stabilized (Ultramid 8202C).

Applications

Ultramid 8202C HS BK-102 is generally recommended for applications such as gears, valves, fittings, insulators, bushings, slides, window hardware, wiring devices, textile components and furniture casters.

General Information				
Additive	Heat Stabilizer			
Features	Crystalline			
	Heat Stabilized			
	Homopolymer			
	Low Viscosity			
Uses	Bushings			
	Fittings			
	Furniture			
	Gears			
	Insulation			
	Textile Applications			
	Valves/Valve Parts			
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)	0.90	--	%	
Water Absorption				
24 hr	1.6	--	%	ASTM D570
23°C, 24 hr	1.6	--	%	ISO 62
Saturation	9.3	--	%	ASTM D570
Saturation, 23°C	9.3	--	%	ISO 62
Equilibrium, 50% RH	2.6	--	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.6	--	%	ISO 62

Hardness	Dry	Conditioned	Unit	Test Method
Rockwell Hardness (R-Scale)	120	--		ASTM D785
Ball Indentation Hardness	200	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3500	1360	MPa	ISO 527-2
Tensile Strength				
Yield, -40°C	137	142	MPa	ASTM D638
Yield, 23°C	90.0	48.0	MPa	ASTM D638
Yield, 80°C	40.0	30.0	MPa	ASTM D638
Yield, 121°C	30.0	25.0	MPa	ASTM D638
Yield, 23°C	85.0	43.0	MPa	ISO 527-2
Break, -40°C	130	80.0	MPa	ASTM D638
Break, 23°C	90.0	70.0	MPa	ASTM D638
Break, 80°C	35.0	30.0	MPa	ASTM D638
Break, 121°C	25.0	20.0	MPa	ASTM D638
Tensile Elongation				
Yield, -40°C	3.0	3.0	%	ASTM D638
Yield, 23°C	4.0	22	%	ASTM D638, ISO 527-2
Yield, 80°C	25	25	%	ASTM D638
Yield, 121°C	27	30	%	ASTM D638
Break, -40°C	5.0	3.0	%	ASTM D638
Break, 23°C	12	> 100	%	ASTM D638
Break, 80°C	> 100	> 100	%	ASTM D638
Break, 121°C	> 100	> 100	%	ASTM D638
Nominal Tensile Strain at Break (23°C)	10	> 50	%	ISO 527-2
Flexural Modulus				
-40°C	3370	4200	MPa	ASTM D790
23°C	3170	970	MPa	ASTM D790
65°C	600	--	MPa	ASTM D790
90°C	440	--	MPa	ASTM D790
121°C	385	--	MPa	ASTM D790
23°C	2800	--	MPa	ISO 178
Flexural Strength				
-40°C	183	168	MPa	ASTM D790
23°C	110	42.0	MPa	ASTM D790
65°C	30.0	--	MPa	ASTM D790
121°C	21.0	--	MPa	ASTM D790
23°C	95.0	--	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				ASTM D256
-40°C	32	21	J/m	
23°C	48	170	J/m	
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	190	--	°C	ASTM D648
1.8 MPa, Unannealed	75.0	--	°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	8.1E-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	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity				
1.50 mm	> 1.0E+13	--	ohms·cm	ASTM D257
--	> 1.0E+15	--	ohms·cm	IEC 60093
Comparative Tracking Index	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	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	--		
Additional Information	Dry	Conditioned	Unit	Test Method
Drop Weight Impact Strength (23°C)	122	> 271	J	Internal Method

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	

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

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

