

Product Information

Mar 2017

Ultramid® 8202C HS BK102 **Polyamide 6**


[Email PDF Datasheet](#) | [Print/Save Version](#)
Product Description

Ultramid 8202C HS BK102 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 BK102 is generally recommended for applications such as gears, valves, fittings, insulators, bushings, slides, window hardware, wiring devices, textile components and furniture casters.

PHYSICAL	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.13	
Mold Shrinkage (1/8" bar, in/in)		0.009	
Moisture, %	D-570		
(24 Hour)		1.6	
(50% RH)		2.6	
(Saturation)		9.3	
MECHANICAL	ASTM Test Method	Dry	Conditioned
Tensile Strength, Yield, MPa (psi)	D-638		
-40°C (-40°F)		137 (19,900)	142 (20,600)
23°C (73°F)		90 (13,100)	48 (6,960)
80°C (176°F)		40 (5,800)	30 (4,350)
121°C (250°F)		30 (4,350)	25 (3,620)
Tensile Strength, Break, MPa (psi)	D-638		
-40°C (-40°F)		130 (18,900)	80 (11,600)
23°C (73°F)		90 (13,100)	70 (10,200)
80°C (176°F)		35 (5,070)	30 (4,350)
121°C (250°F)		25 (3,620)	20 (2,900)
Elongation, Yield, %	D-638		
-40°C (-40°F)		3	3
23°C (73°F)		4	22
80°C (176°F)		25	25
121°C (250°F)		27	30
Elongation, Break, %	D-638		
-40°C (-40°F)		5	3
23°C (73°F)		12	>100
80°C (176°F)		>100	>100
121°C (250°F)		>100	>100
Flexural Modulus, MPa (psi)	D-790		
-40°C (-40°F)		3,370 (489,000)	4,200 (609,000)
23°C (73°F)		3,170 (460,000)	970 (141,000)
65°C (149°F)		600 (87,000)	-
90°C (194°F)		440 (63,800)	-
121°C (250°F)		385 (55,800)	-
Flexural Strength, MPa (psi)	D-790		
-40°C (-40°F)		183 (26,500)	168 (24,400)
23°C (73°F)		110 (16,000)	42 (6,090)
65°C (149°F)		30 (4,350)	-
121°C (250°F)		21 (3,040)	-
Rockwell Hardness, R Scale	D-785	120	-
IMPACT	ASTM Test Method	Dry	Conditioned
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
-40°C (-40°F)		32 (0.6)	21 (0.4)
23°C (73°F)		48 (0.9)	171 (3.2)
Drop Weight Impact, ft-lbs, 23°C	BASF Drop Weight Impact Test	90	>200
THERMAL	ASTM Test Method	Dry	Conditioned
Melting Point, °C(°F)	D-3418	220 (428)	-
Heat Deflection @ 264 psi (1.8 MPa) °C(°F)	D-648	75 (167)	-
Heat Deflection @ 66 psi (.45 MPa) °C(°F)	D-648	190 (374)	-
Coef. of Linear Thermal Expansion, mm/mm °C (in/in °F)	E-831	0.81 X10-4	-
UL RATINGS	UL Test Method	Property Value	
Flammability Rating, .71mm	UL94	V-2	
Relative Temperature Index, .71mm	UL746B		
Mechanical w/o Impact, °C		95	
Mechanical w/ Impact, °C		95	
Electrical, °C		130	
Flammability Rating, 1.5mm	UL94	V-2	

Relative Temperature Index, 1.5mm	UL746B		
Mechanical w/o Impact, °C		105	
Mechanical w/ Impact, °C		105	
Electrical, °C		130	
Flammability Rating, 3.0mm	UL94	V-2	
Relative Temperature Index, 3.0mm	UL746B		
Mechanical w/o Impact, °C		105	
Mechanical w/ Impact, °C		105	
Electrical, °C		130	
Flammability Rating, 6.0mm	UL94	V-2	
Relative Temperature Index, 6.0mm	UL746B		
Mechanical w/o Impact, °C		105	
Mechanical w/ Impact, °C		105	
Electrical, °C		130	
ELECTRICAL	ASTM Test Method	Dry	Conditioned
Volume Resistivity, 1.5 mm	D-257	>1E13	-

Processing Guidelines

Material Handling

Max. Water content: 0.15%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80°C (176°F) is recommended. Drying time is dependent on moisture level, however 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 240-285°C (464-545°F)

Mold Temperature 65-80°C (149-176°F)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

A mold temperature of 65-80°C (149-176°F) is recommended, however temperatures of as low as 10°C (50°F) can be used where applicable.

Pressures

Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Fill Rate

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing.

Note

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required.

BASF Corporation
Engineering Plastics
1609 Biddle Avenue
Wyandotte, MI 48192

General Information: 800-BC-RESIN
Technical Assistance: 800-527-TECH (734-324-5150)
Web address: <http://www.plasticsportal.com/usa>

 **BASF**
We create chemistry