

Product description

Ultramid® 8333G HI HS BK102 is a 33% glass reinforced, impact modified PA6 injection molding compound pigmented black developed for applications requiring improved dry as molded toughness in combination with a balance of strength, stiffness and excellent moldability/surface aesthetics.

Ultramid® 8333G HI HS BK102 is generally recommended for application such as front wheel chair wheels, bicycle wheels, power tool housings, chain saw housings, clips and fasteners, hose clamps and window hardware.

Injection Molding

PROCESSING

injection molding, Melt temperature, range 270 - 295
injection molding, Mold temperature, range 80 - 95

Material Handling

Max. Water content: 0.08%

Material is supplied in sealed containers and drying prior to molding in a dehumidifying or desiccant dryer is recommended. Drying parameters are dependent upon the actual percentage of moisture in the pellets and typical pre-drying conditions are 2-4 hours at 180F (83C). Further information concerning safe handling procedures can be obtained from the Safety Data Sheet (MSDS), or by contacting your BASF representative.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. In order to check the availability of products please contact us or our sales agency.

Product Information

Typical values for uncoloured product at 23 °C ¹⁾	Test method	Unit	Values ²⁾
Properties			dry / cond.
Polymer abbreviation	-	-	PA6-GF33
Filler content: Glass fiber (GF), glass balls (GB), Mineral (M)	-	%	GF33
Density	ISO 1183	kg/m ³	1340 / -
Water absorption, 24 h in water, 23 °C	ISO 62	%	0.9
Moisture absorption, equilibrium 23°C/50% r.h.	similar to ISO 62	%	1.5
Water absorption, equilibrium in water at 23°C	similar to ISO 62	%	5.5
Processing			dry / cond.
Melt temperature, Injection moulding/Extrusion	-	°C	270 - 295
Mould temperature, Injection moulding	-	°C	80 - 95
Injection molding cylinder temperature 1 (feed zone)	-	°C	245 - 275
Injection molding cylinder temperature 2 (compression)	-	°C	260 - 285
Injection molding cylinder temperature 3 (metering-zone, head room of screw)	-	°C	270 - 295
Injection molding cylinder temperature 4 (die)	-	°C	270 - 295
Flammability			
Burning Behav. at 1.5 mm nom. thickn.	IEC 60695-11-10	class	HB
Burning Behav. at thickness d = 0.81 mm	IEC 60695-11-10	class	HB
UL 94 rating at 3 mm thickness	UL-94, IEC 60695	class	HB
RTI, electrical, d = 0.8 mm	UL-746B	°C	140
RTI, electrical, d = 1.6 mm	UL-746B	°C	140
RTI, electrical, d = 3.2 mm	UL-746B	°C	140
RTI, mechanical, under impact stress, d = 1.6 mm	UL-746B	°C	115
RTI, mechanical, under impact stress, d = 3.2 mm	UL-746B	°C	120
RTI, mechanical, without impact stress, d = 0.8 mm	UL-746B	°C	130
RTI, mechanical, without impact stress, d = 1.6 mm	UL-746B	°C	140
RTI, mechanical, without impact stress, d = 3.2 mm	UL-746B	°C	140
Mechanical properties			dry / cond.
Tensile modulus	ISO 527-1/-2	MPa	9250 / -
Yield stress, 50 mm/min	ISO 527-1/-2	MPa	137 / -
Yield strain, 50 mm/min	ISO 527-1/-2	%	2.4 / -
Flexural strength	ISO 178	MPa	210 / -
Flexural modulus	ISO 178	MPa	8460 / -
Charpy unnotched impact strength (23°C)	ISO 179/1eU	kJ/m ²	68 / -
Charpy notched impact strength (23°C)	ISO 179/1eA	kJ/m ²	15 / -
Charpy notched impact strength (-30°C)	ISO 179/1eA	kJ/m ²	10 / -
Izod notched impact strength (23°C)	ISO 180/A	kJ/m ²	16 / -
Izod notched impact strength (-40°C)	ISO 180/A	kJ/m ²	13 / -
Thermal properties			dry / cond.
Melting temperature, DSC	ISO 11357-1/-3	°C	217
HDT A (1.80 MPa)	ISO 75-1/-2	°C	201
HDT B (0.45 MPa)	ISO 75-1/-2	°C	220

Footnotes

1) If product name or properties don't state otherwise.

2) The asterisk symbol "*" signifies inapplicable properties.

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