

BASF Ultramid® 8233G HS BK-106 33% Glass Filled PA6 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 30% Glass Fiber Filled

Material Notes:

Ultramid 8233G HS BK-106 is a heat stabilized, weather resistant, 33% glass fiber reinforced PA6 injection molding compound offering excellent strength, stiffness, high temperature performance and dimensional stability. This balance of engineering properties in combination with excellent processability make it ideal in applications replacing metal, resulting in an overall cost and weight savings.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-8233G-HS-BK-106-33-Glass-Filled-PA6-Dry.php

Physical Properties	Metric	English	Comments
Density	1.39 g/cc	0.0502 lb/in ³	ISO 1183
Water Absorption	1.1 %	1.1 %	24 hour; ISO Test
	6.4 %	6.4 %	ISO 62
Moisture Absorption at Equilibrium	1.8 %	1.8 %	23°C/50% R.H.; ISO 62
Relative Viscosity	2.6 cP	2.6 cP	ISO Test; 96 % SAV
Viscosity Measurement	50	50	Formic Acid
Linear Mold Shrinkage	0.0030 cm/cm	0.0030 in/in	ASTM Data; MD

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	121	121	ASTM Test
Tensile Strength at Break	160 MPa	23200 psi	0.2 in/min; ASTM Test
	70.0 MPa	10200 psi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	70.0 MPa	10200 psi	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
	85.0 MPa	12300 psi	ASTM Test
	@Temperature 80.0 °C	@Temperature 176 °F	
	85.0 MPa	12300 psi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	210 MPa	30500 psi	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	210 MPa	30500 psi	

Mechanical Properties	Metric @ Temperature -40.0 °C	English @ Temperature -40.0 °F	ASTM Test Comments
Tensile Strength, Ultimate	155 MPa	22500 psi	5mm/min; ISO 527
Elongation at Break	2.0 %	2.0 %	5mm/min; ISO 527
	2.0 %	2.0 %	0.2 in/min; ASTM Test
	3.0 %	3.0 %	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	3.0 %	3.0 %	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	7.0 %	7.0 %	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	7.0 %	7.0 %	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	7.0 %	7.0 %	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
	7.0 %	7.0 %	ASTM Test
	@Temperature 80.0 °C	@Temperature 176 °F	
Tensile Modulus	10.5 GPa	1520 ksi	1mm/min; ISO 527
	4.015 GPa	582.3 ksi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	4.66 GPa	676 ksi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	10.4 GPa	1510 ksi	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Strength	225 MPa	32600 psi	ISO Data
Flexural Modulus	8.70 GPa	1260 ksi	ISO Data
Izod Impact, Notched (ISO)	8.50 kJ/m ²	4.04 ft-lb/in ²	ISO Test
	6.00 kJ/m ²	2.86 ft-lb/in ²	ISO Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Charpy Impact Unnotched	5.50 J/cm ²	26.2 ft-lb/in ²	ISO 179
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179

Mechanical Properties	Metric	English	Comments
	0.550 J/cm ²	2.52 ft-lb/in ²	ISO 179
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	38.0 µm/m-°C	21.1 µin/in-°F	ASTM Test
	@Temperature -30.0 - 30.0 °C	@Temperature -22.0 - 86.0 °F	
Melting Point	220 °C	428 °F	10 K/min
	220 °C	428 °F	ASTM Test
Deflection Temperature at 0.46 MPa (66 psi)	215 °C	419 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	ISO 75
	208 °C	406 °F	ASTM Test
Flammability, UL94	HB	HB	
	@Thickness 0.710 mm	@Thickness 0.0280 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	IEC 60093

Processing Properties	Metric	English	Comments
Melt Temperature	275 °C	527 °F	Injection molding
Mold Temperature	95.0 °C	203 °F	Injection molding

Descriptive Properties	Value	Comments
Color	BK-106	
Commercial Status	Active America	
Form	Pellets	
Impact Modified	No	
Primary Processing Technique	Injection Molding	
Processing	Injection Molding	

Descriptive Properties	Value	Comments
UL,UL-C	Yes	stabilized or stable to heat

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