

BASF Ultramid® 8202C HS PA6 (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Unreinforced, Flame Retardant

Material Notes:

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

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-8202C-HS-PA6-Dry.php

Physical Properties	Metric	English	Comments
Density	1.13 g/cc	0.0408 lb/in ³	ISO 1183
Water Absorption	1.6 %	1.6 %	24 hour; ISO Test
	9.3 %	9.3 %	ISO 62
Moisture Absorption at Equilibrium	2.6 %	2.6 %	23°C/50% R.H.; ISO 62
Relative Viscosity	2.6 cP	2.6 cP	ISO Test; 96 % SAV
Viscosity Measurement	48	48	Formic Acid
Linear Mold Shrinkage	0.0090 cm/cm	0.0090 in/in	ASTM Data; MD

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM Test
Tensile Strength at Break	90.0 MPa	13100 psi	0.2 in/min; ASTM Test
	25.0 MPa	3630 psi	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
	25.0 MPa	3630 psi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	35.0 MPa	5080 psi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	35.0 MPa	5080 psi	ASTM Test
	@Temperature 80.0 °C	@Temperature 176 °F	
	130 MPa	18900 psi	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	130 MPa	18900 psi	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Mechanical Properties	Metric	English	Comments
	90.0 MPa	13100 psi	2 in/min; ASTM Test
	30.0 MPa	4350 psi	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
	30.0 MPa	4350 psi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	40.0 MPa	5800 psi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	40.0 MPa	5800 psi	ASTM Test
	@Temperature 80.0 °C	@Temperature 176 °F	
	137 MPa	19900 psi	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	137 MPa	19900 psi	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Elongation at Break	7.0 %	7.0 %	50mm/min, Nominal strain; ISO 527
	12 %	12 %	2 in/min; ASTM Test
	>= 100 %	>= 100 %	
	5.0 %	5.0 %	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	5.0 %	5.0 %	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	>= 100 %	>= 100 %	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	>= 100 %	>= 100 %	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	>= 100 %	>= 100 %	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
Elongation at Yield	4.0 %	4.0 %	50mm/min; ISO 527
	4.0 %	4.0 %	2 in/min; ASTM Test
	3.0 %	3.0 %	

Mechanical Properties	Metric @Temperature -40.0 °C	English @Temperature -40.0 °F	ASTM Test Comments
	3.0 % @Temperature -40.0 °C	3.0 % @Temperature -40.0 °F	ISO Data
	25 % @Temperature 80.0 °C	25 % @Temperature 176 °F	ASTM Test
	25 % @Temperature 80.0 °C	25 % @Temperature 176 °F	ISO Data
	27 % @Temperature 120 °C	27 % @Temperature 248 °F	ASTM Test
	27 % @Temperature 120 °C	27 % @Temperature 248 °F	ISO Data
Tensile Modulus	3.70 GPa	537 ksi	1mm/min; ISO 527
	0.550 GPa @Temperature 120 °C	79.8 ksi @Temperature 248 °F	ISO Data
	0.750 GPa @Temperature 80.0 °C	109 ksi @Temperature 176 °F	ISO Data
	4.09 GPa @Temperature -40.0 °C	593 ksi @Temperature -40.0 °F	ISO Data
Flexural Strength	95.0 MPa	13800 psi	ISO Data
	110 MPa	16000 psi	ASTM Test
	21.0 MPa @Temperature 120 °C	3050 psi @Temperature 248 °F	ASTM Test
	30.0 MPa @Temperature 65.0 °C	4350 psi @Temperature 149 °F	ASTM Test
	183 MPa @Temperature -40.0 °C	26500 psi @Temperature -40.0 °F	ASTM Test
Flexural Modulus	2.80 GPa	406 ksi	ISO Data
	3.17 GPa	460 ksi	ASTM Test
	0.385 GPa @Temperature 120 °C	55.8 ksi @Temperature 248 °F	ASTM Test

Mechanical Properties	Metric	English	Comments
	@Temperature 93.0 °C	@Temperature 199 °F	
	0.600 GPa	87.0 ksi	ASTM Test
	@Temperature 65.0 °C	@Temperature 149 °F	
Izod Impact, Notched	0.320 J/cm	0.599 ft-lb/in	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.480 J/cm	0.899 ft-lb/in	ASTM Test
	@Thickness 3.17 mm	@Thickness 0.125 in	
Charpy Impact Unnotched	NB	NB	ISO 179
Charpy Impact, Notched	0.350 J/cm ²	1.67 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	81.0 µm/m-°C	45.0 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)	165 °C	329 °F	ISO 75
	190 °C	374 °F	ASTM Test
Deflection Temperature at 1.8 MPa (264 psi)	65.0 °C	149 °F	ISO 75
	75.0 °C	167 °F	ASTM Test
Flammability, UL94	V-2	V-2	
	@Thickness 0.700 mm	@Thickness 0.0276 in	
	V-2	V-2	
	@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
Comparative Tracking Index	600 V	600 V	IEC 60112

Processing Properties	Metric	English	Comments
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Melt Temperature Processing Properties	260 °C Metric	500 °F English	Injection molding Comments
Mold Temperature	80.0 °C	176 °F	Injection molding

Descriptive Properties	Value	Comments
Color	Natural	
Commercial Status	Active America	
Form	Pellets	
Impact Modified	No	
Primary Processing Technique	Injection Molding	
Processing	Injection Molding	
Special characteristic	Heat stabilized or stable to heat	
UL.Ul-C	Yes	

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