

BASF Ultramid® 8202C PA6 (Dry)

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

Material Notes:

Ultramid 8202C is a modified crystalline and low viscosity, nylon 6 injection molding homopolymer. It is also available in heat stabilized (Ultramid 8202C HS) and/or pigmented versions. Its unique crystalline structure results in increased strength, stiffness, heat distortion temperature and performance under load as a homopolymer. It also cycles faster while maintaining properties and resistance.

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-8202C-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	

Mechanical Properties	Metric @ Temperature -40.0 °C	English @ Temperature -40.0 °F	ISO Data Comments
Tensile Strength, Yield	88.0 MPa	12800 psi	50mm/min; ISO 527
	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	
Elongation at Break	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

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

Mechanical Properties	Metric	English	ASTM Test Comments
	0.440 GPa @Temperature 120 °C	63.8 ksi @Temperature 248 °F	ASTM Test
	@Temperature 93.0 °C	@Temperature 199 °F	
	0.600 GPa @Temperature 65.0 °C	87.0 ksi @Temperature 149 °F	ASTM Test
	@Temperature 65.0 °C	@Temperature 149 °F	
Izod Impact, Notched	0.320 J/cm @Temperature -40.0 °C	0.599 ft-lb/in @Temperature -40.0 °F	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.480 J/cm @Thickness 3.17 mm	0.899 ft-lb/in @Thickness 0.125 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 @Temperature -30.0 - 30.0 °C	45.0 µin/in-°F @Temperature -22.0 - 86.0 °F	ASTM Test
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 @Thickness 0.700 mm	V-2 @Thickness 0.0276 in	
	V-2 @Thickness 3.00 mm	V-2 @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
Melt Temperature	260 °C	500 °F	Injection molding
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	
UL.UL-C	Yes	

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