

BASF Ultramid® 8202 HS PA6 (Dry)

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

Material Notes:

Ultramid 8202 HS is a heat stabilized, low viscosity, general purpose nylon 6 injection molding homopolymer. It possesses the combination of strength and toughness and has excellent chemical and abrasion resistance. The heat stabilizer system extends the retention of properties at the more elevated temperatures. Excellent in filling thin walls or areas.

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Density	0.932 g/cc	0.0337 lb/in ³	Melt; ISO 1183
	1.13 g/cc	0.0408 lb/in ³	ISO 1183
Water Absorption	1.6 %	1.6 %	24 hour; ISO Test
	9.5 %	9.5 %	ISO 62
Moisture Absorption at Equilibrium	2.7 %	2.7 %	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	0.012 cm/cm	0.012 in/in	ASTM Data; MD

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	119	119	ASTM Test
Tensile Strength at Break	75.0 MPa	10900 psi	0.2 in/min; ASTM Test
Tensile Strength, Yield	78.0 MPa	11300 psi	50mm/min; ISO 527
	79.0 MPa	11500 psi	2 in/min; ASTM Test
	25.0 MPa	3630 psi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	25.0 MPa	3630 psi	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
	35.0 MPa	5080 psi	ASTM Test
	@Temperature 80.0 °C	@Temperature 176 °F	
	35.0 MPa	5080 psi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	

Mechanical Properties	Metric 126 MPa	English 18300 psi	Comments
	@Temperature -40.0 °C	@Temperature -40.0 °F	ASTM Test
	126 MPa	18300 psi	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Elongation at Break	25 %	25 %	50mm/min, Nominal strain; ISO 527
	55 %	55 %	2 in/min; ASTM Test
Elongation at Yield	4.0 %	4.0 %	50mm/min; ISO 527
	4.0 %	4.0 %	2 in/min; ASTM Test
	36 %	36 %	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	36 %	36 %	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
	42 %	42 %	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	42 %	42 %	ASTM Test
	@Temperature 80.0 °C	@Temperature 176 °F	
Tensile Modulus	2.70 GPa	392 ksi	1mm/min; ISO 527
	0.360 GPa	52.2 ksi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	0.485 GPa	70.3 ksi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
Flexural Strength	85.0 MPa	12300 psi	ISO Data
	108 MPa	15700 psi	ASTM Test
	17.0 MPa	2470 psi	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
	20.0 MPa	2900 psi	ASTM Test
	@Temperature 93.0 °C	@Temperature 199 °F	
	30.0 MPa	4350 psi	ASTM Test
	@Temperature 65.0 °C	@Temperature 149 °F	
	170 MPa	24700 psi	

Mechanical Properties	Metric @ Temperature -40.0 °C	English @ Temperature -40.0 °F	ASTM Test Comments
Flexural Modulus	2.40 GPa	348 ksi	ISO Data
	2.83 GPa	410 ksi	ASTM Test
	0.305 GPa @Temperature 120 °C	44.2 ksi @Temperature 248 °F	ASTM Test
	0.350 GPa @Temperature 93.0 °C	50.8 ksi @Temperature 199 °F	ASTM Test
	0.500 GPa @Temperature 65.0 °C	72.5 ksi @Temperature 149 °F	ASTM Test
Izod Impact, Notched	0.480 J/cm @Temperature -40.0 °C	0.899 ft-lb/in @Temperature -40.0 °F	ASTM Test
	0.580 J/cm @Thickness 3.17 mm	1.09 ft-lb/in @Thickness 0.125 in	ASTM Test
Charpy Impact Unnotched	NB	NB	ISO 179
	5.10 J/cm ² @Temperature -30.0 °C	24.3 ft-lb/in ² @Temperature -22.0 °F	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	83.0 μm/m-°C @Temperature -30.0 - 30.0 °C	46.1 μin/in-°F @Temperature -22.0 - 86.0 °F	ASTM Test
Specific Heat Capacity	3.728 J/g-°C	0.8910 BTU/lb-°F	Melt
Thermal Conductivity	0.264 W/m-K	1.83 BTU-in/hr-ft ² -°F	Melt
Melting Point	220 °C	428 °F	10 K/min
Deflection Temperature at 0.46 MPa (66 psi)	150 °C	302 °F	ISO 75
	178 °C	352 °F	ASTM Test
Deflection Temperature at 1.8 MPa (264 psi)	60.0 °C	140 °F	ISO 75
	65.0 °C	149 °F	ASTM Test
	V-2	V-2	

Thermal Properties	Metric	English	Comments
	@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
Dielectric Constant	4.1	4.1	ASTM Data
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	4.3	4.3	ASTM Data
	@Frequency 1e+9 Hz	@Frequency 1e+9 Hz	
Dielectric Strength	37.0 kV/mm	940 kV/in	IEC 60243-1
Dissipation Factor	0.010	0.010	ASTM Data
	@Frequency 1e+9 Hz	@Frequency 1e+9 Hz	
Comparative Tracking Index	0.010	0.010	ASTM Data
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
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	
Special characteristic	Heat stabilized or stable to heat	
UL.UL-C	Yes	

Descriptive Properties	Value	Comments
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