

## BASF Ultramid® 8202 HS PA6 (Conditioned)

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-Conditioned.php](http://www.lookpolymers.com/polymer_BASF-Ultramid-8202-HS-PA6-Conditioned.php)

Physical Properties	Metric	English	Comments
Density	0.932 g/cc	0.0337 lb/in <sup>3</sup>	Melt; ISO 1183
	1.13 g/cc	0.0408 lb/in <sup>3</sup>	dry; ISO 1183
Water Absorption	1.6 %	1.6 %	24 hour; ISO Test
	9.5 %	9.5 %	beginning dry; ISO 62
Moisture Absorption at Equilibrium	2.7 %	2.7 %	beginning dry (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
Tensile Strength at Break	60.0 MPa	8700 psi	0.2 in/min; ASTM Test
	80.0 MPa	11600 psi	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Tensile Strength, Yield	80.0 MPa	11600 psi	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	36.0 MPa	5220 psi	2 in/min; ASTM Test
Tensile Strength, Yield	36.0 MPa	5220 psi	50mm/min; ISO 527
	20.0 MPa	2900 psi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
Tensile Strength, Yield	20.0 MPa	2900 psi	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	

Mechanical Properties	30.0 MPa Metric	4350 psi English	Comments
	@Temperature 80.0 °C	@Temperature 176 °F	
	30.0 MPa	4350 psi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	110 MPa	16000 psi	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	110 MPa	16000 psi	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Elongation at Break	>= 50 %	>= 50 %	50mm/min, Nominal strain; ISO 527
	>= 100 %	>= 100 %	2 in/min; ASTM Test
	2.5 %	2.5 %	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	2.5 %	2.5 %	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Elongation at Yield	16 %	16 %	50mm/min; ISO 527
	16 %	16 %	2 in/min; ASTM Test
	35 %	35 %	ASTM Test
	@Temperature 80.0 °C	@Temperature 176 °F	
	35 %	35 %	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	40 %	40 %	ASTM Test
	@Temperature 120 °C	@Temperature 248 °F	
	40 %	40 %	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
Tensile Modulus	0.970 GPa	141 ksi	1mm/min; ISO 527
	0.320 GPa	46.4 ksi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	0.550 GPa	79.8 ksi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	4.00 GPa	580 ksi	ISO Data

Mechanical Properties	Metric	English	Comments
Flexural Strength	25.0 MPa	3630 psi	ISO Data
	35.0 MPa	5080 psi	ASTM Test
	154 MPa	22300 psi	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Modulus	0.740 GPa	107 ksi	ASTM Test
	0.770 GPa	112 ksi	ISO Data
Izod Impact, Notched	0.430 J/cm	0.806 ft-lb/in	ASTM Test
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	NB	NB	ASTM Test
	@Thickness 3.17 mm	@Thickness 0.125 in	

Thermal Properties	Metric	English	Comments
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 <sup>2</sup> -°F	Melt
Melting Point	220 °C	428 °F	10 K/min

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	

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