

BASF Ultramid® 8202CQ PA6 (Dry)

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

Material Notes:

Ultramid 8202CQ is a low viscosity, PA6 injection molding homopolymer, possessing a modified crystalline structure or 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-8202CQ-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
	9.2 %	9.2 %	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	0.010 cm/cm	0.010 in/in	ASTM Data; MD

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	120	120	ASTM Test
Tensile Strength, Yield	86.0 MPa	12500 psi	50mm/min; ISO 527
	90.0 MPa	13100 psi	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	
	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	

Mechanical Properties	Metric @ Temperature -40.0 °C	English @ Temperature -40.0 °F	ISO Data Comments
Elongation at Break	10 %	10 %	50mm/min, Nominal strain; ISO 527
	10 %	10 %	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
Tensile Modulus	3.60 GPa	522 ksi	1mm/min; ISO 527
	0.490 GPa	71.1 ksi	ISO Data
	@Temperature 120 °C	@Temperature 248 °F	
	0.675 GPa	97.9 ksi	ISO Data
	@Temperature 80.0 °C	@Temperature 176 °F	
	3.73 GPa	541 ksi	ISO Data
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Strength	90.0 MPa	13100 psi	ISO Data
	110 MPa	16000 psi	ASTM Test
	21.0 MPa	3050 psi	ASTM Test
	@Temperature 120 °C	@Temperature 248 °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	ASTM Test
	@Temperature 120 °C	@Temperature 248 °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/cm²	1.67 ft-lb/in²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	81.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	45.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM Test
	@Temperature -30.0 - 30.0 $^{\circ}\text{C}$	@Temperature -22.0 - 86.0 $^{\circ}\text{F}$	
Melting Point	220 $^{\circ}\text{C}$	428 $^{\circ}\text{F}$	10 K/min
	220 $^{\circ}\text{C}$	428 $^{\circ}\text{F}$	ASTM Test
Deflection Temperature at 0.46 MPa (66 psi)	145 $^{\circ}\text{C}$	293 $^{\circ}\text{F}$	ISO 75
	190 $^{\circ}\text{C}$	374 $^{\circ}\text{F}$	ASTM Test
Deflection Temperature at 1.8 MPa (264 psi)	60.0 $^{\circ}\text{C}$	140 $^{\circ}\text{F}$	ISO 75
	75.0 $^{\circ}\text{C}$	167 $^{\circ}\text{F}$	ASTM Test
Flammability, UL94	HB	HB	
	@Thickness 0.700 mm	@Thickness 0.0276 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	450 V	450 V	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	260 $^{\circ}\text{C}$	500 $^{\circ}\text{F}$	Injection molding
Mold Temperature	80.0 $^{\circ}\text{C}$	176 $^{\circ}\text{F}$	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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