

BASF Ultramid® 8281 HS GP PA6 (Dry)

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

Material Notes:

Description: Ultramid 8281 HS GP is an unreinforced, heat stabilized PA6 rot molding compound. It is available in natural and black and can be painted. It exhibits excellent balance of engineering properties including strength, stiffness, and toughness combined with excellent abrasion resistance and self lubricating characteristics. In addition, the heat stabilizer system extends its retention of properties at elevated temperatures. Chemical resistance is excellent to greases, oils and hydrocarbons. All data is from injection molded specimens with the exception of Drop Weight Impact.

Applications: Ultramid 8281 HS GP is generally recommended for applications such as fuel tanks, chemical storage tanks, hydraulic oil reservoirs, cyclones, and heat resistance containers. Information provided by BASF

Order this product through the following link:

http://www.lookpolymers.com/polymer_BASF-Ultramid-8281-HS-GP-PA6-Dry.php

Physical Properties	Metric	English	Comments
Density	1.13 g/cc	0.0408 lb/in ³	ASTM D792
Moisture Absorption at Equilibrium	1.3 %	1.3 %	24 Hours; ASTM D570
	2.7 %	2.7 %	50% RH; ASTM D570
	9.5 %	9.5 %	Saturation; ASTM D570
Linear Mold Shrinkage	0.0508 cm/cm	0.0508 in/in	1/8" bar

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	116	116	ASTM D785
Tensile Strength, Yield	20.0 MPa	2900 psi	ASTM D638
	@Temperature 65.0 °C	@Temperature 149 °F	
	72.0 MPa	10400 psi	ASTM D638
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	114 MPa	16500 psi	ASTM D638
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Elongation at Break	>= 100 %	>= 100 %	ASTM D638
Flexural Strength	15.0 MPa	2180 psi	ASTM D790
	@Temperature 121 °C	@Temperature 250 °F	
	20.0 MPa	2900 psi	ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
	30.0 MPa	4350 psi	

Mechanical Properties	Metric @ Temperature 65.0 °C	English @ Temperature 149 °F	ASTM D790 Comments
	100 MPa	14500 psi	ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	154 MPa	22300 psi	ASTM D790
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Flexural Modulus	0.300 GPa	43.5 ksi	ASTM D790
	@Temperature 121 °C	@Temperature 250 °F	
	0.360 GPa	52.2 ksi	ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
	0.530 GPa	76.9 ksi	ASTM D790
	@Temperature 65.0 °C	@Temperature 149 °F	
	2.69 GPa	390 ksi	ASTM D790
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.76 GPa	400 ksi	ASTM D790
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Izod Impact, Notched (ISO)	45.0 kJ/m²	21.4 ft-lb/in²	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	55.0 kJ/m²	26.2 ft-lb/in²	ASTM D256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Dart Drop, Total Energy	67.8 J	50.0 ft-lb	BASF

Thermal Properties	Metric	English	Comments
CTE, linear	74.0 µm/m-°C	41.1 µin/in-°F	ASTM E831
Melting Point	220 °C	428 °F	ASTM D3418
Deflection Temperature at 1.8 MPa (264 psi)	60.0 °C	140 °F	ASTM D648

Processing Properties	Metric	English	Comments
Dry Time	2 - 4 hour	2 - 4 hour	
Moisture Content	<= 0.20 %	<= 0.20 %	

Descriptive Properties	Value	Comments
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Commercial Status Descriptive Properties	North America Value	Comments
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Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China