

# Ultramid® 8202 HS

## Polyamide 6

### Product Description

Ultramid 8202 HS is a heat stabilized, low viscosity, general purpose PA6 injection molding. 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.

### Applications

Ultramid 8202 HS is generally recommended for drapery hardware, gears, fittings, furniture casters, bearings, handles, clips, fasteners and thin parts.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm <sup>3</sup>	1183	1.13	
Moisture, %	62		
(24 Hour)		1.6	
(50% RH)		2.7	
(Saturation)		9.5	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23°C		2,700	970
80°C		485	550
120°C		360	320
150°C		290	310
Tensile stress at yield, MPa	527		
-40°C		126	110
23°C		78	36
80°C		35	30
120°C		25	20
150°C		20	15
Tensile strain at yield, %	527		
23°C		4	16
Nominal strain at break, %	527		
23°C		25	>50
Flexural Strength, MPa	178		
23°C		85	25
Flexural Modulus, MPa	178		
23°C		2,400	770
IMPACT	ISO Test Method	Dry	Conditioned
Charpy Notched, kJ/m <sup>2</sup>	179		
23°C		3.5	-
Charpy Unnotched, kJ/m <sup>2</sup>	179		
-30°C		51	-
23°C		N	-
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	220	-
HDT A, °C	75	60	-
HDT B, °C	75	150	-
ELECTRICAL	ISO Test Method	Dry	Conditioned
Comparative Tracking Index	IEC 60112	600	-
Volume Resistivity (Ohm)	IEC 60093	>1E13	-
Dielectric Strength, KV/mm	IEC 60243-1	37	-
UL RATINGS	UL Test Method	Property Value	
Flammability Rating, .71mm	UL94	V-2	
Relative Temperature Index, .71mm	UL746B		
Mechanical w/o Impact, °C		95	
Mechanical w/ Impact, °C		95	
Electrical, °C		130	
Flammability Rating, 1.5mm	UL94	V-2	
Relative Temperature Index, 1.5mm	UL746B		
Mechanical w/o Impact, °C		105	
Mechanical w/ Impact, °C		105	
Electrical, °C		130	
Flammability Rating, 3.0mm	UL94	V-2	
Relative Temperature Index, 3.0mm	UL746B		
Mechanical w/o Impact, °C		105	
Mechanical w/ Impact, °C		105	

Electrical, °C		130
Flammability Rating, 6.0mm	UL94	V-2
Relative Temperature Index, 6.0mm	UL746B	
Mechanical w/o Impact, °C		105
Mechanical w/ Impact, °C		105
Electrical, °C		130

## Processing Guidelines

### Material Handling

Max. Water content: 0.15%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80°C (176°F) is recommended. Drying time is dependent on moisture level, however 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

### Typical Profile

Melt Temperature 240-285°C (464-545°F)

Mold Temperature 65-80°C (149-176°F)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

### Mold Temperatures

A mold temperature of 65-80°C (149-176°F) is recommended, however temperatures of as low as 10°C (50°F) can be used where applicable.

### Pressures

Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

### Fill Rate

Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing.

## Note

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