

Product Description

Ultramid 8202C is a modified crystalline and low viscosity, PA6 injection molding homopolymer. It is also available in heat stabilized (Ultramid 8202C HS) and/or pigmented versions. Its unique crystalline structure results in increased strength, stiffness, heat distortion temperature and performance under load as a homopolymer. It also cycles faster while maintaining properties and chemical resistance.

Applications

Ultramid 8202C is ideally suited for applications such as: furniture casters, gears, window hardware, and fittings, insulators, bushings, valves, relays, wiring devices, and other electrical components.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.13	
Moisture, %	62		
(24 Hour)		1.6	
(50% RH)		2.6	
(Saturation)		9.3	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
-40°C		4,090	-
23°C		3,700	1,360
80°C		750	-
120°C		550	-
150°C		445	-
Tensile stress at yield, MPa	527		
-40°C		137	142
23°C		88	43
80°C		40	30
120°C		30	25
150°C		25	-
Tensile stress at break, MPa	527		
Tensile strain at yield, %	527		
23°C		4	22
Nominal strain at break, %	527		
-40°C		5.0	3.0
23°C		7	>50
80°C		>100	>100
120°C		>100	>100
Flexural Strength, MPa	178		
23°C		95	-
Flexural Modulus, MPa	178		
23°C		2,800	-
IMPACT	ISO Test Method	Dry	Conditioned
Charpy Notched, kJ/m ²	179		
23°C		3.5	-
Charpy Unnotched, kJ/m ²	179		
23°C		N	-
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	220	-
HDT A, °C	75	65	-
HDT B, °C	75	165	-
ELECTRICAL	ISO Test Method	Dry	Conditioned
Comparative Tracking Index	IEC 60112	600	-
Volume Resistivity (Ohm)	IEC 60093	>1E13	-
UL RATINGS	UL Test Method	Property Value	
Flammability Rating, .71mm	UL94	V-2	
Relative Temperature Index, .71mm	UL746B		
Mechanical w/o Impact, °C		65	
Mechanical w/ Impact, °C		65	
Electrical, °C		125	
Flammability Rating, 1.5mm	UL94	V-2	
Relative Temperature Index, 1.5mm	UL746B		
Mechanical w/o Impact, °C		85	
Mechanical w/ Impact, °C		75	
Electrical, °C		125	
Flammability Rating, 3.0mm	UL94	V-2	

Relative Temperature Index, 3.0mm	UL746B	
Mechanical w/o Impact, °C		85
Mechanical w/ Impact, °C		75
Electrical, °C		125
Flammability Rating, 6.0mm	UL94	V-2
Relative Temperature Index, 6.0mm	UL746B	
Mechanical w/o Impact, °C		85
Mechanical w/ Impact, °C		75
Electrical, °C		125

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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