Product Information

Aug 2013

Ultramid® 8202
Polyamide 6

BASF The Chemical Company

Product Description

Ultramid 8202 is a low viscosity, general purpose PA6 injection molding homopolymer exhibiting excellent melt fluidity for filling thin sections. It is also available in heat stabilized (Ultramid 8202 HS) and/or pigmented versions. It combines good strength, stiffness and toughness as well as excellent heat, chemical and abrasion resistance.

Applications

Ultramid 8202 is generally recommended for applications such as gears, fittings, casters, beatings, clips, fasteners, plugs, caps, and filter bowls.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	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		
23C		2,700	970
80C		485	550
121C		360	320
Tensile stress at yield, MPa	527		
-40C		126	110
23C		78	36
80C		35	30
121C		25	20
Tensile strain at yield, %	527		
23C		4	16
Nominal strain at break, %	527		
23C		25	>50
Flexural Strength, MPa	178		
23C		85	25
Flexural Modulus, MPa	178		
23C		2,400	770
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Charpy Notched, kJ/m^2	179		
23C		3.5	-
Charpy Unnotched, kJ/m^2	179		
23C		N	-
-30C		51	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	220	-
HDT A, C	75	60	-

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ELECTRICAL	ISO Test Method	Dry	Conditioned
Comparative Tracking Index	IEC 60112	600	-
Volume Resistivity	IEC 60093	>1E13	-
Dielectric Constant (100 Hz)	IEC 60250	3.5	-
Dielectric Constant (1 MHz)	IEC 60250	3.3	-
Dissipation Factor (100 Hz)	IEC 60250	100	-
Dissipation Factor (1 MHz)	IEC 60250	200	-
Dielectric Strength, KV/mm	IEC 60243-1	37	-

UL RATINGS	UL Test Method	Property Value
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

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 degC (176 degF) is recommended. Drying time is dependent on moisture level, but 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile
Melt Temperature 240-285 degC (464-545 degF)
Mold Temperature 65-80 degC (149-176 degF)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures
A mold temperature of 65-80 degC (149-176 degF) is recommended, but temperatures of as low as 10 degC (50 degF) 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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