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	ASTM Test Method	Property Value	
Specific Gravity	D-792	1.13	
Mold Shrinkage (1/8" bar, in/in)		0.012	
Moisture, %	D-570		
(24 Hour)		1.6	
(50% RH)		2.7	
(Saturation)		9.5	
MECHANICAL	**ASTM Test Method**	**Dry**	**Conditioned**
Tensile Strength, Yield, MPa (psi)	D-638		
-40C (-40F)		126 (18,300)	110 (16,000)
23C (73F)		79 (11,500)	36 (5,220)
80C (176F)		35 (5,070)	30 (4,350)
121C (250F)		25 (3,620)	20 (2,900)
Tensile Strength, Break, MPa (psi)	D-638		
23C (73F)		75 (10,900)	60 (8,700)
Elongation, Yield, %	D-638		
23C (73F)		4	16
80C (176F)		42	35
121C (250F)		36	40
Elongation, Break, %	D-638		
23C (73F)		55	>100
Flexural Modulus, MPa (psi)	D-790		
-40C (-40F)		3,010 (436,000)	3,660 (531,000)
23C (73F)		2,830 (410,000)	740 (107,000)
65C (149F)		500 (72,500)	-
90C (194F)		350 (50,700)	-
121C (250F)		305 (44,200)	
Flexural Strength, MPa (psi)	D-790		
-40C (-40F)		170 (24,600)	154 (22,300)
23C (73F)		108 (15,700)	35 (5,070)
65C (149F)		30 (4,350)	-
90C (194F)		20 (2,900)	-
121C (250F)		17 (2,460)	-

ASF Corporation
ngineering Plastics
509 Biddle Avenue
yandotte, MI 48192

Rockwell Hardness, R Scale	D-785	119	-
IMPACT	**ASTM Test Method**	**Dry**	**Conditioned**
Notched Izod Impact, J/M (ft-lbs/in)	D-256		
-40C (-40F)		48 (0.9)	43 (0.8)
23C (73F)		58 (1.1)	NB
Drop Weight Impact, ft-lbs, 23C	BASF Drop Weight Impact Test	105	>200
THERMAL	**ASTM Test Method**	**Dry**	**Conditioned**
Melting Point, C(F)	D-3418	220 (428)	-
Heat Deflection @ 264 psi (1.8 MPa) C(F)	D-648	65 (149)	-
Heat Deflection @ 66 psi (.45 MPa) C(F)	D-648	178 (352)	-
Coef. of Linear Thermal Expansion, mm/mm C (in/in F)	E-831	0.83 X10-4	-

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

ELECTRICAL	**ASTM Test Method**	**Dry**	**Conditioned**
Volume Resistivity, 1.5 mm	D-257	>1E13	-
Dielectric Strength, Short Time, 1.5 mm	D-149	22	-

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

Note

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required.

ASF Corporation
ngineering Plastics
509 Biddle Avenue
yandotte, MI 48192