

Ultramid® A3Z HP UV Polyamide 66

Ultramid A3Z HP UV is an impact modified PA66 containing heat and ultraviolet light stabilizers. Designed for maximum toughness at low temperatures, Ultramid A3Z HP UV offers a unique combination of impact performance and excellent processability.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.07	
Mold Shrinkage, parallel, %	294-4	1.6	
Mold Shrinkage, normal, %	294-4	2.1	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23°C		1,800	-
Tensile stress at yield, MPa	527		
23°C		47	-
Tensile strain at break, %	527		
23°C		66	-
Flexural Modulus, MPa	178		
23°C		1,770	-
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m²	180		
-40°C		21	-
23°C		80	-
Charpy Notched, kJ/m²	179		
-30°C		20	-
23°C		85	-

Charpy Unnotched, kJ/m²

179

23°C		279	-
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	260	-
HDT A, °C	75	61	-

Processing Guidelines

Material Handling

Max. Water content: 0.15%

Material is supplied in sealed containers and drying prior to molding in a dehumidifying or desiccant dryer is recommended. Drying parameters are dependent upon the actual percentage of moisture in the pellets and typical pre-drying conditions are 2-4 hours at 180F (83C). Further information concerning safe handling procedures can be obtained from the Safety Data Sheet (MSDS), or by contacting your BASF representative.

Typical Profile

Melt Temperature 280-304°C (536-579°F)

Mold Temperature 60-100°C (140-212°F)

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

Back Pressure 0-0.35 MPa (0-50 psi)

Screw Speed 40-80 rpm

Screw Compression Ratio 3:1 to 4:1

Mold Temperatures

This product can be processed over a wide range of mold temperatures; however, for applications where aesthetics are critical, a mold surface temperature of 60-100°C (140-212°F) is recommended.

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.

Note

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