

Ultramid® A3K Q601

Polyamide 66

Ultramid A3K Q601 is an unreinforced easy flowing, injection molding grade PA66.

Applications

Typical applications include fast processing high stress technical parts.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.13	
Moisture, %	62		
(50% RH)		2.8	
(Saturation)		8.5	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23°C		3,000	1,200
Tensile stress at yield, MPa	527		
23°C		83	54
Tensile strain at yield, %	527		
23°C		5	25
Nominal strain at break, %	527		
23°C		25	>50
Flexural Strength, MPa	178		
23°C		100	-
Flexural Modulus, MPa	178		
23°C		2,800	1,100
IMPACT	ISO Test Method	Dry	Conditioned

Izod Notched Impact, kJ/m²	180		
23°C		5.2	14
Charpy Notched, kJ/m²	179		
-30°C		4	4
23°C		5.7	16
Charpy Unnotched, kJ/m²	179		
-30°C		N	N
23°C		N	N
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	260	-
HDT A, °C	75	75	-

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 280-300°C (536-572°F)

Mold Temperature 40-80°C (104-176°F)

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

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 40-80°C (104-176°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.

Fill Rate

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

Note

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