

Product Information

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Ultramid® A3K Q601 **Polyamide 66**


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Product Description

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

Applications

Typical applications include fast processing high stress technical parts or electrically insulating parts.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm³	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		
23°C		5.7	16
-30°C		4	4
Charpy Unnotched, kJ/m²	179		
23°C		N	N
-30°C		N	N
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, °C	3146	260	-
HDT A, °C	75	75	-
UL RATINGS	UL Test Method	Property Value	
Flammability Rating, 0.4mm	UL94	V-2	
Relative Temperature Index, 0.4mm	UL746B		
Mechanical w/o Impact, °C		65	
Mechanical w/ Impact, °C		65	
Electrical, °C		65	
Flammability Rating, 0.75mm	UL94	V-2	
Relative Temperature Index, 0.75mm	UL746B		
Mechanical w/o Impact, °C		80	
Mechanical w/ Impact, °C		80	
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		80	
Electrical, °C		125	
Flammability Rating, 3.0mm	UL94	V-2	
Relative Temperature Index, 3.0mm	UL746B		
Mechanical w/o Impact, °C		90	
Mechanical w/ Impact, °C		80	
Electrical, °C		125	

Processing Guidelines
Material Handling

Max. Water content: 0.20%

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 280-300 degC (536-572 degF)
Mold Temperature 40-80 degC (104-176 degF)
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 degC (104-176 degF) 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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