

Ultramid® A3K R01

Polyamide 66



Product Description

Ultramid A3K R01 is an unreinforced 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/cm ³	1183	1.14	
Moisture, %	62		
(50% RH)		2.8	
(Saturation)		8.5	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23C		3,100	1,100
Tensile stress at yield, MPa	527		
23C		85	50
Tensile strain at yield, %	527		
23C		5	20
Nominal strain at break, %	527		
23C		30	>50
Flexural Modulus, MPa	178		
23C		2,900	-
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m ²	180		
-40C		5.6	-
23C		5.3	-
Charpy Notched, kJ/m ²	179		
-40C		4.5	-
23C		4.8	20
Charpy Unnotched, kJ/m ²	179		
-30C		N	N
23C		N	N
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, C	3146	260	-
HDT A, C	75	75	-
HDT B, C	75	220	-
ELECTRICAL	ISO Test Method	Dry	Conditioned
Comparative Tracking Index	IEC 60112	0	-
Dielectric Strength, KV/mm	IEC 60243-1	22	-
UL RATINGS	UL Test Method	Property Value	
Flammability Rating, 0.4mm	UL94	V-2	

Relative Temperature Index, 0.4mm	UL746B	
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 80C (176F) is recommended. Drying time is dependent on moisture level, however 2-4 hours is generally sufficient. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 280-300C (536-572F)

Mold Temperature 40-80C (104-176F)

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 40-80C (104-176F) 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

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.