

Ultramid® B3K

Polyamide 6

Product Description

Ultramid B3K is an easy flowing, stabilized PA6 product for fast processing.

Applications

Typical applications include technical parts with wall thicknesses greater than 2 mm.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.13	
Moisture, %	62		
(50% RH)		3	
(Saturation)		9.5	
RHEOLOGICAL	ISO Test Method	Dry	Conditioned
Melt Volume Rate (275 C/5 Kg), cc/10min.	1133	160	-
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23C		3,000	1,000
Tensile stress at yield, MPa	527		
23C		85	40
Tensile stress at break, MPa	527		
23C		80	-
Tensile strain at yield, %	527		
23C		3.7	20
Nominal strain at break, %	527		
23C		20	>50
Flexural Modulus, MPa	178		
23C		2,600	-
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m ²	180		
23C		5.6	-
Charpy Notched, kJ/m ²	179		
-30C		4	-
23C		5.5	60
Charpy Unnotched, kJ/m ²	179		
-30C		100	-
23C		N	N
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, C	3146	220	-
HDT A, C	75	65	-
HDT B, C	75	180	-
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		0.85 X10-4	-
ELECTRICAL	ISO Test Method	Dry	Conditioned

Comparative Tracking Index	IEC 60112	600	600
Volume Resistivity (Ohm-m)	IEC 60093	1E13	1E10
Dielectric Constant (100 Hz)	IEC 60250	4	-
Dielectric Constant (1 MHz)	IEC 60250	3.5	7
Dissipation Factor (100 Hz), E-4	IEC 60250	100	-
Dissipation Factor (1 MHz), E-4	IEC 60250	230	3,000

UL RATINGS	UL Test Method	Property Value
Relative Temperature Index, 0.71mm	UL746B	
Electrical, C		130
Flammability Rating, 1.5mm	UL94	HB
Relative Temperature Index, 1.5mm	UL746B	
Mechanical w/o Impact, C		115
Mechanical w/ Impact, C		75
Electrical, C		130
Flammability Rating, 3.0mm	UL94	V-2
Relative Temperature Index, 3.0mm	UL746B	
Mechanical w/o Impact, C		115
Mechanical w/ Impact, C		75
Electrical, C		130
Flammability Rating, 6.0mm	UL94	V-2
Relative Temperature Index, 6.0mm	UL746B	
Mechanical w/o Impact, C		115
Mechanical w/ Impact, C		75
Electrical, C		130

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 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: 240-285C (464-545F)
 Mold Temperature: 65-80C (149-176F)
 Injection and Packing Pressure: 35-125 bar (500-1500 psi)

Mold Temperatures

A mold temperature of 65-80C (149-176F) is recommended, however temperatures of as low as 10C (50F) 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

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