Product Information

Aug 2013

Ultramid® B3GK24
Polyamide 6

BASF
The Chemical Company

Product Description

Ultramid B3GK24 is 30% combined glass-fiber and glass bead injection molding PA6 grade for industrial articles having very high dimensional stability.

Applications

Typical applications include automobile ashtrays and housings for electronics.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	1183	1.34	
Moisture, %	62		
(50% RH)		2	
(Saturation)		6.6	
RHEOLOGICAL	**ISO Test Method**	**Dry**	**Conditioned**
Melt Volume Rate (275 C/5 Kg), cc/10min.	1133	70	-
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23C		6,000	3,000
Tensile stress at break, MPa	527		
23C		105	60
Tensile strain at break, %	527		
23C		3.5	15
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Charpy Notched, kJ/m^2	179		
23C		5	11
-30C		5	-
Charpy Unnotched, kJ/m^2	179		
23C		40	90
-30C		39	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	220	-
HDT A, C	75	200	-
HDT B, C	75	215	-
Coef. of Linear Thermal Expansion, Parallel, mm/mm C		0.38 X10-4	-
ELECTRICAL	**ISO Test Method**	**Dry**	**Conditioned**
Comparative Tracking Index	IEC 60112	425	425
Volume Resistivity	IEC 60093	1E13	1E10
Dielectric Constant (1 MHz)	IEC 60250	3.9	4.6
Dissipation Factor (1 MHz)	IEC 60250	200	700
UL RATINGS	**UL Test Method**	**Property Value**	
Flammability Rating, 1.5mm	UL94	HB	
Relative Temperature Index, 1.5mm	UL746B		
Mechanical w/o Impact, C		65	

ASF Corporation
ngineering Plastics
509 Biddle Avenue
yandotte, MI 48192

Mechanical w/ Impact, C	65
Electrical, C	65

Processing Guidelines

Material Handling
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). Recommended moisture levels for achieving optimum surface qualities and mechanical properties is 0.05% - 0.12%. Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet (MSDS), or by contacting your BASF representative.

Typical Profile
Melt Temperature 270-295 degC (518-563 degF)
Mold Temperature 80-95 degC (176-203 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 80-95 degC (176-203 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.

Back pressure can be utilized to provide uniform melt consistency and reduce trapped air and gas. Minimal back pressure should be utilized to prevent glass breakage.

Fill Rate
Fast fill rates are recommended to ensure uniform melt delivery to the cavity and prevent premature freezing. Surface appearance is directly affected by injection rate.

Note

ASF Corporation
ngineering Plastics
509 Biddle Avenue
yandotte, MI 48192