Product Information

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Ultramid® A3HG6 HR

Polyamide 66

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Product Description

Ultramid A3HG6 HR is a 30% glass reinforced, injection molding PA66 grade. It offers good resistance to hydrolysis.

Applications

Typical applications include automotive radiator mounting frame.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm³	1183	1.37	
Moisture, %	62		
(50% RH)		1.7	
(Saturation)		5.5	
RHEOLOGICAL	**ISO Test Method**	**Dry**	**Conditioned**
Melt Volume Rate (- °C/- Kg), cc/10min.	1133	25	-
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23°C		10,100	-
Tensile stress at break, MPa	527		
23°C		188	-
Tensile strain at break, %	527		
23°C		3.3	-
Flexural Strength, MPa	178		
23°C		275	-
Flexural Modulus, MPa	178		
23°C		8,850	-
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m^2	180		
-40°C		8.3	-
23°C		11	-
Charpy Notched, kJ/m^2	179		
-30°C		9	-
23°C		11	-
Charpy Unnotched, kJ/m^2	179		
-30°C		63	-
23°C		77	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, °C	3146	260	-
HDT A, ° C	75	249	-

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 80 degC (176 degF) is recommended. Drying time is dependent on moisture level, but 2-4 hours is generally sufficient. 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 Safety Data Sheet. Alternatively, please contact your BASF representative.

Typical Profile

Melt Temperature 280-305 degC (536-581 degF)
Mold Temperature 80-90 degC (176-194 degF)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

A mold temperature of 80-90 degC (176-194 degF) is recommended, but temperatures of as low as 45 degC (113 degF) and as high as 105 degC (221 degF) 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.

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

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