Product Information

Ultramid® A3L HP BK20465
Polyamide 66

BASF
The Chemical Company

Product Description

Ultramid A3L HP BK20465 is an unreinforced, heat stabilized, impact modified, high flow, nylon 66 for injection molding. This grade has excellent flow and improved ambient and low temperature toughness.

Applications

Typical applications include fasteners and clamps.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm	1183	1.10	
MECHANICAL	**ISO Test Method**	**Dry**	**Conditioned**
Tensile Modulus, MPa	527		
23C		2,440	-
Tensile stress at yield, MPa	527		
23C		63.5	-
Tensile strain at yield, %	527		
23C		6.2	-
Nominal strain at break, %	527		
23C		28	-
Flexural Modulus, MPa	178		
23C		2,280	-
IMPACT	**ISO Test Method**	**Dry**	**Conditioned**
Izod Notched Impact, kJ/m^2	180		
23C		18	-
-40C		12	-
Charpy Notched, kJ/m^2	179		
23C		19	-
-30C		14	-
THERMAL	**ISO Test Method**	**Dry**	**Conditioned**
Melting Point, C	3146	260	-
HDT A, C	75	70	-

Processing Guidelines

Material Handling
Nylon 66 materials must be properly dried in order to provide parts with optimum strength and toughness. Nylon 66 materials are hygroscopic and will become degraded by excessive moisture during the injection molding process. For unopened bag/box, dry at 60 degC (140 degF) for 1-2 hours. For material exposed to the atmosphere, if additional drying is needed, dry at 66 degC (150 degF) or until the moisture level is between 0.04 - 0.20%.

Typical Profile
Melt Temperature: 288-305 degC (550-581 degF)
Mold Temperature: 60-100 degC (140-212 degF)
Injection Pressure: 35-125 MPa (5000-18000 psi)

Back Pressure: 0-0.35 MPa (0-50 psi)
Screw RPM 40-80
Screw Compression Ratio:3:1-4:1

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 60-100 degC (140-212 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.