

Ultramid® 1503-2 NF2004

Polyamide 66

Product Description

Ultramid 1503-2 NF2004 is a 33% glass reinforced, heat stabilized injection molding PA6/6.

PHYSICAL	ISO Test Method	Property Value	
Density, g/cm ³	1183	1.40	
Moisture, %	62		
(50% RH)		1.7	
(Saturation)		5.7	
MECHANICAL	ISO Test Method	Dry	Conditioned
Tensile Modulus, MPa	527		
23C		10,800	7,400
Tensile stress at break, MPa	527		
23C		210	145
Tensile strain at break, %	527		
23C		3.0	5.0
Flexural Modulus, MPa	178		
23C		9,900	6,300
IMPACT	ISO Test Method	Dry	Conditioned
Izod Notched Impact, kJ/m ²	180		
23C		11	15
Charpy Notched, kJ/m ²	179		
-30C		11	11
23C		12	15
Charpy Unnotched, kJ/m ²	179		
-30C		75	75
23C		90	100
THERMAL	ISO Test Method	Dry	Conditioned
Melting Point, C	3146	260	-
HDT A, C	75	255	-
HDT B, C	75	264	-

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 60C (140F) for 1-2 hours. For material exposed to the atmosphere, if additional drying is needed, dry at 66C (150F) or until the moisture level is between 0.04 - 0.20%.

Typical Profile

Melt Temperature: 288-305C (550-581F)

Mold Temperature: 60-100C (140-212F)

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 60-100C (140-212F) 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

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