## **Product Information**

Aug 2020

# Ultramid® A3H UN00002 Polyamide 66



## **Product Description**

Ultramid A3H UN00002 is a high heat aging resistant, unreinforced injection molding PA66 grade for highly stressed parts such as bearing cages, gear-wheels, coil formers and cable connectors.

Sensity, g/cm3	BUYCICAL	ICO Took Mathaul	B	week Value
So Test Method   Dry   Conditioned   Dry   D	PHYSICAL Page 1992		Property Value	
Seriale Modulus, MPa   527   2,970   - 1				
23C   2,970   -			Dry	Conditioned
Sensile stress at yield, MPa   S27   S28   S29		527		
23C 82 - fensile strain at yield, % 527 23C 4.5 - felexural Modulus, MPa 178 23C 2,740 - MPACT ISO Test Method Dry Conditioned and Notched Impact, kJ/m² 180 -40C 4.2 - 23C 5.3 - Charpy Notched, kJ/m² 179 -40C 2.5 - 23C 5.0 - Charpy Unnotched, kJ/m² 179 -30C 23C N - Charpy Unnotched, kJ/m² 179 -30C N - Char			2,970	-
Sensile strain at yield, %	-	527		
23C 4.5 - Elexural Modulus, MPa 178 23C 2,740 - MPACT ISO Test Method Dry Conditioned  270d Notched Impact, kJ/m² 180 -40C 4.2 - 23C 5.3 - Charpy Notched, kJ/m² 179 -40C 2.5 - 23C 5.0 - 23C 5.0 - Charpy Unnotched, kJ/m² 179 -30C Notehod NJ/m² 179 -30C NJ/m² 17			82	-
Secural Modulus, MPa	Tensile strain at yield, %	527		
23C   2,740   -	23C		4.5	-
MPACT         ISO Test Method         Dry         Conditioned           2od Notched Impact, kJ/m²         180         4.2         -           -40C         4.2         -         -           23C         5.3         -         -           Charpy Notched, kJ/m²         179         -	Flexural Modulus, MPa	178		
20d Notched Impact, kJ/m² 180  -40C 4.2 - 23C 5.3 - Charpy Notched, kJ/m² 179  -40C 2.5 - 23C 5.0 - 23C 5.0 - 23C 5.0 - 23C	23C		2,740	-
-40C	IMPACT	ISO Test Method	Dry	Conditioned
23C   5.3   -	Izod Notched Impact, kJ/m <sup>2</sup>	180		
Charpy Notched, kJ/m² 179  -40C 2.5 - 23C 5.0 - Charpy Unnotched, kJ/m² 179  -30C N N - 23C N - 24CHERMAL ISO Test Method Dry Conditioned Melting Point, C 3146 260 - 24CT A, C 75 73 -	-40C		4.2	-
-40C 2.5 - 23C 5.0 - Charpy Unnotched, kJ/m² 179 -30C N - 23C N - 23C N - Welting Point, C 3146 260 - Welting Point, C 75 73 -	23C		5.3	-
23C       5.0       -         Charpy Unnotched, kJ/m²       179         -30C       N       -         23C       N       -         THERMAL       ISO Test Method       Dry       Conditioned         Melting Point, C       3146       260       -         HDT A, C       75       73       -	Charpy Notched, kJ/m <sup>2</sup>	179		
Charpy Unnotched, kJ/m²     179       -30C     N     -       23C     N     -       THERMAL     ISO Test Method     Dry     Conditioned       Melting Point, C     3146     260     -       MDT A, C     75     73     -	-40C		2.5	-
-30C         N         -           23C         N         -           CHERMAL         ISO Test Method         Dry         Conditioned           Melting Point, C         3146         260         -           HDT A, C         75         73         -	23C		5.0	-
23C N - THERMAL ISO Test Method Dry Conditioned Melting Point, C 3146 260 - HDT A, C 75 73 -	Charpy Unnotched, kJ/m <sup>2</sup>	179		
HERMALISO Test MethodDryConditionedMelting Point, C3146260-HDT A, C7573-	-30C		N	
Melting Point, C     3146     260     -       HDT A, C     75     73     -	23C		N	-
Melting Point, C     3146     260     -       HDT A, C     75     73     -	THERMAL	ISO Test Method	Dry	Conditioned
HDT A, C 75 73 -	Melting Point, C			
	HDT A, C	75	73	-
	HDT B, C	75	190	-

## **Processing Guidelines**

## **Material Handling**

Max. Water content: 0.20%

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 280-300C (536-572F) Mold Temperature 40-80C (104-176F) Injection and Packing Pressure 35-125 bar (500-1500 psi)

# Ultramid® A3H UN00002



#### **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 40-80C (104-176F) 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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