

# Nilamid® A3 H CF20

Polyamide 66

Celanese Corporation

**PROSPECTOR®**

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## Technical Data

### Product Description

NILAMID® A3 H CF20 is a Polyamide 66 (Nylon 66) compound, 20% carbon fiber reinforced, heat stabilized.

This compound is intended for injection molding.

NILAMID® A3 H CF20 is primarily designed for the Automotive industry. It is also suitable for Industrial & Consumer applications.

### General

Material Status	• Commercial: Active
Literature <sup>1</sup>	• <a href="#">Technical Datasheet (English)</a> • <a href="#">Technical Datasheet (German)</a> • <a href="#">Technical Datasheet (Italian)</a>
Search for UL Yellow Card	• <a href="#">Celanese Corporation</a> • <a href="#">Nilamid®</a>
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight
Additive	• Heat Stabilizer
Features	• Heat Stabilized
Uses	• Automotive Applications • Consumer Applications • Industrial Applications
Processing Method	• Injection Molding

Physical	Nominal Value Unit	Test Method
Density (23°C)	1.23 g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage		ISO 294-4
Across Flow : 23°C	0.50 %	
Flow : 23°C	0.30 %	
Water Absorption		ISO 62
24 hr, 23°C	1.0 %	
Saturation, 23°C	6.0 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus (23°C)	15500 MPa	ISO 527-2
Tensile Stress (Yield, 23°C)	200 MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.0 %	ISO 527-2

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-30°C	5.0 kJ/m <sup>2</sup>	
23°C	5.5 kJ/m <sup>2</sup>	
Charpy Unnotched Impact Strength		ISO 179/1eU
-30°C	40 kJ/m <sup>2</sup>	
23°C	50 kJ/m <sup>2</sup>	
Notched Izod Impact Strength		ISO 180/A
-30°C	5.0 kJ/m <sup>2</sup>	
23°C	6.0 kJ/m <sup>2</sup>	

Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	258 °C	ISO 75-2/B
1.8 MPa, Unannealed	250 °C	ISO 75-2/A
Continuous Use Temperature <sup>3</sup>	130 °C	IEC 60216
Ball Pressure Test		IEC 60695-10-2
125°C	Pass	
165°C	Pass	



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Electrical	Nominal Value Unit	Test Method
Surface Resistivity <sup>4</sup>	1.0E+3 ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+4 ohms·cm	IEC 60093
Electric Strength (2.00 mm)	2.4 kV/mm	IEC 60243-1
Comparative Tracking Index 3.20 mm, Solution A	< 100 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.8 mm	HB	
1.6 mm	HB	
3.2 mm	HB	
Oxygen Index	28 %	ISO 4589-2

## Notes

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

<sup>2</sup> Typical properties: these are not to be construed as specifications.

<sup>3</sup> 20000 hr

<sup>4</sup> 23°C



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### Where to Buy

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#### Supplier

**Celanese Corporation**

Florence, KY USA

**Telephone:** 800-833-4882

**Web:** <http://www.celanese.com/engineered-materials>

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#### Distributor

Please contact the supplier to find a distributor for Nilamid® A3 H CF20

