

# Amodel® A-1133 NL WH 505

## polyphthalamide

Amodel® A-1133 NL resin is a 33% glass reinforced polyphthalamide (PPA) which is distinguished by its high-reflectivity white color. This grade features a high deflection temperature for compatibility with SMT processes, and low moisture absorption.

- White: A-1133 NL WH 505

### General

Material Status	• Commercial: Active
Availability	<ul style="list-style-type: none"> <li>• Africa &amp; Middle East</li> <li>• Asia Pacific</li> <li>• Europe</li> <li>• Latin America</li> <li>• North America</li> </ul>
Filler / Reinforcement	• Glass Fiber, 33% Filler by Weight
Features	<ul style="list-style-type: none"> <li>• Chemical Resistant</li> <li>• Good Color Stability</li> <li>• High Reflectivity</li> <li>• Low Moisture Absorption</li> </ul>
Uses	<ul style="list-style-type: none"> <li>• Automotive Electronics</li> <li>• Housings</li> <li>• LEDs</li> </ul>
RoHS Compliance	• Contact Manufacturer
Automotive Specifications	• ASTM D6779 PA128G35
Appearance	• White
Forms	• Pellets
Processing Method	• Injection Molding

Physical	Typical Value	Unit	Test method
Density	1.54	g/cm <sup>3</sup>	ISO 1183/A
Molding Shrinkage			ASTM D955
Flow	0.20	%	
Across Flow	0.60	%	
Water Absorption (24 hr)	0.16	%	ASTM D570

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	12400	MPa	ASTM D638
Tensile Strength (Break)	179	MPa	ASTM D638
Tensile Elongation (Break)	1.8	%	ASTM D638
Flexural Modulus	11700	MPa	ASTM D790
Flexural Strength (Yield)	236	MPa	ASTM D790
Poisson's Ratio	0.41		ASTM E132

Impact	Typical Value	Unit	Test method
Notched Izod Impact	37	J/m	ASTM D256

Hardness	Typical Value	Unit	Test method
Rockwell Hardness (R-Scale)	125		ASTM D785

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Thermal	Typical Value Unit	Test method
Deflection Temperature Under Load 1.8 MPa, Unannealed	271 °C	ASTM D648
Melting Temperature	310 °C	ASTM D570
CLTE		ASTM E831
Flow : 0 to 100°C	2.3E-5 cm/cm/°C	
Flow : 160 to 249°C	1.4E-5 cm/cm/°C	
Transverse : 0 to 100°C	4.5E-6 cm/cm/°C	
Transverse : 160 to 249°C	1.0E-4 cm/cm/°C	

Injection	Typical Value Unit
Drying Temperature	120 °C
Drying Time	4.0 hr
Suggested Max Moisture	0.045 %
Rear Temperature	304 to 318 °C
Front Temperature	316 to 329 °C
Processing (Melt) Temp	321 to 343 °C
Mold Temperature	135 °C

### Injection Notes

A general purpose screw is recommended, with minimum back pressure.

### Storage:

- Amodel® compounds are shipped in moisture-resistant packages at moisture levels according to specifications. Sealed, undamaged bags should be preferably stored in a dry room at a maximum temperature of 50°C (122°F) and should be protected from possible damage. If only a portion of a package is used, the remaining material should be transferred into a sealable container. It is recommended that Amodel® resins be dried prior to molding following the recommendations found in this datasheet and/or in the Amodel® processing guide.

### Notes

Typical properties: these are not to be construed as specifications.

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