

# Amodel® AE-8950

## polyphthalamide

Amodel® AE-8950 is a 50% glass reinforced polyphthalamide (PPA) designed to work in the modern automotive electrical environment.

- Black: AE-8950 BK938

This grade features a high heat deflection temperature, high flexural modulus and high tensile strength, as well as excellent creep resistance and low moisture absorption.

### General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight	
Features	• Chemical Resistant • Creep Resistant • Good Dimensional Stability • Good Glycol Resistance • Good Stiffness • High Heat Resistance	• High Stiffness • High Strength • High Temperature Strength • Low Moisture Absorption • Non-Corrosive
Uses	• Automotive Electronics • Connectors	• Electrical Parts • Electrical/Electronic Applications
RoHS Compliance	• Contact Manufacturer	
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Typical Value	Unit	Test method
Density	1.68	g/cm <sup>3</sup>	ISO 1183/A

Mechanical	Typical Value	Unit	Test method
Tensile Modulus (23°C)	19800	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	280	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.1	%	ISO 527-2
Flexural Modulus (23°C)	18500	MPa	ISO 178
Flexural Stress (23°C)	400	MPa	ISO 178
Flexural Strain	2.3	%	ISO 178

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength (23°C)	12	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	80	kJ/m <sup>2</sup>	ISO 179/1eU
Notched Izod Impact Strength (23°C)	12	kJ/m <sup>2</sup>	ISO 180/1A

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Thermal	Typical Value	Unit	Test method
Heat Deflection Temperature 1.8 MPa, Unannealed	300	°C	ISO 75-2/A
Glass Transition Temperature	135	°C	DSC
Melting Temperature	325	°C	ISO 11357-3

Flammability	Typical Value	Unit	Test method
Flame Rating <sup>1</sup> (3.2 mm)	HB		UL 94

Injection	Typical Value	Unit
Drying Temperature	120	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.030 to 0.060	%
Rear Temperature	316 to 330	°C
Middle Temperature	316 to 330	°C
Front Temperature	324 to 340	°C
Processing (Melt) Temp	330 to 350	°C
Mold Temperature	150	°C

### Injection Notes

Injection Rate: 3-4 inch/second (7.5-10 cm/sec)

Holding Pressure: 50% of injection pressure

Mold Temperature:

- Higher tool temperatures might be required for thin wall sections

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.

<sup>1</sup> These flammability ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

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