

# Amodel® AE-8930 polyphthalamide

Amodel® AE-8930 is a 30% glass reinforced polyphthalamide (PPA) designed to work in the modern automotive electrical environment.

strength, excellent creep resistance, improved hydrolytic stability, resistance to glycol, and low moisture absorption.

This grade features a high heat deflection temperature, high flexural modulus and high tensile

- Black: AE-8930 BK938
- Natural: AE-8930 NT

## General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 30% 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	• Natural Color
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Typical Value	Unit	Test method
Density	1.45	g/cm <sup>3</sup>	ISO 1183/A

Mechanical	Typical Value	Unit	Test method
Tensile Modulus (23°C)	11900	MPa	ISO 527-1
Tensile Stress (Break, 23°C)	210	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.3	%	ISO 527-2
Flexural Modulus (23°C)	11000	MPa	ISO 178
Flexural Stress (23°C)	300	MPa	ISO 178
Flexural Strain	2.9	%	ISO 178

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength (23°C)	7.2	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	56	kJ/m <sup>2</sup>	ISO 179/1eU
Notched Izod Impact Strength (23°C)	7.2	kJ/m <sup>2</sup>	ISO 180/1A



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Thermal	Typical Value	Unit	Test method
Deflection Temperature Under Load 1.8 MPa, Unannealed	290	°C	ISO 75-2/A
Glass Transition Temperature	135	°C	DSC
Melting Temperature	325	°C	ISO 11357-3
CLTE			ASTM E831
Flow : -40°C <sup>1</sup>	2.3E-5	cm/cm/°C	
Flow : 23°C <sup>2</sup>	2.3E-5	cm/cm/°C	
Flow : 110°C <sup>3</sup>	2.7E-5	cm/cm/°C	
Transverse : -40°C <sup>4</sup>	3.3E-5	cm/cm/°C	
Transverse : 23°C <sup>5</sup>	3.1E-5	cm/cm/°C	
Transverse : 110°C <sup>6</sup>	3.5E-5	cm/cm/°C	

Electrical	Typical Value	Unit	Test method
Dielectric Constant			
60 Hz	4.35		ASTM D150 IEC 60250
1 MHz	4.02		ASTM D150
1 kHz	4.02		IEC 60250
Dissipation Factor (60 Hz)	7.0E-3		ASTM D150 IEC 60250
Comparative Tracking Index <sup>7</sup>	600	V	IEC 60112

Flammability	Typical Value	Unit	Test method
Flame Rating <sup>8</sup> (1.6 mm)	HB		UL 94
Glow Wire Flammability Index <sup>7</sup> (0.8 mm)	750	°C	IEC 60695-2-12

Injection	Typical Value	Unit
Drying Temperature	120	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.030 to 0.060	%
Rear Temperature	310 to 330	°C
Middle Temperature	315 to 330	°C
Front Temperature	325 to 335	°C
Processing (Melt) Temp	320 to 345	°C
Mold Temperature	150	°C



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### Injection Notes

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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.
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### Notes

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

<sup>1</sup> This value is equivalent to 0.23EE-04 by ISO 11359

<sup>2</sup> This is equivalent to 0.23EE-04 /°K by ISO 11359

<sup>3</sup> This is equivalent to 0.27EE-04 /°K by ISO 11359

<sup>4</sup> This is equivalent to 0.33EE-04 /°K by ISO 11359

<sup>5</sup> This is equivalent to 0.31EE-04 /°K by ISO 11359

<sup>6</sup> This is equivalent to 0.35EE-04 /°K by ISO 11359

<sup>7</sup> Tested at UL

<sup>8</sup> These flammability ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

Tested at UL

