

Amodel® AE-8930

polyphthalamide

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

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

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, 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 ³	ISO 1183/A

Mechanical	Typical Value	Unit	Test method
Tensile Modulus (23°C)	11900	MPa	ISO 527-2
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 ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	56	kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	7.2	kJ/m ²	ISO 180/1A

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Thermal	Typical Value	Unit	Test method
Heat Deflection Temperature 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 ¹	2.3E-5	cm/cm/°C	
Flow : 23°C ²	2.3E-5	cm/cm/°C	
Flow : 110°C ³	2.7E-5	cm/cm/°C	
Transverse : -40°C ⁴	3.3E-5	cm/cm/°C	
Transverse : 23°C ⁵	3.1E-5	cm/cm/°C	
Transverse : 110°C ⁶	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 ⁷	600	V	IEC 60112
Flammability	Typical Value	Unit	Test method
Flame Rating ⁸ (1.6 mm)	HB		UL 94
Glow Wire Flammability Index ⁷ (0.8 mm)	750	°C	IEC 60695-2-12

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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.

¹ This value is equivalent to 0.23EE-04 by ISO 11359

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

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

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

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

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

⁷ Tested at UL

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

Tested at UL



Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

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