Amodel® AE-8935

polyphthalamide

Amodel AE-8935 is a 35% glycol resistant glass-reinforced heat stabilized polyphtalamide (PPA) resin designed to work in the modern automotive electrical environment. It is distinguished by a high heat deflection temperature, high flexural modulus, high tensile strength and low moisture absorbtion. This grade displays excellent resistance to cracks which may occur during thermal shock cycling.

- Black: AE-8935 BK902

General		
Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight	
Features	• Chemical Resistant • Creep Resistant • Good Dimensional Stability • Good Stiffness • High Heat Resistance	• High Stiffness • High Strength • High Temperature Strength • Low Moisture Absorption
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	1.47	g/cm³	ISO 1183/A
Molding Shrinkage			ASTM D955
Flow	0.30	%	
Across Flow	0.80	%	
Water Absorption (Equilibrium)	0.16	%	ASTM D570

Mechanical	Typical Value	Unit	Test method
Tensile Modulus (23°C)	12600	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	220	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.4	%	ISO 527-2
Flexural Modulus (23°C)	12200	MPa	ISO 178
Flexural Stress (23°C)	300	MPa	ISO 178

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength (23°C)	11	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	96	kJ/m²	ISO 179/1eU

Thermal	Typical Value	Unit	Test method
Heat Deflection Temperature			ISO 75-2/A
1.8 MPa, Unannealed	290	°C	

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Electrical	Typical Value	Unit	Test method
Volume Resistivity	> 1.0E+16	ohms·cm	ASTM D257
Comparative Tracking Index (CTI)	> 600	V	UL 746

Flammability	Typical Value	Unit	Test method
Flame Rating [1] (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 352	°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] These flammability ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

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