

Amodel® AS-1935 HS

polyphthalamide

Amodel® AS-1935 HS is a 35% glass reinforced grade of polyphthalamide (PPA) resin developed specifically for improved performance in a 50/50 ethylene glycol and water environment. This material exceeds the performance required by the automotive industry for polymeric materials exposed to antifreeze at 226°F (108°C), even when tested at 275°F (135°C).

- Former PXM-12091
- Black: AS-1935 HS BK 328

General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 35% Filler by Weight	
Additive	• Heat Stabilizer	
Features	• Antifreeze Resistant • Chemical Resistant • Creep Resistant • Good Dimensional Stability • Good Glycol Resistance	• Good Stiffness • Heat Stabilized • High Heat Resistance • High Strength
Uses	• Automotive Applications • Automotive Under the Hood • Housings • Industrial Applications • Industrial Parts	• Machine/Mechanical Parts • Metal Replacement • Power/Other Tools • Thick-walled Parts • Valves/Valve Parts
RoHS Compliance	• RoHS Compliant	
Automotive Specifications	• FORD WSS-M4D861-A3	• HYUNDAI MS211-19 AS-1935 HS Color: BK 238 Black
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Typical Value	Unit	Test method
Density	1.49	g/cm ³	ISO 1183/A
Molding Shrinkage			ASTM D955
Flow	0.20	%	
Across Flow	0.60	%	

Mechanical	Typical Value	Unit	Test method
Tensile Modulus			
--	12500	MPa	ASTM D638
--	12600	MPa	ISO 527-2/1A/1
Tensile Strength			
Break	205	MPa	ASTM D638
Break	210	MPa	ISO 527-2

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Mechanical	Typical Value	Unit	Test method
Tensile Elongation (Break)	2.2	%	ASTM D638 ISO 527-2
Flexural Modulus			
--	11300	MPa	ASTM D790
--	11500	MPa	ISO 178
Flexural Stress			
--	300	MPa	ISO 178
Break	275	MPa	ASTM D790
Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength	8.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength	66	kJ/m ²	ISO 179/1eU
Notched Izod Impact			
--	65	J/m	ASTM D256
--	8.5	kJ/m ²	ISO 180/1A
Thermal	Typical Value	Unit	Test method
Heat Deflection Temperature			ISO 75-2/Af
1.8 MPa, Unannealed	290	°C	
Melting Temperature	323	°C	ISO 11357-3

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Injection	Typical Value	Unit
Drying Temperature	121	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.10	%
Hopper Temperature	79	°C
Rear Temperature	313 to 330	°C
Front Temperature	326 to 339	°C
Processing (Melt) Temp	330 to 350	°C
Mold Temperature	150	°C

Injection Notes

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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