

Solvay Specialty Polymers Amodel® AS-1933 HS Polyphthalamide (PPA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 30% Glass Fiber Reinforced

Material Notes:

Amodel AS-1933 HS is a 33% 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). Potential applications include a variety of automotive components such as thermostat housings, heater core endcaps, heater hose connectors, and water inlets, outlets and valves. - Black: AS-1933 HS BK 324 Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-AS-1933-HS-Polyphthalamide-PPA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in ³	ISO 1183/A
Filler Content	33 %	33 %	Glass Fiber Reinforcement
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ASTM D955
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	75.8 MPa	11000 psi	After Immersion in 50/50 Glycol/Water Mixture for 1,000 hours at 275°F (135°C); ASTM D638
	212 MPa	30700 psi	ISO 527-2
	221 MPa	32100 psi	ASTM D638
Elongation at Break	2.5 %	2.5 %	ASTM D638
	2.5 %	2.5 %	ISO 527-2
Tensile Modulus	7.58 GPa	1100 ksi	After Immersion in 50/50 Glycol/Water Mixture for 1,000 hours at 275°F (135°C); ASTM D638
	11.7 GPa	1700 ksi	ASTM D638
	12.6 GPa	1830 ksi	ISO 527-2
Flexural Strength	309 MPa	44800 psi	ISO 178
Flexural Yield Strength	313 MPa	45400 psi	ASTM D790
Flexural Modulus	10.6 GPa	1540 ksi	ISO 178

Mechanical Properties	10.8 GPa Metric	1570 ksi English	ASTM D790 Comments
Izod Impact, Notched	0.530 J/cm	0.993 ft-lb/in	After Immersion in 50/50 Glycol/Water Mixture for 1,000 hours at 275°F (135°C); ASTM D256
	0.910 J/cm	1.70 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	9.50 kJ/m ²	4.52 ft-lb/in ²	ISO 180/1A
Charpy Impact Unnotched	7.60 J/cm ²	36.2 ft-lb/in ²	ISO 179/1eU
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Melting Point	312 °C	594 °F	ISO 11357-3
Deflection Temperature at 1.8 MPa (264 psi)	277 °C	531 °F	Unannealed; ASTM D648
	278 °C	532 °F	Unannealed; ISO 75-2/Af

Processing Properties	Metric	English	Comments
Feed Temperature	79.4 °C	175 °F	Hopper Temperature
Rear Barrel Temperature	304 - 318 °C	579 - 604 °F	
Front Barrel Temperature	316 - 329 °C	601 - 624 °F	
Melt Temperature	321 - 343 °C	610 - 649 °F	
Mold Temperature	135 °C	275 °F	
Drying Temperature	121 °C	250 °F	
Dry Time	4.00 hour	4.00 hour	
Moisture Content	0.10 %	0.10 %	

Descriptive Properties	Value	Comments
Additive	Heat Stabilizer	
Appearance	Black	
Automotive Specifications	ASTM D4000 PA121 G35 Color: BK324 Black	
	ASTM D6779 PA121G35	
	BOSCH N28 BN05-OX1 BN0510-GF45-3Gsw01SO Color: BK324 Black	
	CHRYSLER MS-DB478 CPN4116 Color: Black	

Descriptive Properties	Value WSS-M4D861-A3 Color: BK324 Black	Comments
	GM GMP.PPA.019	
	GM GMW16360 GMW 16360P-PPA-GF35	
	ISO 1874 PA6T/6I/66, MH, 12-120, GF33 Color: BK324 Black	
	PSA Peugeot-Citroën SPA X62 4203	
	VALEO PDT NVB 10 057 Color: BK324 Black	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Antifreeze Resistant	
	Glycol Resistant	
	Good Chemical Resistance	
	Good Creep Resistance	
	Good Dimensional Stability	
	Good Stiffness	
	Heat Stabilized	
	High Heat Resistance	
	High Strength	
Forms	Pellets	
Generic	PPA	
Processing Method	Injection Molding	
RoHS Compliance	RoHS Compliant	
Uses	Automotive Applications	
	Automotive Under the Hood	
	Housings	

Descriptive Properties	Industrial Applications Value	Comments
	Industrial Parts	
	Machine/Mechanical Parts	
	Metal Replacement	
	Power/Other Tools	
	Thick-walled Parts	
	Valves/Valve Parts	

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