

Solvay Specialty Polymers Amodel® A-1945 HSL Polyphthalamide (PPA) (discontinued **)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 50% Glass Fiber Reinforced

Material Notes:

Amodel A-1945 HSL is a 45% glass reinforced grade of polyphthalamide (PPA) resin. This grade was developed specifically for improved performance in a 50/50 ethylene glycol and water environment. This material was tested using the aggressive automotive coolant system, ethylene glycol with organic acid stabilizer, at 130°C (266°F). It exceeds the performance required by the automotive industry for polymeric materials exposed to antifreeze. 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: A-1945 HSL BK 328 Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-A-1945-HSL-Polyphthalamide-PPA-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.58 g/cc	0.0571 lb/in ³	ISO 1183/A
Filler Content	45 %	45 %	Glass Fiber Reinforcement
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	Type D2; ASTM D955
	0.0010 cm/cm	0.0010 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	Type D2; ASTM D955
	0.0060 cm/cm	0.0060 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	124	124	R-Scale; ASTM D785
Tensile Strength	151 MPa	21900 psi	67% Retained; After Immersion in Glycol Solution (50% Valvoline Zerex® G-05 and 50% water) for 1,000 hours at 130°C (266°F).; ASTM D638
	226 MPa	32800 psi	ASTM D638
Elongation at Break	2.0 %	2.0 %	ISO 527-2
Tensile Modulus	13.9 GPa	2020 ksi	ISO 527-2
Flexural Strength	302 MPa	43800 psi	ISO 178
Flexural Modulus	12.5 GPa	1810 ksi	ISO 178
Izod Impact, Notched (ISO)	9.00 kJ/m ²	4.28 ft-lb/in ²	ISO 180/1A
Charpy Impact, Notched	0.970 J/cm ²	4.62 ft-lb/in ²	ISO 179/1eA

Mechanical Properties	Metric ^{kg/cm²}	English ^{lb/in²}	Comments ^A
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Thermal Properties	Metric	English	Comments
Melting Point	323 °C	613 °F	ISO 11357-3
Deflection Temperature at 1.8 MPa (264 psi)	299 °C	570 °F	Unannealed; ISO 75-2/A

Processing Properties	Metric	English	Comments
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	150 °C	302 °F	
Drying Temperature	120 °C	248 °F	
Dry Time	4.00 hour	4.00 hour	
Moisture Content	0.045 %	0.045 %	

Descriptive Properties	Value	Comments
Additive	Heat Stabilizer	
	Lubricant	
	Mold Release	
Appearance	Black	
Automotive Specifications	ASTM D6779 PA131G45	
	ISO 1874-PA6T/6I, MH, 11-160, GF45 Color: BK-328 and NT-07 Black and Natural	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Antifreeze Resistant	
	Glycol Resistant	

Descriptive Properties	Good Chemical Resistance Value	Comments
	Good Creep Resistance	
	Good Dimensional Stability	
	Good Stiffness	
	High Heat Resistance	
	High Strength	
	Lubricated	
Forms	Pellets	
Generic	PPA	
Processing Method	Injection Molding	
RoHS Compliance	RoHS Compliant	
Uses	Automotive Applications	
	Automotive Under the Hood	
	Housings	
	Machine/Mechanical Parts	
	Valves/Valve Parts	

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