

Solvay Specialty Polymers Amodel® AS-1945 HS Polyphthalamide (PPA), 45% Glass Fiber

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

Material Notes:

Amodel® AS-1945 HS is a 45% 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). Features: Antifreeze Resistant; Glycol Resistant; Good Chemical Resistance; Good Creep Resistance; Good Dimensional Stability; 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 Injection Molding Notes: 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. Automotive Specifications ASTM D6779 PA121G45; FORD WSS-M4D997-A Color: BK-324 Black; GM GMP.PPA.018 Color: Black; GM GMW16360P-PPA-GF45 Color: Black; IMDS ID 14880200 Color: Black Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-AS-1945-HS-Polyphthalamide-PPA-45-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.57 g/cc	0.0567 lb/in ³	ISO 1183
Filler Content	45 %	45 %	Glass Fiber
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ISO 294-4
	0.0020 cm/cm	0.0020 in/in	
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	ISO 294-4
	0.0060 cm/cm	0.0060 in/in	Type D2; ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	244 MPa	35400 psi	ISO 527-2
Elongation at Break	2.5 %	2.5 %	ASTM D638
Tensile Modulus	15.1 GPa	2190 ksi	ISO 527-2
Flexural Strength	335 MPa	48600 psi	ISO 178
Flexural Yield Strength	359 MPa	52100 psi	ASTM D790
Flexural Modulus	12.6 GPa	1830 ksi	ISO 178

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched (ISO)	11.0 kJ/m ²	5.23 ft-lb/in ²	Type 1, Notch A; ISO 180
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	Type 1, Edgewise; ISO 179

Thermal Properties	Metric	English	Comments
Melting Point	312 Â°C	594 Â°F	ISO 11357-3
Deflection Temperature at 1.8 MPa (264 psi)	282 Â°C	540 Â°F	Unannealed; Flatwise; ISO 75-2/A
	282 Â°C	540 Â°F	Unannealed; ASTM D648

Processing Properties	Metric	English	Comments
Processing Temperature	79.4 Â°C	175 Â°F	Hopper
Rear Barrel Temperature	304 - 318 Â°C	579 - 604 Â°F	
Front Barrel Temperature	316 - 329 Â°C	601 - 624 Â°F	
Melt Temperature	321 - 343 Â°C	610 - 649 Â°F	
Mold Temperature	135 Â°C	275 Â°F	
Drying Temperature	121 Â°C	250 Â°F	
	@Time 14400 sec	@Time 4.00 hour	
Moisture Content	<= 0.10 %	<= 0.10 %	

Descriptive Properties	Value	Comments
Additive	Heat Stabilizer	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Black	
Form	Pellets	
Processing Technique	Injection Molding	

RoHS Compliance Descriptive Properties	RoHS Compliant Value	Comments
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