

## Solvay Specialty Polymers Amodel® A-1145 HS Polyphthalamide (PPA), 45% Glass Fiber (Conditioned)

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

### Material Notes:

Amodel® A-1145 HS is a 45% glass reinforced, heat stabilized polyphthalamide (PPA) with a high heat deflection temperature, very high flexural modulus and very high tensile strength. Excellent creep resistance and low moisture absorption are also characteristic of this resin. Features: Good Chemical Resistance; Good Creep Resistance; Good Dimensional Stability; Good Stiffness; High Heat Resistance; High Strength; High Temperature Strength; Low Moisture Absorption. Uses: Automotive Applications; Automotive Electronics; Automotive Under the Hood; Connectors; Housings; Industrial Applications; Industrial Parts; Machine/Mechanical Parts; Metal Replacement; Power/Other Tools; 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 3M 11-0003-5762-1 Color: BK324 Black; ASTM D4000 PA121 G45 Color: BK324 Black; ASTM D4000 PA121 G45 Color: NT Natural; ASTM D4000 PPA0120 G46 A95726 AA002 CD295 GB159 MF015Z Color: BN575 Brown; ASTM D6779 PA121G45; BOSCH 9 916 365 011 Color: BK 324 Black; BOSCH 9 916 365 011 Color: NT Natural; CHRYSLER MS-DB-478 Type B CPN3567 Color: Black; FORD WSB-M4D861-A Color: BK324 Black; FORD WSB-M4D861-A Color: NT Natural; GM GMP.PPA.008 Color: BK324 Black; GM GMP.PPA.008 Color: NT Natural; GM GMW16356P-PPA-GF45 Color: BK-324 Black; GM GMW16356P-PPA-GF45 Color: NT Natural; ISO 1874 PA6T/6I/66, MH, 12-160, GF45 Color: NT Natural; TRW S-13301201 Color: BK324 Black. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Amodel-A-1145-HS-Polyphthalamide-PPA-45-Glass-Fiber-Conditioned.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-A-1145-HS-Polyphthalamide-PPA-45-Glass-Fiber-Conditioned.php)

Physical Properties	Metric	English	Comments
Density	1.59 g/cc	0.0574 lb/in <sup>3</sup>	Dry; ISO 1183
Filler Content	45 %	45 %	Glass Fiber
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	
Linear Mold Shrinkage, Transverse	0.0010 cm/cm	0.0010 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength	228 MPa	33100 psi	ASTM D638
Elongation at Break	2.1 %	2.1 %	ASTM D638
Tensile Modulus	17.2 GPa	2490 ksi	ASTM D638
Flexural Strength	294 MPa	42600 psi	ASTM D790
Flexural Modulus	13.8 GPa	2000 ksi	ASTM D790

Shear Strength Mechanical Properties	91.7 MPa Metric	13300 psi English	ASTM D732 Comments
Izod Impact, Notched	1.00 J/cm	1.87 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Melting Point	310 Å°C	590 Å°F	Peak; Dry; ASTM D3418
	310 Å°C	590 Å°F	Dry; ISO 11357-3

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+15 ohm-cm	2.00e+15 ohm-cm	ASTM D257
Dielectric Constant	4.5	4.5	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.9	4.9	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dielectric Strength	23.0 kV/mm	584 kV/in	ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0090	0.0090	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	0.021	0.021	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	125 sec	125 sec	ASTM D495
Comparative Tracking Index	550 V	550 V	UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	304 - 318 Å°C	579 - 604 Å°F	
Front Barrel Temperature	316 - 329 Å°C	601 - 624 Å°F	
Melt Temperature	321 - 343 Å°C	610 - 649 Å°F	
Mold Temperature	135 Å°C	275 Å°F	
Drying Temperature	120 Å°C	248 Å°F	
	@Time 16200 sec	@Time 4.50 hour	
Moisture Content	<= 0.045 %	<= 0.045 %	

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

## Contact Songhan Plastic Technology Co.,Ltd.

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