

## Solvay Specialty Polymers Amodel® A-4145 HH Polyphthalamide (PPA), 45% Glass Fiber (Conditioned)

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

### Material Notes:

Amodel® A-4145 HH is a 45% glass fiber reinforced heat stabilized grade of polyphthalamide (PPA) that has been designed to provide outstanding property retention to thermal oxidative degradation at temperatures of 230°C. Other features are fast cycling and hot water moldability. This product is particularly suitable to air induction applications within downsized automotive engines such as air induction charge air cooling and exhaust gas recirculation. Features: Fast Molding Cycle; Good Chemical Resistance; Good Creep Resistance; Good Dimensional Stability; Good Stiffness; Heat Stabilized; High Heat Resistance; High Strength; Hot Water Moldability; Laser Weldable; Low Moisture Absorption; Lubricated Uses: Automotive Applications; Automotive Under the Hood; Metal Replacement 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. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Amodel-A-4145-HH-Polyphthalamide-PPA-45-Glass-Fiber-Conditioned.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-A-4145-HH-Polyphthalamide-PPA-45-Glass-Fiber-Conditioned.php)

Physical Properties	Metric	English	Comments
Density	1.57 g/cc	0.0567 lb/in <sup>3</sup>	Dry; ISO 1183
Filler Content	45 %	45 %	Glass Fiber
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	Dry
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	Dry; ASTM D955

Mechanical Properties	Metric	English	Comments
Compressive Strength	172 MPa	24900 psi	ASTM D695
Shear Strength	75.8 MPa	11000 psi	ASTM D732

Thermal Properties	Metric	English	Comments
Melting Point	327 °C	621 °F	Dry; ISO 11357-3
	327 °C	621 °F	Dry; DSC

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.00e+14 ohm-cm	5.00e+14 ohm-cm	ASTM D257
Dielectric Constant	3.4	3.4	ASTM D150

Electrical Properties	@Frequency 1.00e+6 Hz Metric	@Frequency 1.00e+6 Hz English	Comments
	4.3	4.3	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.019	0.019	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.020	0.020	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Comparative Tracking Index	600 V	600 V	UL 746
High Voltage Arc-Tracking Rate, HVTR	18.0 mm/min	0.709 in/min	UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	318 - 324 Â°C	604 - 615 Â°F	
Front Barrel Temperature	327 - 332 Â°C	621 - 630 Â°F	
Melt Temperature	329 - 343 Â°C	624 - 649 Â°F	
Mold Temperature	65.6 - 93.3 Â°C	150 - 200 Â°F	
Drying Temperature	120 Â°C	248 Â°F	
	@Time 14400 sec	@Time 4.00 hour	
Moisture Content	<= 0.045 %	<= 0.045 %	

Descriptive Properties	Value	Comments
Additive	Heat Stabilizer	
	Lubricant	
	Mold Release	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	

Descriptive Properties	North America Value	Comments
Color	Black	
Form	Pellets	
Processing Technique	Water-Heated Mold Injection Molding	

## Contact Songhan Plastic Technology Co.,Ltd.

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