

Solvay Specialty Polymers Amodel® AS-4145 HS Polyphthalamide (PPA), 45% Glass Fiber (Dry)

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

Material Notes:

Amodel® AS-4145 HS polyphthalamide (PPA) is a 45% glass reinforced resin that is hot-water moldable. Key properties include high heat resistance, high strength and stiffness over a broad temperature range, low moisture absorption, excellent chemical resistance and excellent electrical properties. 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; Low Moisture Absorption; Lubricated Uses: Abrasive Cleaning Material; Automotive Applications; Automotive Electronics; Automotive Under the Hood; Connectors; General Purpose; Housings; Industrial Applications; Industrial Parts; Lawn and Garden Equipment; Machine/Mechanical Parts; Metal Replacement; 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 PA102G45; TYCO 100-1632 Color: BK-324 Black. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-AS-4145-HS-Polyphthalamide-PPA-45-Glass-Fiber-Dry.php

Physical Properties	Metric	English	Comments
Density	1.55 g/cc	0.0560 lb/in ³	ISO 1183
Filler Content	45 %	45 %	Glass Fiber
Water Absorption	0.21 % @Time 86400 sec	0.21 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	224 MPa	32500 psi	ISO 527-2
	228 MPa	33100 psi	ASTM D638
Elongation at Break	2.2 %	2.2 %	ISO 527-2
	2.4 %	2.4 %	ASTM D638
Tensile Modulus	15.2 GPa	2200 ksi	ASTM D638
	16.1 GPa	2340 ksi	ISO 527-2
Flexural Strength	327 MPa	47400 psi	ISO 178

Mechanical Properties	Metric	English	Comments
Flexural Modulus	13.1 GPa	1900 ksi	ASTM D790
	13.4 GPa	1940 ksi	ISO 178
Compressive Strength	172 MPa	24900 psi	ASTM D695
Poissons Ratio	0.40	0.40	ASTM E132
Shear Strength	89.6 MPa	13000 psi	ASTM D732
Izod Impact, Notched	1.00 J/cm	1.87 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	10.0 kJ/mÂ²	4.76 ft-lb/inÂ²	Type 1, Notch A; ISO 180
Charpy Impact Unnotched	6.30 J/cmÂ²	30.0 ft-lb/inÂ²	Type 1, Edgewise; ISO 179
Charpy Impact, Notched	1.00 J/cmÂ²	4.76 ft-lb/inÂ²	Type 1, Edgewise; ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	13.0 Âµm/m-Â°C	7.22 Âµin/in-Â°F	2
	@Temperature 150 - 250 Â°C	@Temperature 302 - 482 Â°F	
	16.0 Âµm/m-Â°C	8.89 Âµin/in-Â°F	2
	@Temperature -50.0 - 90.0 Â°C	@Temperature -58.0 - 194 Â°F	
CTE, linear, Transverse to Flow	59.0 Âµm/m-Â°C	32.8 Âµin/in-Â°F	TMA; ASTM E831
	@Temperature 0.000 - 90.0 Â°C	@Temperature 32.0 - 194 Â°F	
	110 Âµm/m-Â°C	61.1 Âµin/in-Â°F	TMA; ASTM E831
	@Temperature 100 - 250 Â°C	@Temperature 212 - 482 Â°F	
Melting Point	320 Â°C	608 Â°F	ISO 11357-3
	320 Â°C	608 Â°F	DSC
Maximum Service Temperature, Air	210 Â°C	410 Â°F	Continuous Use
Deflection Temperature at 0.46 MPa (66 psi)	320 Â°C	608 Â°F	Annealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	298 Â°C	568 Â°F	Unannealed; ISO 75-2/A
	300 Â°C	572 Â°F	
			Annealed; ASTM D648

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Flammability, UL94	HB	HB	
	@Thickness 3.18 mm	@Thickness 0.125 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	8.00e+15 ohm-cm	8.00e+15 ohm-cm	ASTM D257
Dielectric Constant	3.7	3.7	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.0	4.0	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Dielectric Strength	24.0 kV/mm	610 kV/in	ASTM D149
	@Thickness 1.59 mm	@Thickness 0.0626 in	
Dissipation Factor	0.0040	0.0040	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	0.011	0.011	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	600 V	600 V	UL 746
High Voltage Arc-Tracking Rate, HVTR	13.0 mm/min	0.512 in/min	UL 746

Processing Properties	Metric	English	Comments
Processing Temperature	79.4 Â°C	175 Â°F	Hopper
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	121 Â°C	250 Â°F	
	@Time 14400 sec	@Time 4.00 hour	
Moisture Content	<= 0.10 %	<= 0.10 %	

Descriptive Properties	Value	Comments
------------------------	-------	----------

Additive Descriptive Properties	Heat Stabilizer Value	Comments
	Lubricant	
	Mold Release	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Black	
Form	Pellets	
Processing Technique	Water-Heated Mold Injection Molding	
RoHS Compliance	RoHS Compliant	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China