

Solvay Specialty Polymers Amodel® AE-4133 Polyphthalamide (PPA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 30% Glass Fiber Reinforced

Material Notes:

Amodel AE-4133 is a 33% glass reinforced, hot-water moldable polyphthalamide (PPA) designed to work in the modern automotive electrical environment. This grade features a high heat deflection temperature, high flexural modulus and high tensile strength, as well as excellent creep resistance and low moisture absorption. - Black: AE-4133 BK902 - Natural: AE-4133 NTInjection Notes: Injection Rate: 3-4 inch/second (7.5-10 cm/sec) Holding Pressure: 50% of injection pressureData is presented for dry polymer unless noted as 'conditioned'.Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-AE-4133-Polyphthalamide-PPA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in ³	ISO 1183/A
Filler Content	33 %	33 %	Glass Fiber Reinforcement
Water Absorption	0.23 % @Time 86400 sec	0.23 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ASTM D955
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	210 MPa @Temperature 23.0 °C	30500 psi @Temperature 73.4 °F	ISO 527-2
Elongation at Break	2.5 % @Temperature 23.0 °C	2.5 % @Temperature 73.4 °F	ISO 527-2
Tensile Modulus	12.0 GPa @Temperature 23.0 °C	1740 ksi @Temperature 73.4 °F	ISO 527-2
Flexural Strength	295 MPa @Temperature 23.0 °C	42800 psi @Temperature 73.4 °F	ISO 178
Flexural Modulus	10.7 GPa @Temperature 23.0 °C	1550 ksi @Temperature 73.4 °F	ISO 178
Izod Impact, Notched (ISO)	9.20 kJ/m ²	4.38 ft-lb/in ²	ISO 180/1A
	68.0 kJ/m ²	32.4 ft-lb/in ²	

Izod Impact, Unnotched (ISO)		English	
Mechanical Properties	Metric	English	ISO 180/1U Comments
	@ Temperature 23.0 °C	@ Temperature 73.4 °F	
Charpy Impact Unnotched	7.90 J/cm²	37.6 ft-lb/in²	ISO 179/1eU
Charpy Impact, Notched	0.900 J/cm²	4.28 ft-lb/in²	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	15.0 µm/m-°C	8.33 µin/in-°F	TMA; ASTM E831
	@ Temperature 100 - 200 °C	@ Temperature 212 - 392 °F	
	20.0 µm/m-°C	11.1 µin/in-°F	TMA; ASTM E831
	@ Temperature 0.000 - 100 °C	@ Temperature 32.0 - 212 °F	
CTE, linear, Transverse to Flow	76.0 µm/m-°C	42.2 µin/in-°F	ASTM E831
	@ Temperature 0.000 - 100 °C	@ Temperature 32.0 - 212 °F	
	120 µm/m-°C	66.7 µin/in-°F	ASTM E831
	@ Temperature 100 - 200 °C	@ Temperature 212 - 392 °F	
Melting Point	327 °C	621 °F	ISO 11357-3
Deflection Temperature at 1.8 MPa (264 psi)	>= 300 °C	>= 572 °F	Unannealed; ISO 75-2/A
Glass Transition Temp, Tg	95.0 °C	203 °F	DSC
Flammability, UL94	HB	HB	UL 94
	@ Thickness 3.20 mm	@ Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.00e+14 ohm-cm	5.00e+14 ohm-cm	Conditioned; ASTM D257
	5.60e+15 ohm-cm	5.60e+15 ohm-cm	ASTM D257
Dielectric Constant	3.4	3.4	Conditioned; ASTM D150
	@ Frequency 1.00e+6 Hz	@ Frequency 1.00e+6 Hz	
	3.75	3.75	ASTM D150
	@ Frequency 1.00e+6 Hz	@ Frequency 1.00e+6 Hz	
	4.1	4.1	ASTM D150
	@ Frequency 60.0 Hz	@ Frequency 60.0 Hz	

Electrical Properties	Metric	English	Comments
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	Conditioned, ASTM D150
Dielectric Strength	19.0 kV/mm	483 kV/in	Conditioned; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
	19.0 kV/mm	483 kV/in	ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0060	0.0060	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	0.015	0.015	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.019	0.019	Conditioned; ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.020	0.020	Conditioned; ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
Comparative Tracking Index	600 V	600 V	UL 746
	600 V	600 V	Conditioned; UL 746
High Voltage Arc-Tracking Rate, HVTR	14.0 mm/min	0.551 in/min	UL 746
	18.0 mm/min	0.709 in/min	Conditioned; UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	320 - 330 °C	608 - 626 °F	
Middle Barrel Temperature	320 - 330 °C	608 - 626 °F	
Front Barrel Temperature	327 - 335 °C	621 - 635 °F	
Melt Temperature	330 - 345 °C	626 - 653 °F	
Mold Temperature	65.0 - 95.0 °C	149 - 203 °F	
Drying Temperature	120 °C	248 °F	
Dry Time	4.00 hour	4.00 hour	
Moisture Content	0.030 - 0.060 %	0.030 - 0.060 %	

Descriptive Properties	Value	Comments
Appearance	Black	
	Natural Color	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Good Chemical Resistance	
	Good Creep Resistance	
	Good Dimensional Stability	
	Good Stiffness	
	High Heat Resistance	
	High Stiffness	
	High Strength	
	High Temperature Strength	
	Low Moisture Absorption	
Flexural Strain (%)	3.1	
Forms	Pellets	
Generic	PPA	
Processing Method	Injection Molding	
Uses	Automotive Electronics	
	Connectors	
	Electrical Parts	
	Electrical/Electronic Applications	

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