

Solvay Specialty Polymers Amodel® AFA-6133 V0 Z Polyphthalamide (PPA) (Unverified Data**)

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

Material Notes:

Amodel AFA-6133 V0 Z is a 33% glass-fiber reinforced, flame retardant grade of polyphthalamide (PPA) resin specifically formulated for connector applications requiring compatibility with both infrared and vapor phase soldering operations typically used by the electronics industry. Amodel AFA-6133 V0 Z offers high flow and short molding cycles, thereby enhancing molding productivity and lowering costs. - Black: AFA-6133 V0 Z BK 324

Injection Notes: Injection Rate: 3 to 4 in/sec Holding Pressure: 50% of injection pressure

Data 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-AFA-6133-V0-Z-Polyphthalamide-PPA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.68 g/cc	0.0607 lb/in ³	ISO 1183/A
Filler Content	33 %	33 %	Glass Fiber Reinforcement
Water Absorption	0.20 %	0.20 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	ASTM D955
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength	166 MPa	24100 psi	Conditioned; ASTM D638
	199 MPa	28900 psi	ASTM D638
Tensile Strength, Yield	63.4 MPa	9200 psi	Conditioned; ISO 527-2
	@Temperature 175 °C	@Temperature 347 °F	
	63.4 MPa	9200 psi	ISO 527-2
	@Temperature 175 °C	@Temperature 347 °F	
	75.2 MPa	10900 psi	Conditioned; ISO 527-2
	@Temperature 150 °C	@Temperature 302 °F	
	75.2 MPa	10900 psi	ISO 527-2
	@Temperature 150 °C	@Temperature 302 °F	
	114 MPa	16500 psi	Conditioned; ISO 527-2

Mechanical Properties	@Temperature 100 °C Metric	@Temperature 212 °F English	Comments
	114 MPa	16500 psi	ISO 527-2
	@Temperature 100 °C	@Temperature 212 °F	
	186 MPa	27000 psi	ISO 527-2
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	186 MPa	27000 psi	Conditioned; ISO 527-2
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	1.7 %	1.7 %	Conditioned; ASTM D638
	1.7 %	1.7 %	ASTM D638
	1.6 %	1.6 %	ISO 527-2
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.6 %	1.6 %	Conditioned; ISO 527-2
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.4 %	2.4 %	Conditioned; ISO 527-2
	@Temperature 100 °C	@Temperature 212 °F	
	2.4 %	2.4 %	ISO 527-2
	@Temperature 100 °C	@Temperature 212 °F	
	4.9 %	4.9 %	ISO 527-2
	@Temperature 175 °C	@Temperature 347 °F	
	4.9 %	4.9 %	Conditioned; ISO 527-2
	@Temperature 175 °C	@Temperature 347 °F	
	5.1 %	5.1 %	ISO 527-2
	@Temperature 150 °C	@Temperature 302 °F	
	5.1 %	5.1 %	Conditioned; ISO 527-2
	@Temperature 150 °C	@Temperature 302 °F	
Tensile Modulus	13.7 GPa	1990 ksi	Conditioned; ASTM D638
	16.1 GPa	2340 ksi	ASTM D638
	5.10 GPa	740 ksi	ISO 527-2
	@Temperature 175 °C	@Temperature 347 °F	
	5.10 GPa	740 ksi	Conditioned; ISO 527-2
	@Temperature 175 °C	@Temperature 347 °F	

Mechanical Properties	Metric 5.90 GPa	English 858 ksi	Comments
	@Temperature 150 °C	@Temperature 302 °F	Conditioned; ISO 527-2
	5.93 GPa	860 ksi	ISO 527-2
	@Temperature 150 °C	@Temperature 302 °F	
	9.17 GPa	1330 ksi	ISO 527-2
	@Temperature 100 °C	@Temperature 212 °F	
	9.20 GPa	1330 ksi	Conditioned; ISO 527-2
	@Temperature 100 °C	@Temperature 212 °F	
	14.5 GPa	2100 ksi	Conditioned; ISO 527-2
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	14.5 GPa	2100 ksi	ISO 527-2
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	224 MPa	32500 psi	ASTM D790
	229 MPa	33200 psi	Conditioned; ASTM D790
	87.6 MPa	12700 psi	ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	88.0 MPa	12800 psi	Conditioned; ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	101 MPa	14600 psi	Conditioned; ISO 178
	@Temperature 150 °C	@Temperature 302 °F	
	101 MPa	14600 psi	ISO 178
	@Temperature 150 °C	@Temperature 302 °F	
	161 MPa	23400 psi	ISO 178
	@Temperature 100 °C	@Temperature 212 °F	
	161 MPa	23400 psi	Conditioned; ISO 178
	@Temperature 100 °C	@Temperature 212 °F	
	259 MPa	37600 psi	Conditioned; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	259 MPa	37600 psi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Flexural Modulus Mechanical Properties	13.1 GPa Metric	1900 ksi English	ASTM D790 Comments
	13.3 GPa	1930 ksi	Conditioned; ASTM D790
	4.60 GPa	667 ksi	Conditioned; ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	4.62 GPa	670 ksi	ISO 178
	@Temperature 175 °C	@Temperature 347 °F	
	4.96 GPa	719 ksi	ISO 178
	@Temperature 150 °C	@Temperature 302 °F	
	5.00 GPa	725 ksi	Conditioned; ISO 178
	@Temperature 150 °C	@Temperature 302 °F	
	8.07 GPa	1170 ksi	ISO 178
	@Temperature 100 °C	@Temperature 212 °F	
	8.10 GPa	1170 ksi	Conditioned; ISO 178
	@Temperature 100 °C	@Temperature 212 °F	
	12.6 GPa	1830 ksi	Conditioned; ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	12.6 GPa	1830 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Strength	145 MPa	21000 psi	ASTM D695
Shear Strength	62.1 MPa	9010 psi	Conditioned; ASTM D732
	80.0 MPa	11600 psi	ASTM D732
Izod Impact, Notched	0.800 J/cm	1.50 ft-lb/in	Conditioned; ASTM D256
	0.850 J/cm	1.59 ft-lb/in	ASTM D256
	6.90 J/cm	12.9 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	8.00 kJ/m²	3.81 ft-lb/in²	Conditioned; ISO 180/1A
	8.20 kJ/m²	3.90 ft-lb/in²	ISO 180/1A
Izod Impact, Unnotched (ISO)	44.0 kJ/m²	20.9 ft-lb/in²	Conditioned; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	44.0 kJ/m²	20.9 ft-lb/in²	ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
	4.70 J/cm ²	22.4 ft-lb/in ²	Conditioned; ISO 179/1eU
Charpy Impact, Notched	1.40 J/cm ²	6.66 ft-lb/in ²	ISO 179/1eA
	1.40 J/cm ²	6.66 ft-lb/in ²	Conditioned; ISO 179/2eA

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	ASTM D257
Dielectric Constant	4.1	4.1	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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