

## Solvay Specialty Polymers Amodel® AT-6115 HS Polyphthalamide (PPA) (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 20% Glass Fiber Reinforced

### Material Notes:

Amodel AT-6115 HS is a 15% glass-fiber reinforced, toughened grade of polyphthalamide (PPA) resin designed to possess more elongation than other 15% glass-fiber reinforced grades of Amodel resin. This grade was developed for automotive snap-fit electronic connectors. It offers high flow and short molding cycles. - Black: AT-6115 HS BK 324 - Natural: AT-6115 HS NTInjection Notes: Injection Rate: 2 to 4 in/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-AT-6115-HS-Polyphthalamide-PPA-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-AT-6115-HS-Polyphthalamide-PPA-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Density	1.22 g/cc	0.0441 lb/in <sup>3</sup>	ISO 1183/A
Filler Content	15 %	15 %	Glass Fiber Reinforcement
Water Absorption	0.20 % @Time 86400 sec	0.20 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.010 cm/cm	0.010 in/in	ASTM D955
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	68.3 MPa @Temperature 100 °C	9910 psi @Temperature 212 °F	ISO 527-2
	114 MPa @Temperature 23.0 °C	16500 psi @Temperature 73.4 °F	ISO 527-2
Tensile Strength	95.8 MPa	13900 psi	Conditioned; ASTM D638
	122 MPa	17700 psi	ASTM D638
Elongation at Break	3.4 %	3.4 %	ASTM D638
	5.3 %	5.3 %	Conditioned; ASTM D638
	3.9 % @Temperature 23.0 °C	3.9 % @Temperature 73.4 °F	ISO 527-2
	7.7 % @Temperature 100 °C	7.7 % @Temperature 212 °F	ISO 527-2

Mechanical Properties	Metric	English	Comments
	6.69 GPa	970 ksi	Conditioned; ASTM D638
	3.10 GPa	450 ksi	ISO 527-2
	@Temperature 100 °C	@Temperature 212 °F	
	5.38 GPa	780 ksi	ISO 527-2
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Strength	115 MPa	16700 psi	Conditioned; ASTM D790
	165 MPa	23900 psi	ASTM D790
	66.9 MPa	9700 psi	ISO 178
	@Temperature 100 °C	@Temperature 212 °F	
	170 MPa	24700 psi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Flexural Modulus	3.45 GPa	500 ksi	Conditioned; ASTM D790
	4.41 GPa	640 ksi	ASTM D790
	2.34 GPa	339 ksi	ISO 178
	@Temperature 100 °C	@Temperature 212 °F	
	4.27 GPa	619 ksi	ISO 178
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Strength	100 MPa	14500 psi	ASTM D695
Shear Strength	44.1 MPa	6400 psi	Conditioned; ASTM D732
	56.5 MPa	8190 psi	ASTM D732
Izod Impact, Notched	0.800 J/cm	1.50 ft-lb/in	Conditioned; ASTM D256
	0.910 J/cm	1.70 ft-lb/in	ASTM D256
	8.50 J/cm	15.9 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	12.0 kJ/m <sup>2</sup>	5.71 ft-lb/in <sup>2</sup>	ISO 180/1A
Izod Impact, Unnotched (ISO)	55.0 kJ/m <sup>2</sup>	26.2 ft-lb/in <sup>2</sup>	ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	7.60 J/cm <sup>2</sup>	36.2 ft-lb/in <sup>2</sup>	ISO 179/1eU
Charpy Impact, Notched	1.10 J/cm <sup>2</sup>	5.23 ft-lb/in <sup>2</sup>	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	22.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	12.2 $\mu\text{in}/\text{in}\cdot\text{°F}$	TMA; ASTM E831
	@Temperature 0.000 - 100 $\text{°C}$	@Temperature 32.0 - 212 $\text{°F}$	
	30.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	16.7 $\mu\text{in}/\text{in}\cdot\text{°F}$	TMA; ASTM E831
	@Temperature 100 - 200 $\text{°C}$	@Temperature 212 - 392 $\text{°F}$	
CTE, linear, Transverse to Flow	90.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	50.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E831
	@Temperature 0.000 - 100 $\text{°C}$	@Temperature 32.0 - 212 $\text{°F}$	
	120 $\mu\text{m}/\text{m}\cdot\text{°C}$	66.7 $\mu\text{in}/\text{in}\cdot\text{°F}$	ASTM E831
	@Temperature 100 - 200 $\text{°C}$	@Temperature 212 - 392 $\text{°F}$	
Melting Point	307 $\text{°C}$	585 $\text{°F}$	Peak; ASTM D3418
	307 $\text{°C}$	585 $\text{°F}$	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	298 $\text{°C}$	568 $\text{°F}$	Unannealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	265 $\text{°C}$	509 $\text{°F}$	Unannealed; ISO 75-2/A
	271 $\text{°C}$	520 $\text{°F}$	Annealed; ASTM D648

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	316 - 324 $\text{°C}$	601 - 615 $\text{°F}$	
Front Barrel Temperature	327 - 332 $\text{°C}$	621 - 630 $\text{°F}$	
Melt Temperature	321 - 335 $\text{°C}$	610 - 635 $\text{°F}$	
Mold Temperature	65.6 - 93.3 $\text{°C}$	150 - 200 $\text{°F}$	
Drying Temperature	110 $\text{°C}$	230 $\text{°F}$	
Dry Time	4.00 hour	4.00 hour	
Moisture Content	0.045 %	0.045 %	

Descriptive Properties	Value	Comments
Additive	Heat Stabilizer	
	Impact Modifier	
	Lubricant	

Descriptive Properties	Value	Comments
Appearance	Black	
	Natural Color	
Automotive Specifications	ASTM D4000 PA103 G15	
	ASTM D4000 PPA0123 G15 GB121 KD100 KN042 PN068 YI242	
	ASTM D6779 PA103G15	
	DELPHI M-4628 Color: BK324 Black	
	DELPHI M-4628 Color: NT Natural	
	FORD WSS-M4D943-A2 Color: BK324 Black	
	FORD WSS-M4D943-A2 Color: NT Natural	
	GM GMP.PPA.020 Color: BK-324, NT Black & Natural	
	ISO 1874 PA6T/66-HI, MH, 11-050, GF15	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Fast Molding Cycle	
	Good Mold Release	
	Heat Stabilized	
	High Elongation	
	High Flow	
	Impact Modified	
	Lubricated	
Forms	Pellets	
Generic	PPA	
Processing Method	Water-Heated Mold Injection Molding	

<b>RoHS Compliance Descriptive Properties</b>	<b>RoHS Compliant Value</b>	<b>Comments</b>
Uses	Automotive Applications	
	Automotive Electronics	
	Automotive Under the Hood	
	Connectors	
	General Purpose	
	Housings	
	Industrial Applications	
	Industrial Parts	
	Machine/Mechanical Parts	
	Metal Replacement	
	Valves/Valve Parts	

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