



# Amodel® AT-6115 HS

## polyphthalamide

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

### General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • North America • South America
Filler / Reinforcement	• Glass Fiber Reinforcement, 15% Filler by Weight
Additive	• Heat Stabilizer • Impact Modifier • Lubricant • Mold Release
Features	• Fast Molding Cycle • Good Mold Release • Heat Stabilized • High Elongation • High Flow • Impact Modified • Lubricated
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
RoHS Compliance	• RoHS Compliant
Automotive Specifications	• ASTM D4000 PA103 G15 • ASTM D4000 PPA0123 G15 GB121 KD100 KN042 PN068 YI242 • 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 • ISO 1874 PA6T/66-HI, MH, 11-050, GF15
Appearance	• Black
Forms	• Pellets
Processing Method	• Water-Heated Mold Injection Molding

Physical	Dry	Conditioned Unit	Test Method
Density	1.22	-- g/cm <sup>3</sup>	ISO 1183/A
Molding Shrinkage			ASTM D955
Flow	1.0	-- %	
Across Flow	1.1	-- %	
Water Absorption (24 hr)	0.20	-- %	ASTM D570
Mechanical	Dry	Conditioned Unit	Test Method
Tensile Modulus			
--	5380	6690 MPa	ASTM D638
23°C	5380	-- MPa	ISO 527-2

Mechanical	Dry	Conditioned Unit	Test Method
100°C	3100	-- MPa	ISO 527-2
Tensile Stress			
Break, 23°C	114	-- MPa	ISO 527-2
Break, 100°C	68.3	-- MPa	ISO 527-2
--	122	95.8 MPa	ASTM D638
Tensile Elongation			
Break	3.4	5.3 %	ASTM D638
Break, 23°C	3.9	-- %	ISO 527-2
Break, 100°C	7.7	-- %	ISO 527-2
Flexural Modulus			
--	4410	3450 MPa	ASTM D790
23°C	4270	-- MPa	ISO 178
100°C	2340	-- MPa	ISO 178
Flexural Strength			
--	165	115 MPa	ASTM D790
23°C	170	-- MPa	ISO 178
100°C	66.9	-- MPa	ISO 178
Compressive Strength	100	-- MPa	ASTM D695
Shear Strength	56.5	44.1 MPa	ASTM D732
Impact	Dry	Conditioned Unit	Test Method
Charpy Notched Impact Strength (23°C)	11	-- kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	76	-- kJ/m <sup>2</sup>	ISO 179/1eU
Notched Izod Impact			
--	91	80 J/m	ASTM D256
23°C	12	-- kJ/m <sup>2</sup>	ISO 180/1A
Unnotched Izod Impact			
--	850	-- J/m	ASTM D256
23°C	55	-- kJ/m <sup>2</sup>	ISO 180/1U
Thermal	Dry	Conditioned Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	298	-- °C	ISO 75-2/B
1.8 MPa, Unannealed	265	-- °C	ISO 75-2/A
1.8 MPa, Annealed	271	-- °C	ASTM D648
Melting Temperature	307	-- °C	ISO 11357-3 ASTM D3418
CLTE			
Flow: 0 to 100°C	0.000022	-- cm/cm/°C	
Flow: 100 to 200°C	0.000030	-- cm/cm/°C	
Transverse: 0 to 100°C	0.000090	-- cm/cm/°C	
Transverse: 100 to 200°C	0.00012	-- cm/cm/°C	

Injection	Typical Value Unit
Drying Temperature	110 °C
Drying Time	4.0 hr
Suggested Max Moisture	0.045 %
Rear Temperature	316 to 324 °C

Injection	Typical Value	Unit
Front Temperature	327 to 332	°C
Processing (Melt) Temp	321 to 335	°C
Mold Temperature	65.6 to 93.3	°C

**Injection Notes**

Injection Rate: 2 to 4 in/sec

Holding Pressure: 50% of injection pressure

**Notes**

Typical properties: these are not to be construed as specifications.

For assistance with an emergency involving products of Solvay Advanced Polymers, such as a spill, leak, fire, or explosion, call day or night:

#### Emergency Health Information

USA +1.800.621.4590

International +1.770.772.8577

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China +86.10.5100.3039

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For additional product information, technical assistance, and Material Safety Data Sheets (MSDS), call:

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Property values for individual batches will vary within specification limits. Unless otherwise noted, values shown are typical for uncolored resin; colorants may alter values. For Preliminary Data Sheets, values are typical of limited production and specifications are not yet established.

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