

## Solvay Specialty Polymers Amodel® A-1565 HS Polyphthalamide (PPA), 65% GlassMineral (Dry)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), Mineral Filled

### Material Notes:

Amodel® A-1565 HS is a 65% glass and mineral-reinforced polyphthalamide (PPA) designed to be cost-effective in applications requiring high stiffness, good dimensional stability and good retention of stiffness at elevated temperatures. This grades also exhibits a high deflection temperature and flexural modulus. Features: Good Chemical Resistance; Good Creep Resistance; Good Dimensional Stability; High Heat Resistance; Low CLTE; Low Warpage; Lubricated; Ultra High Stiffness Uses: Automotive Applications; Automotive Under the Hood; Housings; Industrial Applications; Industrial Parts; Pump 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 D4000 PA121 R65 Color: BK324 Black; ASTM D6779 PA121R65; DELPHI M-53294 Color: BK324 Black Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Amodel-A-1565-HS-Polyphthalamide-PPA-65-GlassMineral-Dry.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-A-1565-HS-Polyphthalamide-PPA-65-GlassMineral-Dry.php)

Physical Properties	Metric	English	Comments
Density	1.90 g/cc	0.0686 lb/in <sup>3</sup>	ISO 1183
Filler Content	65 %	65 %	GlassMineral
Water Absorption	0.10 % @Time 86400 sec	0.10 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	32.4 MPa @Temperature 175 °C	4700 psi @Temperature 347 °F	4; ISO 527-2
	46.2 MPa @Temperature 150 °C	6700 psi @Temperature 302 °F	4; ISO 527-2
	91.7 MPa @Temperature 100 °C	13300 psi @Temperature 212 °F	4; ISO 527-2
	138 MPa @Temperature 23.0 °C	20000 psi @Temperature 73.4 °F	4; ISO 527-2

Mechanical Properties	Metric <sup>Pa</sup>	English <sup>psi</sup>	Comments
Elongation at Break	1.2 %	1.2 %	ASTM D638
	1.0 % @Temperature 23.0 Â°C	1.0 % @Temperature 73.4 Â°F	ISO 527-2
	1.3 % @Temperature 100 Â°C	1.3 % @Temperature 212 Â°F	ISO 527-2
	1.8 % @Temperature 175 Â°C	1.8 % @Temperature 347 Â°F	ISO 527-2
	2.4 % @Temperature 150 Â°C	2.4 % @Temperature 302 Â°F	ISO 527-2
Tensile Modulus	20.7 GPa	3000 ksi	ASTM D638
	5.10 GPa @Temperature 175 Â°C	740 ksi @Temperature 347 Â°F	4; ISO 527-2
	5.72 GPa @Temperature 150 Â°C	830 ksi @Temperature 302 Â°F	4; ISO 527-2
	15.4 GPa @Temperature 100 Â°C	2230 ksi @Temperature 212 Â°F	4; ISO 527-2
	19.7 GPa @Temperature 23.0 Â°C	2860 ksi @Temperature 73.4 Â°F	4; ISO 527-2
Flexural Strength	210 MPa	30500 psi	ASTM D790
	55.8 MPa @Temperature 175 Â°C	8090 psi @Temperature 347 Â°F	4; ISO 178
	69.6 MPa @Temperature 150 Â°C	10100 psi @Temperature 302 Â°F	4; ISO 178
	163 MPa @Temperature 100 Â°C	23600 psi @Temperature 212 Â°F	4; ISO 178
	211 MPa @Temperature 23.0 Â°C	30600 psi @Temperature 73.4 Â°F	4; ISO 178
Flexural Modulus	17.9 GPa	2600 ksi	ASTM D790

Mechanical Properties	Metric Pa	English	Comments
	@Temperature 175 Â°C	@Temperature 347 Â°F	ISO 178
	2.48 GPa	360 ksi	ISO 178
	@Temperature 150 Â°C	@Temperature 302 Â°F	
	6.83 GPa	991 ksi	ISO 178
	@Temperature 100 Â°C	@Temperature 212 Â°F	
	9.10 GPa	1320 ksi	ISO 178
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Compressive Strength	189 MPa	27400 psi	ASTM D695
	@Thickness 13.0 mm	@Thickness 0.512 in	
Shear Strength	71.0 MPa	10300 psi	ASTM D732
Izod Impact, Notched	0.370 J/cm	0.693 ft-lb/in	ASTM D256
Izod Impact, Unnotched	4.10 J/cm	7.68 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	4.00 kJ/mÂ²	1.90 ft-lb/inÂ²	Type 1, Notch A; ISO 180
Izod Impact, Unnotched (ISO)	32.0 kJ/mÂ²	15.2 ft-lb/inÂ²	Type 1; ISO 180
Charpy Impact Unnotched	4.40 J/cmÂ²	20.9 ft-lb/inÂ²	Type 1, Edgewise; ISO 179
Charpy Impact, Notched	0.340 J/cmÂ²	1.62 ft-lb/inÂ²	Type 1, Edgewise; ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	17.0 Âµm/m-Â°C	9.44 Âµin/in-Â°F	2
	@Temperature 100 - 200 Â°C	@Temperature 212 - 392 Â°F	
	20.0 Âµm/m-Â°C	11.1 Âµin/in-Â°F	2
	@Temperature 0.000 - 100 Â°C	@Temperature 32.0 - 212 Â°F	
CTE, linear, Transverse to Flow	37.0 Âµm/m-Â°C	20.6 Âµin/in-Â°F	TMA; ASTM E831
	@Temperature 0.000 - 100 Â°C	@Temperature 32.0 - 212 Â°F	
	81.0 Âµm/m-Â°C	45.0 Âµin/in-Â°F	TMA; ASTM E831
	@Temperature 100 - 200 Â°C	@Temperature 212 - 392 Â°F	
Melting Point	311 Â°C	592 Â°F	ASTM D3418

Thermal Properties	311 Â°C Metric	592 Â°F English	ISO 11357-3 Comments
Deflection Temperature at 1.8 MPa (264 psi)	271 Â°C	520 Â°F	Unannealed; ISO 75-2/A
	271 Â°C	520 Â°F	Unannealed; ASTM D648

Electrical Properties	Metric	English	Comments
Volume Resistivity	4.00e+14 ohm-cm	4.00e+14 ohm-cm	ASTM D257
Arc Resistance	125 sec	125 sec	ASTM D495
Comparative Tracking Index	600 V	600 V	UL 746

Processing Properties	Metric	English	Comments
Processing Temperature	79.4 Â°C	175 Â°F	Hopper
Rear Barrel Temperature	304 - 318 Â°C	579 - 604 Â°F	
Front Barrel Temperature	316 - 329 Â°C	601 - 624 Â°F	
Melt Temperature	321 - 343 Â°C	610 - 649 Â°F	
Mold Temperature	135 Â°C	275 Â°F	
Drying Temperature	120 Â°C @Time 14400 sec	248 Â°F @Time 4.00 hour	
Moisture Content	<= 0.045 %	<= 0.045 %	

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

Descriptive Properties	Value	Comments
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## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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