

Solvay Specialty Polymers Amodel® A-4122 LS WH678 Polyphthalamide (PPA) (Unverified Data**)

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

Material Notes:

Amodel A-4122 LS is a 22% glass fiber reinforced, light-stabilized, high-reflectivity white grade of Amodel polyphthalamide (PPA). It is designed to provide high crystallinity when molded in water-cooled molds. This resin exhibits high heat resistance, high strength and stiffness over a broad temperature range, low moisture absorption, excellent chemical resistance and excellent electrical properties. Its rapid crystallization rate and high flow can result in short cycles and therefore high molding productivity and lower part cost. - White: A-4122 LS WH678
 Injection Notes: Injection Rate: 3 to 4 in/sec Holding Pressure: 50% of injection pressure
 Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-A-4122-LS-WH678-Polyphthalamide-PPA-nbspUnverified-Data.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|---------------------------|---------------------------|---------------------------|
| Density | 1.59 g/cc | 0.0574 lb/in ³ | ISO 1183/A |
| Filler Content | 22 % | 22 % | Glass Fiber Reinforcement |
| Water Absorption | 0.19 % @Time 86400 sec | 0.19 % @Time 24.0 hour | ASTM D570 |
| Linear Mold Shrinkage, Flow | 0.0040 cm/cm | 0.0040 in/in | ASTM D955 |
| Linear Mold Shrinkage, Transverse | 0.0060 cm/cm | 0.0060 in/in | ASTM D955 |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|------------|----------------|--------------------|
| Hardness, Rockwell R | 124 | 124 | R-Scale; ASTM D785 |
| Tensile Strength | 104 MPa | 15100 psi | ASTM D638 |
| Elongation at Break | 1.2 % | 1.2 % | ASTM D638 |
| Tensile Modulus | 9.10 GPa | 1320 ksi | ASTM D638 |
| Flexural Strength | 165 MPa | 23900 psi | ASTM D790 |
| Flexural Modulus | 8.10 GPa | 1170 ksi | ASTM D790 |
| Izod Impact, Notched | 0.180 J/cm | 0.337 ft-lb/in | ASTM D256 |

| Thermal Properties | Metric | English | Comments |
|-------------------------------|-----------------------------------|-------------------------------------|----------------|
| CTE, linear, Parallel to Flow | 190 µm/m-°C @Temperature 150 - | 106 µin/in-°F @Temperature 302 - | TMA; ASTM E831 |

| Thermal Properties | 250 °C Metric | 482 °F English | Comments |
|---|-----------------------------|----------------------------|-----------------------|
| | 250 µm/m-°C | 139 µin/in-°F | |
| | @Temperature 0.000 - 100 °C | @Temperature 32.0 - 212 °F | TMA; ASTM E831 |
| Melting Point | 323 °C | 613 °F | Peak; ASTM D3418 |
| Deflection Temperature at 0.46 MPa (66 psi) | 290 °C | 554 °F | Unannealed; ASTM D648 |

| Optical Properties | Metric | English | Comments |
|---------------------------------------|---------|---------|--------------------|
| Reflection Coefficient, Visible (0-1) | >= 0.90 | >= 0.90 | 460 nm; ASTM E1331 |
| | >= 0.90 | >= 0.90 | 540 nm; ASTM E1331 |
| | >= 0.90 | >= 0.90 | 615 nm; ASTM E1331 |

| Processing Properties | Metric | English | Comments |
|---------------------------|-----------------|-----------------|----------|
| Rear Barrel Temperature | 318 - 324 °C | 604 - 615 °F | |
| Middle Barrel Temperature | 318 - 324 °C | 604 - 615 °F | |
| Front Barrel Temperature | 327 - 332 °C | 621 - 630 °F | |
| Melt Temperature | 329 - 343 °C | 624 - 649 °F | |
| Mold Temperature | 65.0 - 93.0 °C | 149 - 199 °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 |
|------------------------|----------------------|----------|
| Additive | UV Stabilizer | |
| Appearance | White | |
| Availability | Africa & Middle East | |
| | Asia Pacific | |
| | Europe | |
| | North America | |
| | South America | |

| Features Descriptive Properties | Fast Molding Cycle Value | Comments |
|------------------------------------|-------------------------------------|----------|
| | Good Chemical Resistance | |
| | Good Color Stability | |
| | High Reflectivity | |
| | High Stiffness | |
| | Light Stabilized | |
| | Low Moisture Absorption | |
| Forms | Pellets | |
| Generic | PPA | |
| Processing Method | Water-Heated Mold Injection Molding | |
| RoHS Compliance | RoHS Compliant | |
| Uses | Automotive Applications | |
| | Automotive Electronics | |

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