Amodel® AT-1001L

Polyphthalamide

Solvay Specialty Polymers

Message:

Amodel ® AT-1001L is an unreinforced, impact modified polyphthalamide (PPA) resin that exhibits exceptional impact strength at temperatures ranging from room temperature to as low as -40°F (-40°C), which suggests possible applications in ski boots and hockey skates. In addition, its chemical and wear resistance, combined with good mechanical properties, make Amodel ® AT-1001L resin a prime candidate for applications such as anti-friction and wear resistant components, chemical, oil field, automotive and safety equipment. Natural: AT-1001 L NT

| General Information | |
|---------------------|--|
| Additive | Impact modifier |
| | Lubricant |
| | demoulding |
| | |
| Features | Impact modification |
| | Low warpage |
| | Low temperature impact resistance |
| | Good chemical resistance |
| | Good wear resistance |
| | Hot water formability |
| | Lubrication |
| | ductility |
| | |
| Uses | Industrial components |
| | Industrial application |
| | Machine/mechanical parts |
| | Metal substitution |
| | Automotive Electronics |
| | Application in Automobile Field |
| | Oil/Gas Supplies |
| | General |
| | Shell |
| | |
| RoHS Compliance | Contact manufacturer |
| Appearance | Natural color |
| Forms | Particle |
| Processing Method | Water temperature mold injection molding |
| | Injection molding |
| | |

Multi-Point Data

Isothermal Stress vs. Strain (ISO 11403-1)

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|-------|-------------|
| Density | 1.11 | g/cm³ | ISO 1183/A |
| Molding Shrinkage | | | ASTM D955 |
| Flow | 1.7 - 2.2 | % | ASTM D955 |
| Transverse flow | 1.9 - 2.1 | % | ASTM D955 |
| Water Absorption (24 hr) | 0.75 | % | ASTM D570 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus | 1900 | MPa | ASTM D638 |
| Tensile Strength (Break) | 62.1 | MPa | ASTM D638 |
| Tensile Elongation | | | ASTM D638 |
| Yield | 6.0 | % | ASTM D638 |
| Fracture | 30 | % | ASTM D638 |
| Flexural Modulus | 2210 | MPa | ASTM D790 |
| Flexural Strength | 96.5 | MPa | ASTM D790 |
| Poisson's Ratio | 0.35 | | ASTM E132 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact | | | ASTM D256 |
| -40°C | 750 | J/m | ASTM D256 |
| 23°C | 1100 | J/m | ASTM D256 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (1.8 | | | |
| MPa, Annealed, 3.18 mm) | 120 | ٠̈ــ | ASIM D648 |
| Melting Temperature | 310 | °C | |

Additional Information

Penetration Impact, ASTM D3763, 73°F, Maximum Load: 1100 lbsPenetration Impact, ASTM D3763, 73°F, Total Energy Absorbed: 40 ft-lbsPenetration Impact, ASTM D3763, -10°F, Total Energy Absorbed: 40 ft-lbsPenetration Impact, ASTM D3763, -10°F, Total Energy Absorbed: 40 ft-lbsPenetration Impact, ASTM D3763, -10°F, Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 1260 lbsPenetrati

| Injection | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature | 110 | °C |
| Drying Time | 4.0 | hr |
| Suggested Max Moisture | 0.045 | % |
| Hopper Temperature | 79.4 | °C |
| Rear Temperature | 304 - 318 | °C |
| Front Temperature | 316 - 329 | °C |
| Processing (Melt) Temp | 321 - 343 | °C |
| Mold Temperature | 65.6 - 110 | °C |
| Injection instructions | | |

Storage:

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 following the recommendations found in this datasheet and/or in the Amodel[®] processing guide.

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co., Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

