

## ***Newport 321 LS***

### **Description:**

Newport 321 LS lightning strike protection material is a 275°F (135°C) to 300°F (149°C) cure, toughened, high Tg, controlled flow epoxy resin system, provided as a resin coated expanded metal mesh adhesive film. Versatile processing and long out time make Newport 321 LS especially suited for general aviation, aerospace, and industrial applications. FAA approved design allowable database is available for Newport's 321 products.

### **Application:**

Newport 321 LS is a lightning strike protection adhesive ideal for electrical shielding and can be provided as an Aluminum or Copper mesh reinforced adhesive. 321 LS is ideal for the UAV, general aviation, aerospace and industrial markets where electrical conductance or dissipation is required.

Adhesive products are available in standard commercial widths up to 48 inches (1.2 M).

<b>Products</b>	<b>width (in)</b>	<b>weight (psf)</b>	<b>thickness (in)</b>	<b>% open area</b>
Aluminum Mesh	48	0.016	0.006	76
Aluminum Mesh	36	0.028	0.005	60
Copper Mesh	36, 48	0.029	0.005	84

### **Benefits/Features:**

- Lightning strike protection
- Electrical shielding & electronics (EMI, RFI and ESD)
- Good tack and handling
- Controlled resin flow
- High dry and wet Tg
- Flexible processing: curable by autoclave, press, or vacuum bag
- 30 days out time at 70°F (21°C)

### **Recommended Processing Conditions:**

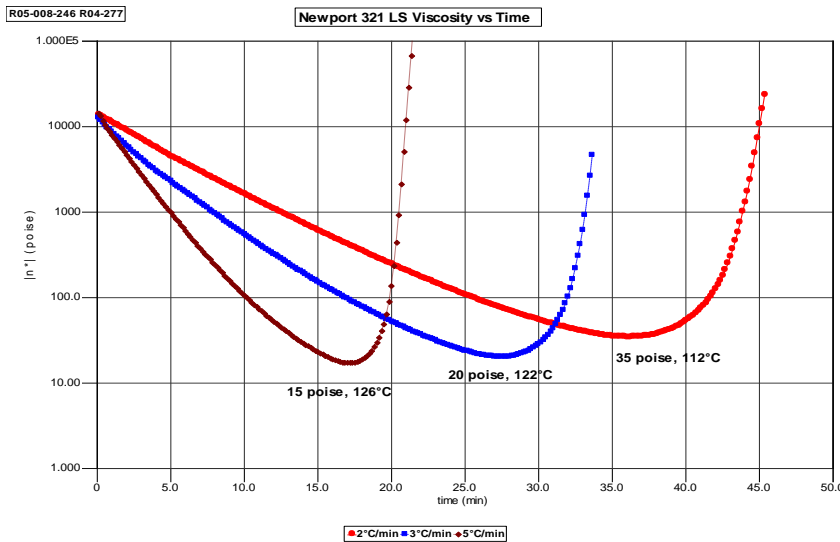
Newport 321 LS can be cured at temperatures from 275°F (135°C) to 300°F (149°C), depending on part size and complexity. Low, medium, and high pressure molding techniques may be used for curing. Recommended cure cycle is 50 psi (345 kPa), 3°F (1.7°C)/min. ramp to 275°F (135°C), hold for 90 -120 minutes, cool to <140°F (60°C).

**Physical Properties:**

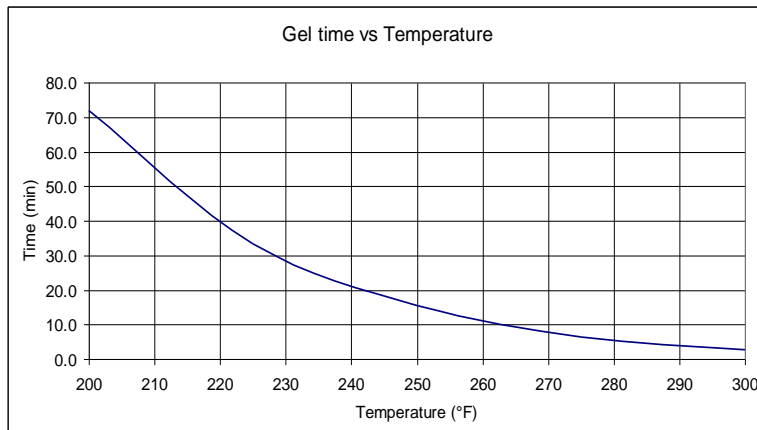
- Gel Time 275°F (135°C): 5-7 minutes
- Resin Specific Gravity: 1.22
- Tg Dry (DMA, E'): 150°C (302°F)

**Melt Viscosity Profile of Newport 321 LS**

A TA (model AR2000) parallel plate rheometer was used to determine the complex viscosity of the NB321 neat resin system.



**Gel Curve Profile of Newport 321 LS**



### **Prepreg Storage**

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Material can be stored at 40°F (4°C) for 3 months, or 0°F (-18°C) for 6 months. Out time is 30 days maximum at room temperature 70°F (21°C).

### **Availability:**

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Newport 321 LS is available in film weights from 0.016 to 0.033 psf (78-161 gsm) either with Al or Cu mesh reinforcements. Some product characteristics such as foil weight, mesh geometry, resin content, width can be tailored within reason to meet specific requirements. Contact Newport about any special requirements.

*For orders, pricing, availability, technical assistance or other inquiries please contact:*

### **CORPORATE OFFICES**

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