

# NB106



MITSUBISHI RAYON  
CARBON FIBER & COMPOSITES

## 235-300°F (110-140°C) Cure Epoxy Film Adhesive

Meets FAR 25.853 Appendix F – Parts I

### Typical applications

Aerospace  
Sporting goods  
Marine  
Wind energy  
Industrial

### Out life

7 days at 70°F (21°C)

### Shelf life

3 months at 40°F (4°C)  
6 months at 0°F (-18°C)

### Description

Newport 106 is a 235°F (113°C) to 300°F (149°C) cure, general purpose flame retardant epoxy film adhesive designed for bonding applications requiring high strengths from -67-180°F (-55-82°C).

### Benefits/features

- Flame retardant
- Co-curable with most 250°F (121°C) curing prepregs
- Conforms to FAR 25.853 Appendix F, Part I, (a)(1)(i) flammability requirements
- Meets: MMM-A-132B, Type I, Class 3, Group 3
- MIL-A-25463B, Type I, Class 1, Group 3
- Meets NASA outgassing requirements for space applications

### Application

NB106 is suited for structural and secondary bonding applications in aerospace, sporting goods, marine, wind energy, and industrial manufacturing where flame retardant properties are required. Recommended for bonding a large number of substrates including, but not limited to, Nomex & aluminum honeycombs, metals, cured & uncured epoxy composites, balsa, and foams.

NB106 is supplied in standard film weights from 0.030 to 0.090 psf (150-450 gsm), either unsupported or on a variety of commercially available reinforcements, including:

- Non-woven polyester carrier (HC)
- Nylon mesh (N), and tricot (TR)
- Unsupported (U)
- Metal meshes for electrical management
- Also available in fabric (NB1106) and unitape (NCT106-8) forms

### Recommended processing conditions

NB106 can be cured at temperatures from 235°F (113°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 25psi (172kPa), 3°F (1.7°C)/min, ramp to 250°F (135°C), hold for 60 minutes, cool to <140°F (60°C).

Technical Data Sheet



## Neat Resin (values are average and do not constitute a specification)

Property	Measured Value
Gel Time @ 275°F (135°C), minutes	3 – 5
Specific Gravity	1.30
T <sub>g</sub> (DMA, E'), °C (°F)	100 (212)

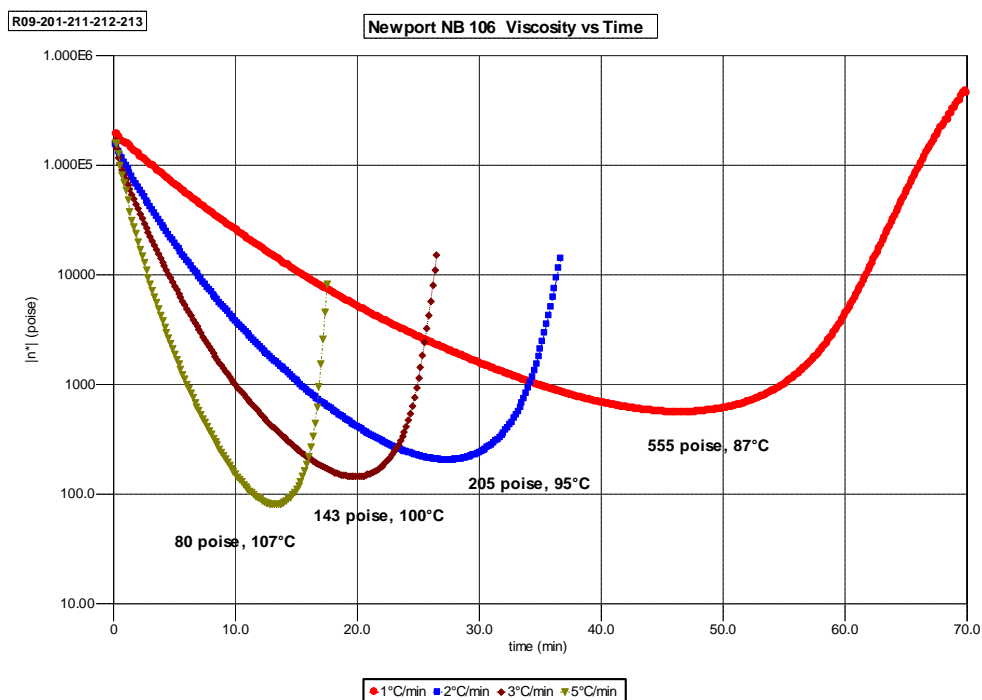
## Mechanical Data (values are average and do not constitute a specification)

MIL-A-25463 Type I, Class 3. NB106HC @ 0.060 psf, preheated press 275°F, 1 hour, 25 psi

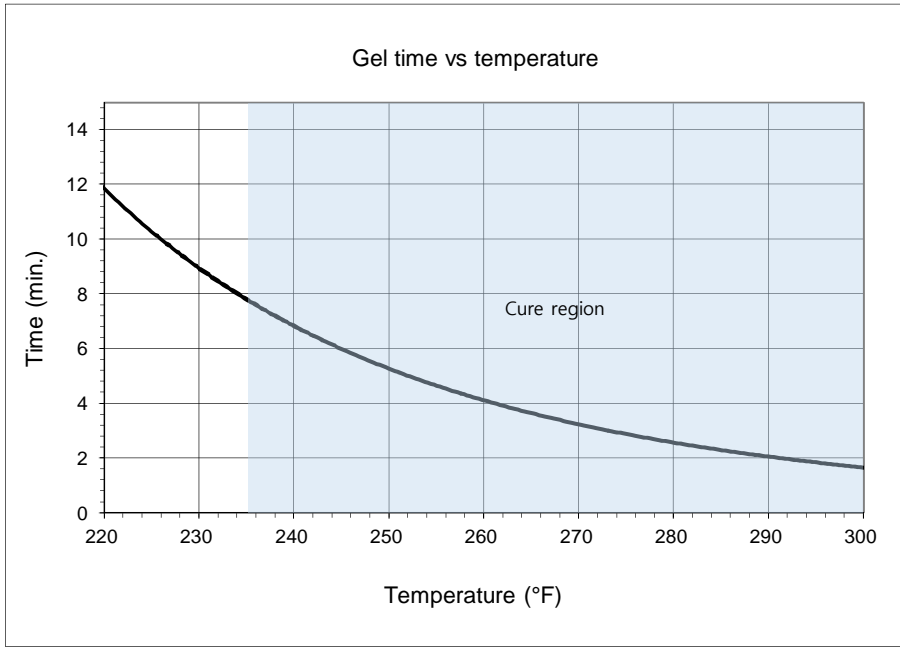
Property	Test Method	Test Conditions	Results
Lap shear strength, psi (MPa)	ASTM D1002	RT	4400 (30.3)
		-67°F (-55°C)	3800 (26.2)
		180°F (82°C)	3100 (21.3)
Flatwise tensile strength, psi (MPa)	ASTM C297	RT	1300 (8.96)
		-67°F (-55°C)	1200 (8.27)
		180°F (82°C)	975 (6.72)
Flexural strength, lbs (kN)	ASTM C393	RT	2900 (12.9)
		-67°F (-55°C)	2800 (12.4)
CD peel strength, in-lbs/in (Nm/m)	ASTM D1781	180°F (82°C)	2400 (10.6)
		RT	10.8 (48.0)

## Viscosity Profile

TA - AR2000 parallel plate rheometer



# Gel Curve



The information contained herein has been obtained under controlled laboratory conditions and are typical or average values and do not constitute a specification, guarantee, or warranty. Results may vary under different processing conditions or in combination with other materials. The data is believed to be reliable but all suggestions or recommendations for use are made without guarantee. You should thoroughly and independently evaluate materials for your planned application and determine suitability under your own processing conditions before commercialization. Furthermore, no suggestion for use or material supplied shall be considered a recommendation or inducement to violate any law or infringe any patent.

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