

WP-H2002

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Heat-resistant Prepreg Epoxy Resin



惠柏新材料科技（上海）股份有限公司
Wells Advanced Materials Co., Ltd.

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Recommended Curing Condition

- Atmospheric pressure curing process: $150^{\circ}\text{C} \times 1\text{hr} + 200^{\circ}\text{C} \times 2\text{h}$

***Forming conditions:** Adjustments need to be made according to the thickness, heat transfer, pressure, and forming method of the product.

Storage period	Temperature ($^{\circ}\text{C}$)	Storage Period
	0	3 Months
	-18	1 Year

Resin should be stored in a cool and dry place or in a cold storage. After taking it out of the cold storage, before opening the polyethylene sealing bag, the resin needs to be placed at indoor temperature to prevent condensation.

Prepreg Processing

1. Melting Condition

- Oven temperature: 75°C - 85°C , and the time is 30-80 mins.
- Required time varies with different temperature and amount of melting. When the amount of preheating resin is large, the resin may have exothermic reaction.
- , careful observation is required, and exothermic may occur

2. Coating Condition

- Temperature is 78 - 90°C .
- Increase the temperature properly if the coating quantity is low to get better surface.

3. Impregnation Condition

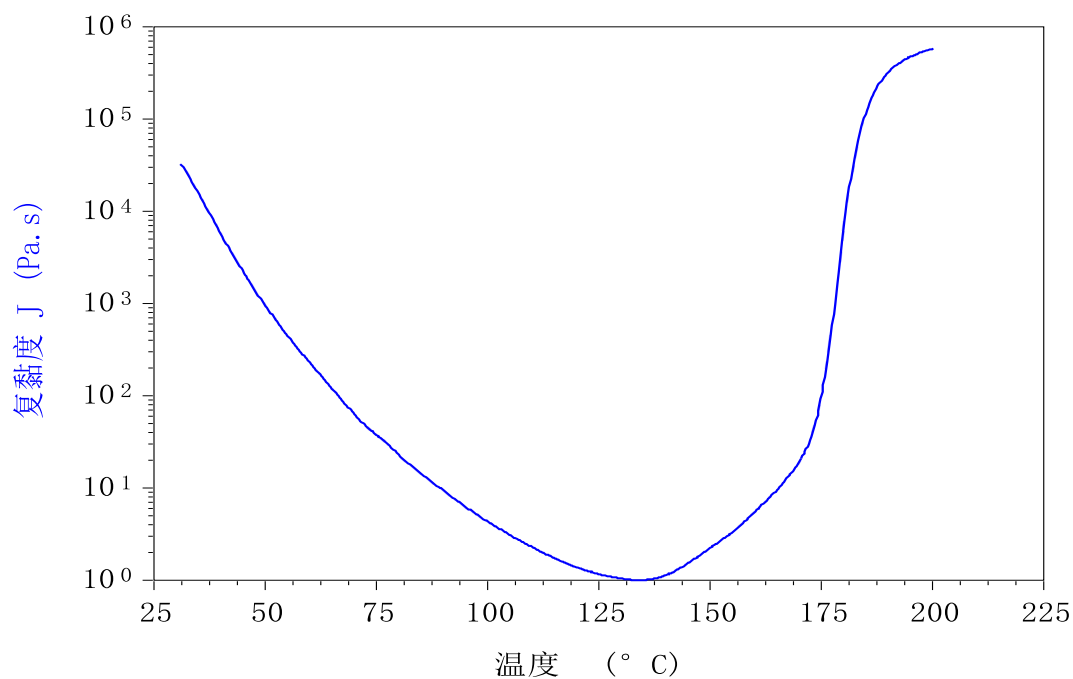
- Temperature between 80 - 105°C . Increase the temperature properly if the impregnation is NOT sufficient. The temperature varies with different production speed and product thickness.
- Note that the resin is easy to cure above 100°C
- Adjust the tension, gap, pressure and other conditions according to the fiber and weight per unit area.

Resin Properties

Viscosity	Gel Time (s, @ 120°C)	Viscosity ($\text{mPa}\cdot\text{s}$, @ 80°C)
WP-H2002	600-900	7000-11000

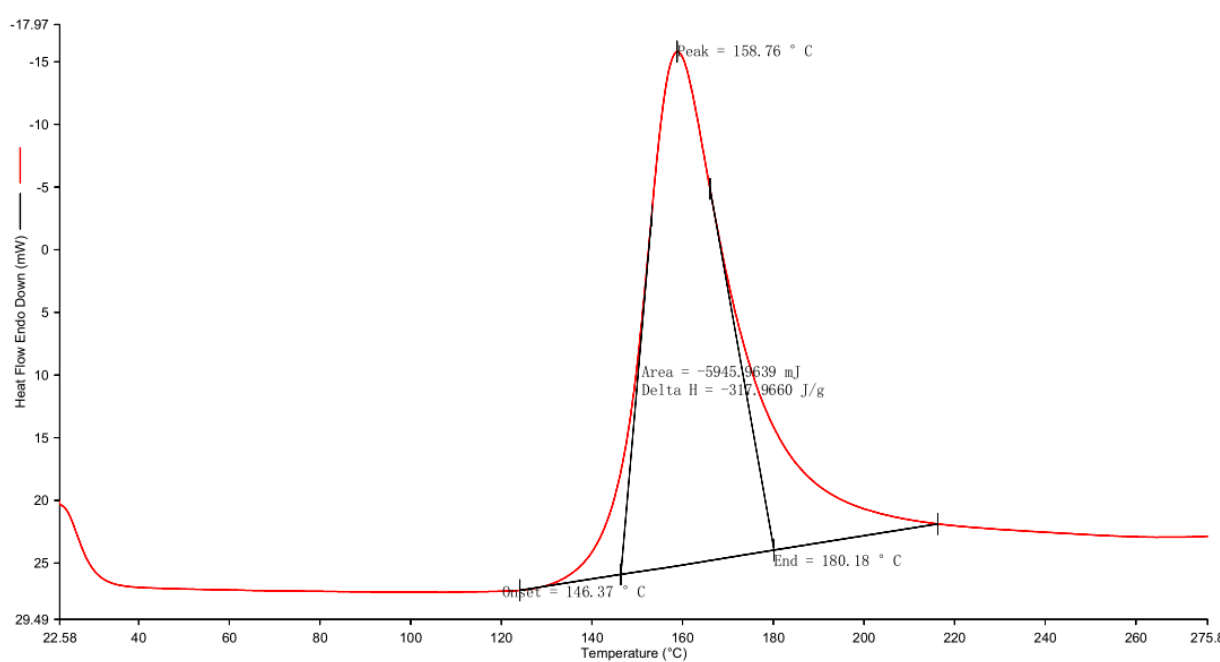
Temperature- Viscosity Curve

— Heating Rate (3°C/min)



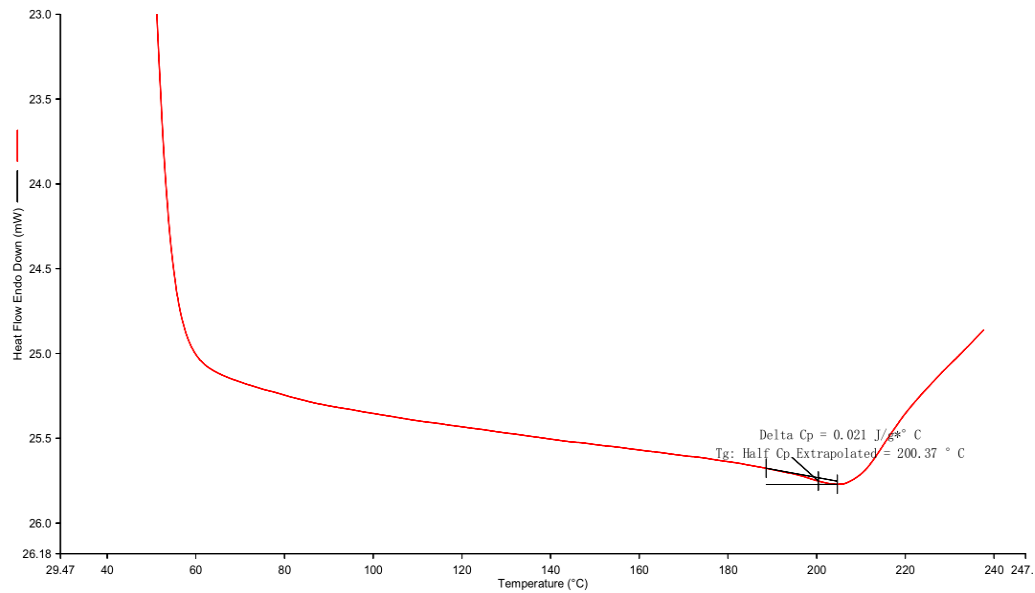
DSC Curve (Curing)

— Heating Rate (10°C/min)

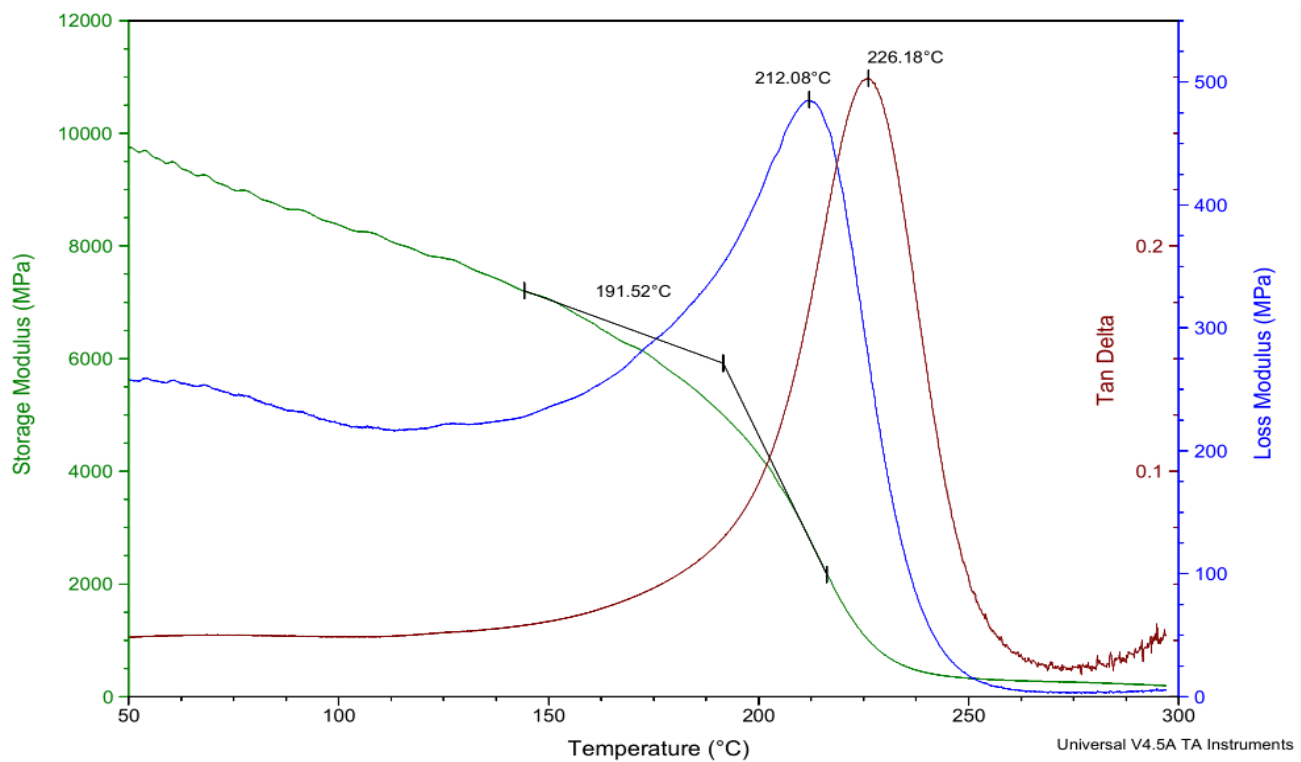


Glass Transition Temperature (T_g)

- By DSC: 200°C (curing condition: 120°C×1hr+200°C×2hr)



- By DMA (ASTM E1545): (3°C/min, 1Hz)



Mechanical Properties

Test	Method	Unit	Value
Tensile Strength	GB/T 2567	MPa	57
Tensile Modulus	GB/T 2567	MPa	3180
Elongation at Break	GB/T 2567	%	2
Flexural Strength	GB/T 2567	MPa	115
Flexural Modulus	GB/T 2567	MPa	3250
Impact Strength	GB/T 2567, Unnotched Charpy	KJ/m ²	10

Package

Resin

Carton box 25kg/box

Handling Precautions

Personal Protection Equipment:	Wear protection gloves to avoid direct contact with skin.
Respiratory Protection:	No special protection.
Eyes Protection:	Chemical anti-spattering goggles is recommended.
Body Protection:	Use a protection coat which can be resisted, protection shoes, gloves, coat and emergency shower equipment according to situations.

First aid

Skin	Wash the contaminated skin with soap and clean water for at least 5 minutes or until the contaminant removed.
Eyes	1. Flush eyes with plenty of water or physiologic saline for 20 minutes or until the contaminant removed while holding eyelids open 2. A doctor should then be consulted.
Inhalation	1. Moved to fresh air area. 2. In all cases of doubt, call for medical assistance.

Important notice:

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