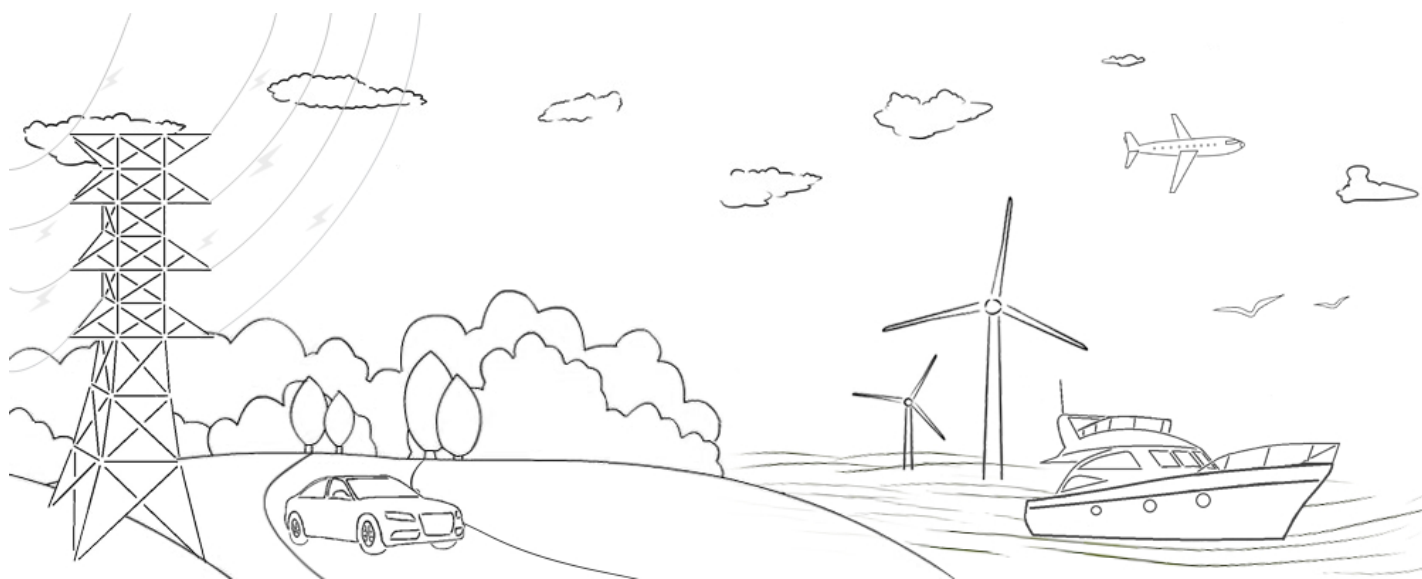


**WP-R2600**

File Number: WAMTIR04

Version Number: 10

## **Low Viscosity Standard Prepreg Epoxy Resin System**



**Wells Advanced Materials (Shanghai) Co., Ltd.**

*Creating Partners.*

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## Introduction

WP-R2600 is a 130 °C cured epoxy resin system of WAM, and its viscosity and stickiness are very suitable for the prepreg operation process. The resin has good fluidity, excellent wettability, fast resin reaction, low product loss rate, and excellent mechanical properties of the product. It can be applied to roll tubes, vacuum bags, hot pressing cans, blow molding processes, and molding process of molding tables. And with the change of temperature, the difference in usage characteristics (viscosity and softness) is very small. WP-R2600 can be stored for 3 weeks at room temperature and for 12 months at -18 °C.

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## Features and Advantages

- The resin loss rate is low.
- The mechanical properties of the product are excellent.
- Hot melt resin/solvent-free: a good working environment for workers; Few pores, excellent product performance.
- Best prepreg operability: Good flexibility, with minimal differences in resin properties with temperature changes.
- Appropriate viscosity and stickiness
- Shelf life: (at 25 °C) 3 weeks

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## Recommended processing and applications

- Roll tube, vacuum bag, hot pressing tank, blow molding process, and molding table forming process, etc

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## Recommended Curing Condition

- 130°C×60 mins
- 150°C×30 mins

\* Curing condition: required mending according to product size, transfusion, and molding method.

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## Storage

The resin system should be stored in cool and dry place or cold storage. After taking out the resin from cold storage, place the resin to room temperature, and then open the PE sealing bag to prevent condensation.

- Storage period

| Temperature (°C) | Humidity (%) | Storage Period |
|------------------|--------------|----------------|
| 25               | ≤65          | 3 Weeks        |
| 0                | ≤65          | 3 Months       |
| -18              | -            | 1 Year         |

## Prepreg Processing

### 1. Melting Condition

- It is not recommended to bake. Instead, place it on a resin heating rack and melt it directly.

The temperature of the resin rack is 65 °C -85 °C

### 2. Coating Condition

- Temperature between 70°C-80°C.
- Increase the temperature properly if the coating quantity is low to get better surface.

### 3. Impregnation Condition

- Temperature between 85-100°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.

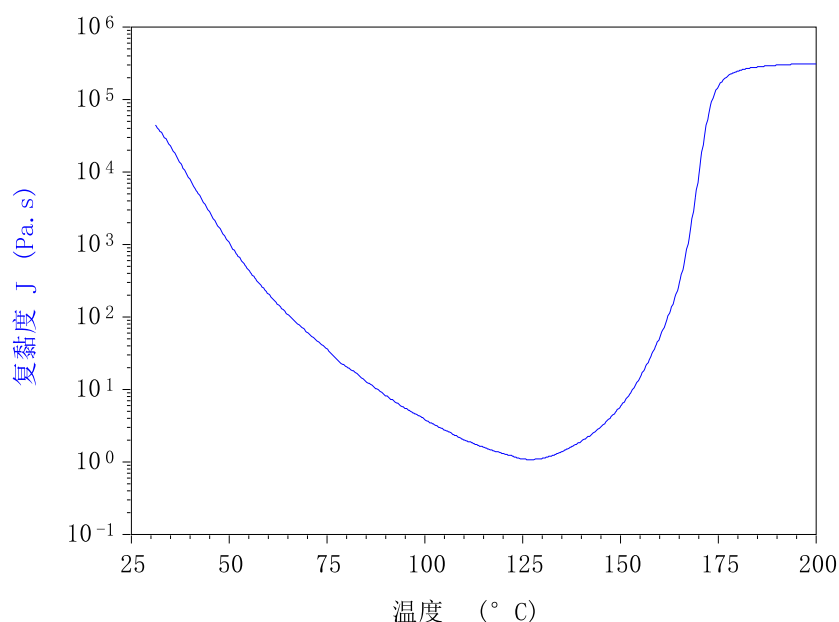
## Resin Properties

- Viscosity

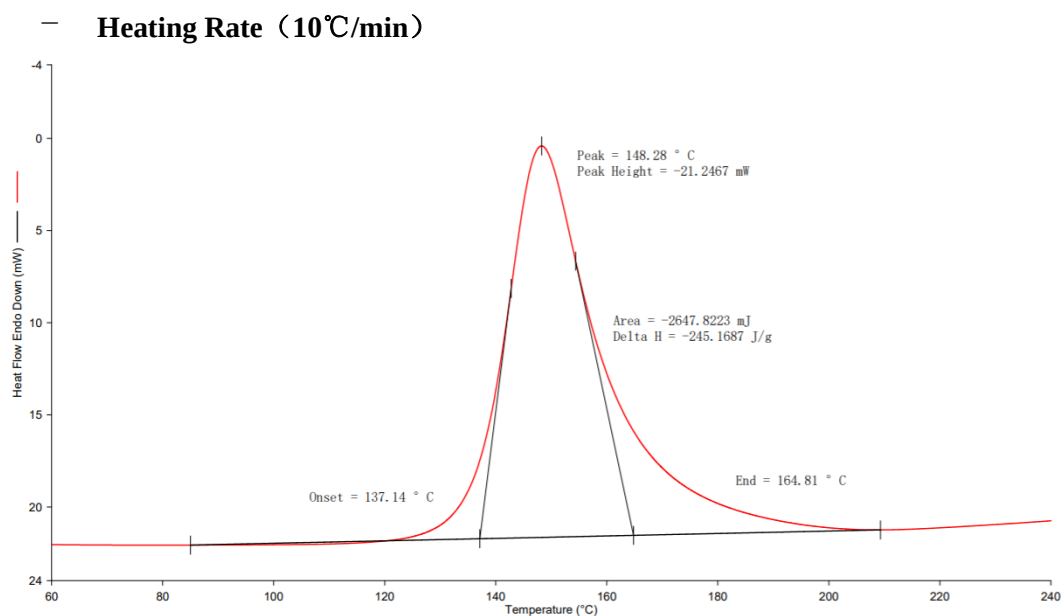
|          | Viscosity<br>(mPa.s, @80°C) | Gel time<br>(s, @120°C) | Density<br>(g/cm <sup>3</sup> ) |
|----------|-----------------------------|-------------------------|---------------------------------|
| WP-R2600 | 5,500-11,000                | 420-620                 | 1.19                            |

## Temperature & Viscosity Curve

- Heating Rate (3°C/min)

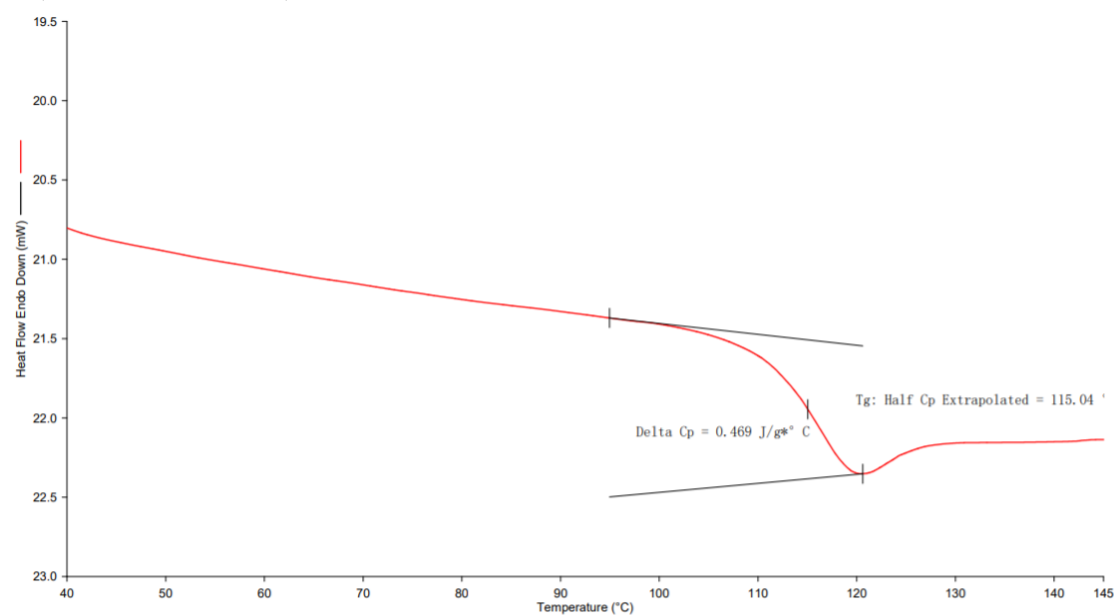


## DSC Curve (Curing)

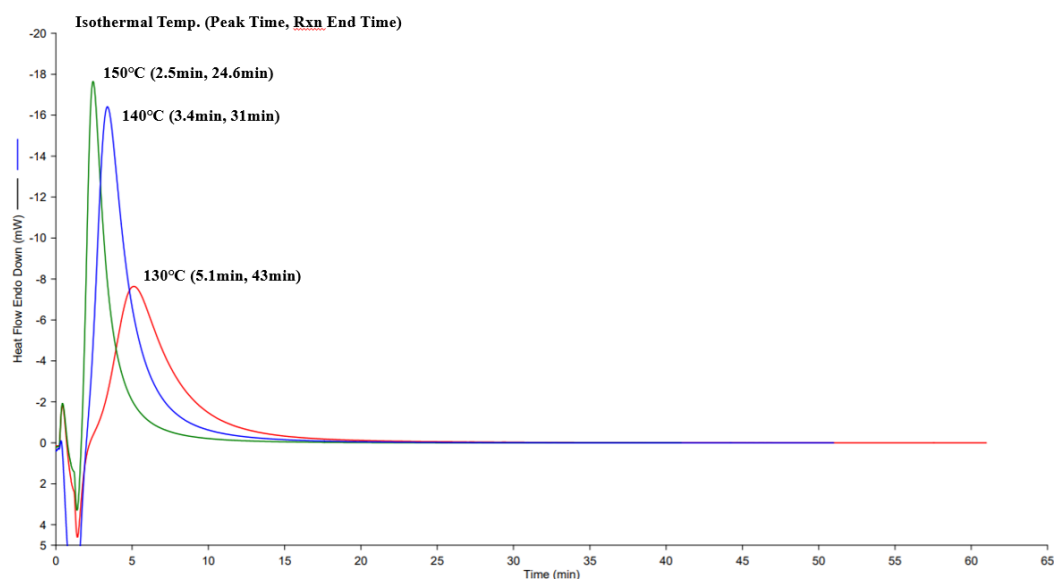


## Glass Transition Temperature (Tg)

— By DSC (GB/T 19466.2-2004): 115°C



## Isothermal DSC curve



## Mechanical Properties

| Test                | Method                        | Unit              | WP-R2600 |
|---------------------|-------------------------------|-------------------|----------|
| Tensile Strength    | GB/T 2567                     | MPa               | 75       |
| Tensile Modulus     | GB/T 2567                     | MPa               | 3102     |
| Elongation at Break | GB/T 2567                     | %                 | 3        |
| Flexural Strength   | GB/T 2567                     | MPa               | 142      |
| Flexural Modulus    | GB/T 2567                     | MPa               | 3257     |
| Impact Strength     | GB/T 2567<br>Unnotched Charpy | KJ/m <sup>2</sup> | 71       |

## Package

Resin  
Carton box      25kg/box

## Handling Precautions

|                                  |    |                                                                                                                                     |
|----------------------------------|----|-------------------------------------------------------------------------------------------------------------------------------------|
| Personal Protection Equipment... | 1. | Wear protection gloves to avoid direct contact with skin.                                                                           |
| Respiratory Protection.....      | 2. | No special protection.                                                                                                              |
| Eyes Protection.....             | 3. | Chemical anti-splattering goggles and face guard are recommended.                                                                   |
| Body Protection.....             | 4. | Use a protection coat which can be resisted, protection shoes, gloves, coat and emergency shower equipment according to situations. |

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**First aid**

|                         |                                                                                                                                                                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Skin</b> .....       | Wash with warm soap water for at least 5 minutes or the contaminant removed.                                                                                                                                                         |
| <b>Eyes</b> .....       | 1. Contamination of the eyes by resin, hardener or mix should be treated immediately by flushing with clean, running water or physiologic saline for 20 minutes or the contaminant removed.<br>2. A doctor should then be consulted. |
| <b>Inhalation</b> ..... | 1. Anyone taken ill after inhaling vapors should be moved outdoors immediately.<br>2. In all cases of doubt, call for medical assistance.                                                                                            |

**Important notice:**

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