

WP-R1200

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Version Number: A/4

General Prepreg Epoxy Resin System

WP-R Epoxy Resin Series Wells Advanced Materials (WAM), 125 °C Curing Epoxy Resin System



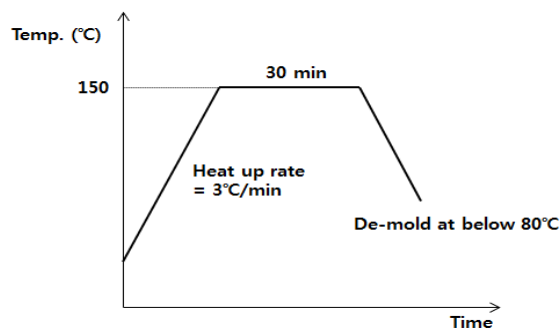
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Wells Advanced Materials Co., Ltd.

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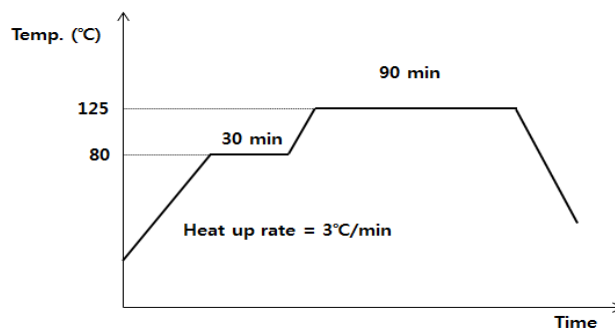
Recommended Curing Condition

- Curing: 90 mins ~ 30 mins(120 ~ 150℃)
- Pipes (golf club, fishing rod) Curing: 30mins × 80℃ + 90 × 125℃

*** Curing condition: required mending according to product thickness, transfusion, and curing type.**



Example of curing condition



Standard curing condition for pipes

Storage

The resin system should be kept in cool and dry place or the fridge. After taking out the resin from the fridge, wait the temperature up to 25℃ before opening the PE sealed bag to avoid condensation.

- Shelf Life	Temperature (℃)	Time
	0	3 Months
	-18	1 Year

Processing

1. Melting Condition

- Oven temperature: 70℃-80℃ ×30-80 mins.
- Required time differs according to the temperature and resin melting quantity.

2. Coating Condition

- Temperature between 73℃-80℃.
- Increase the temperature if the coating quantity is low to get better surface.

3. Impregnating Condition

- Temperature between 80-110℃ according to the production speed and product thickness.
- Note that resin may get cured at more than 100℃
- Increase the temperature if the impregnation is NOT sufficient.

Prepreg Shelf Life

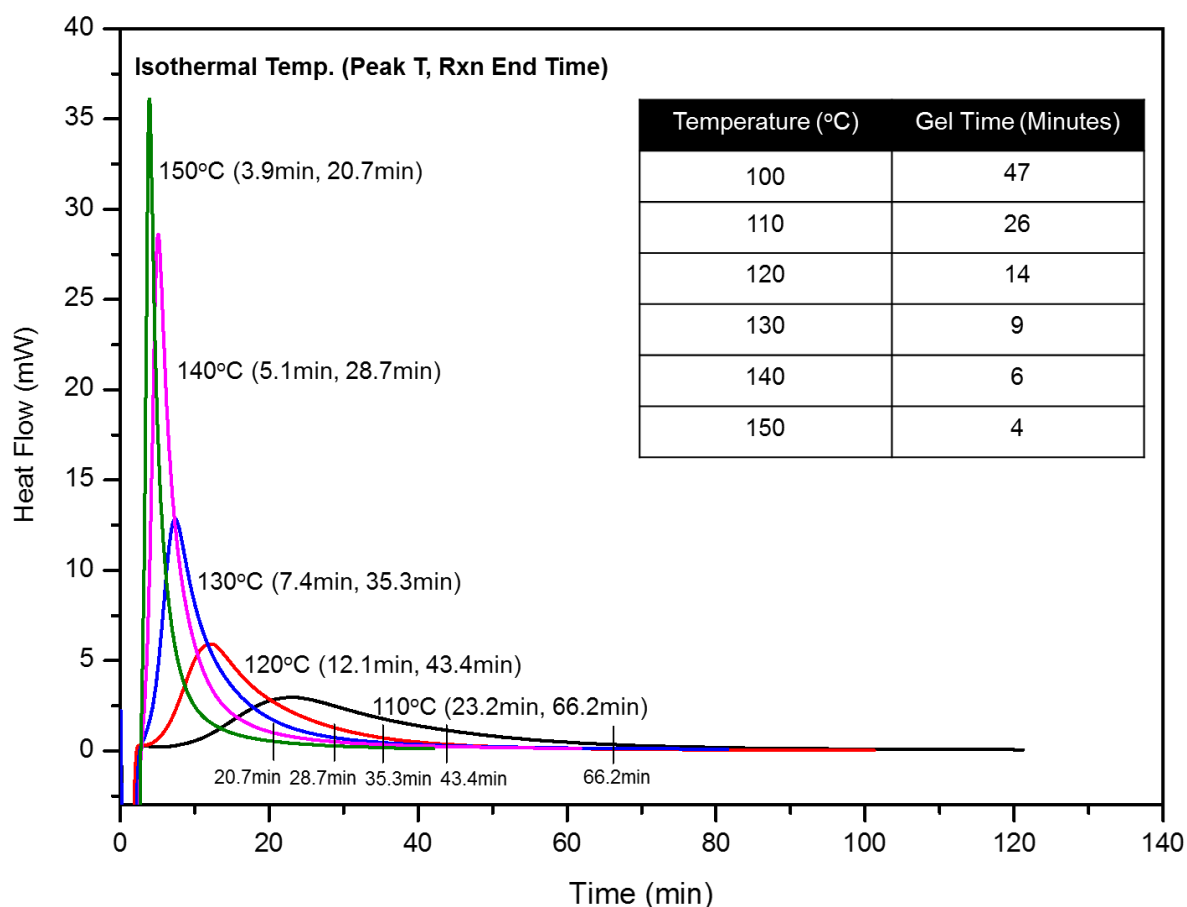
Temperature (°C)	Time
25	4 Weeks
0	3 Months
-18	1 Year

Resin Properties

– Viscosity

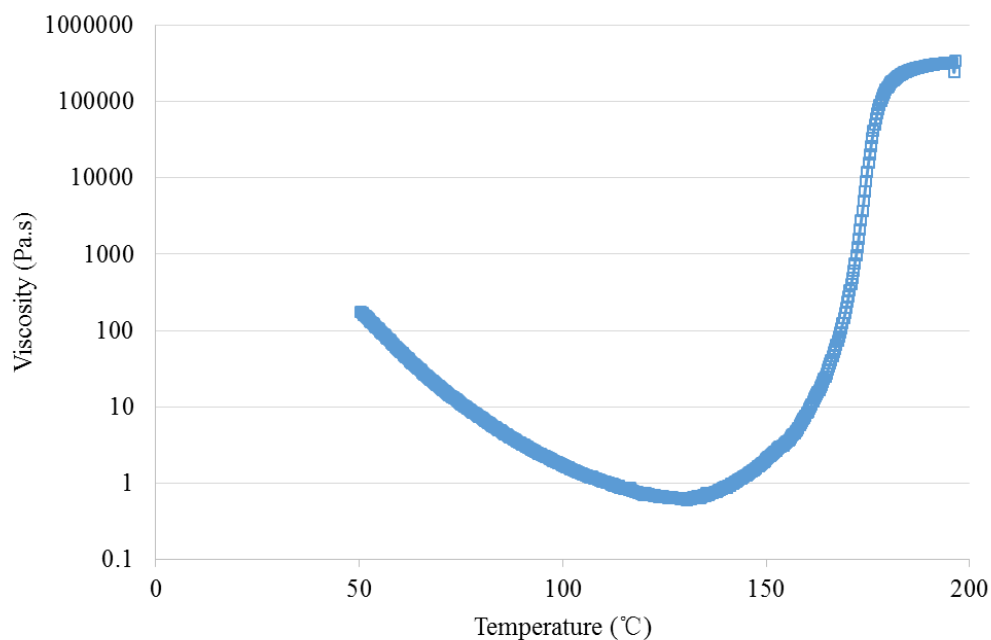
	Viscosity (mPa.s, @70°C)	Viscosity (mPa.s, @80°C)	Fluidity
WP-R1200	9,000-13,000	3,500-5,000	High

Isothermal DSC Curve and Gel Time



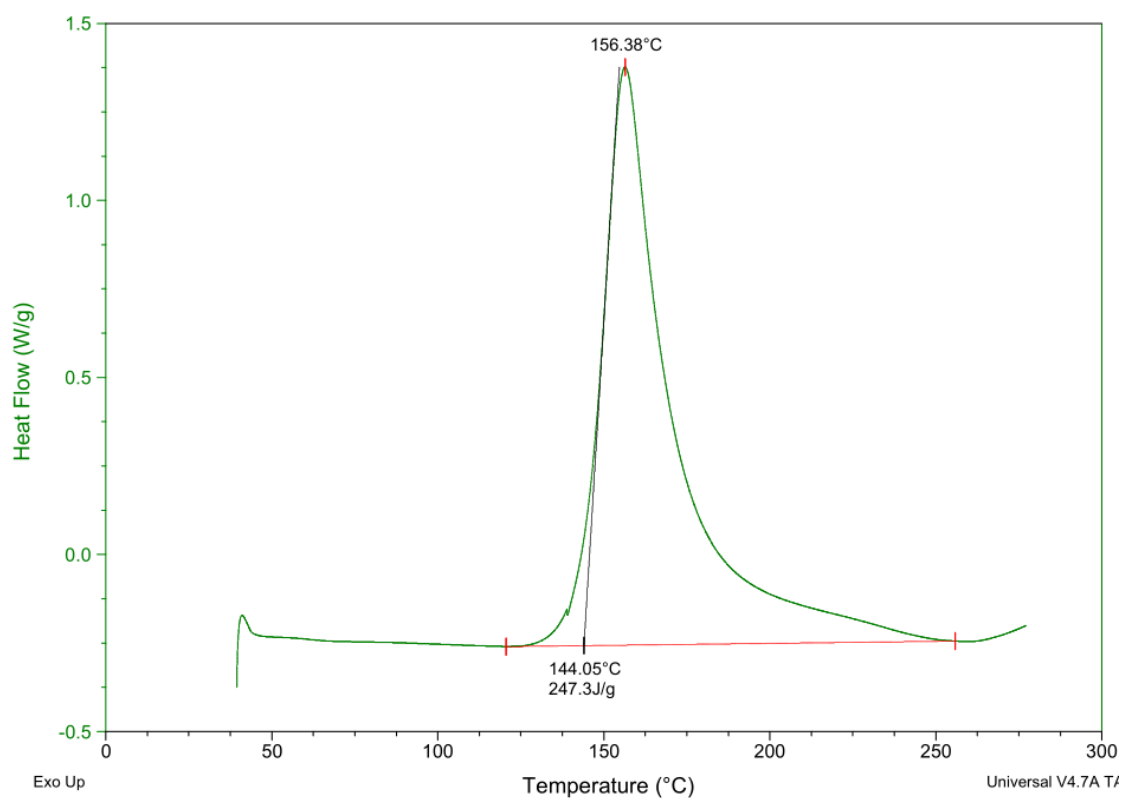
Temperature- Viscosity Curve

– Heating Rate (3°C/min)



DSC Curve (Curing)

– Heating Rate (10°C/min)

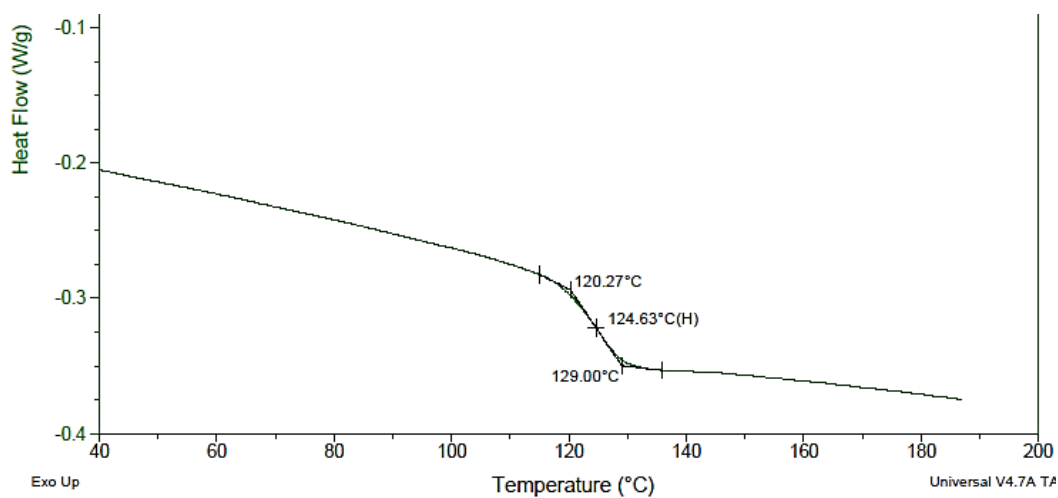


Cured Resin Properties

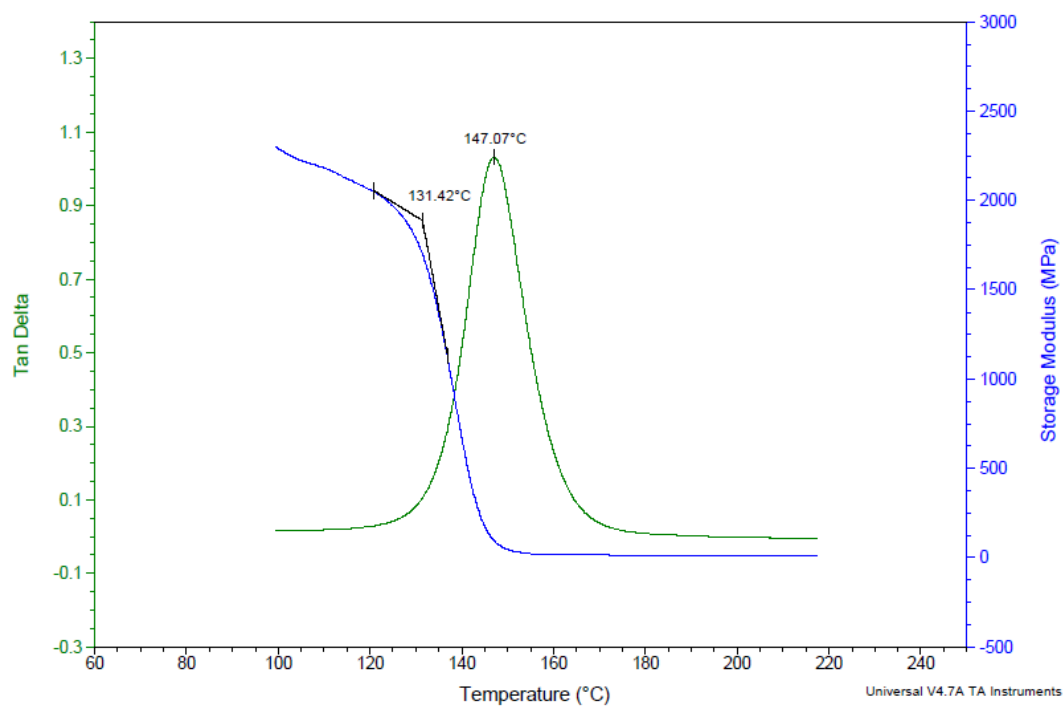
Density	WP-R1200
g/cm ³	1.19

Glass Transition Temperature (T_g)

By DSC (GB/T 19466.2-2004): 125 °C



By DMA (ASTM E1545): 131 °C (Onset of Storage), 147 °C (Tan delta Peak Max)



Mechanical Properties

Test	Method	Unit	Value
Tensile Strength	GB/T 2567	MPa (psi)	85 (1.2 x 10 ⁴)
Tensile Modulus	GB/T 2567	MPa (psi)	2741 (4.0 x 10 ⁵)
Elongation at Break	GB/T 2567	%	7
Flexural Strength	GB/T 2567	MPa (psi)	126 (1.8 x 10 ⁴)
Flexural Modulus	GB/T 2567	MPa (psi)	2935 (4.2 x 10 ⁵)
Impact Strength	GB/T 2567, Unnotched Charpy	KJ/m ²	54

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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