

GR3303

Fast-curing epoxy resin for recyclable prepreg

Description

GR3303 is Fast-curing epoxy resin designed for prepreg impregnation without diuron. It's compatible with carbon fiber, glass fiber and other fibers, and has good mechanical properties after curing. GR3303 could be applied in moulding process with low flow rate, including sports leisure, automobile, and medical device.

Neat Resin Properties

Items	GR3303-A	GR3303-B
Appearance	Brown Solid	White paste
Epoxy Equivalent Weight (g/e q)	260 ~ 360 g/e q	NA
Viscosity (cps,80°C)	40,000 ~ 60,000 cps	NA
Viscosity (cps,50°C)	NA	1500~4500
Viscosity of mixed(cps,70°C)	30,000 ~ 40,000 cps	
A/B ratio (weight)	100 : 47.4	
B-stage Tg	8 ~ 15 °C	
Tg*1	> 90 °C	
Storage at room temperature	> 9 hrs	
Enthalpy*2	250 ~ 400 J/g	
Gel time*3	130 °C : 3 ~ 5 minutes	
Curing Time*4	130 °C : 6 minutes	
Tack	No tack	

*1 Tg is tested by DSC after cured.

*2 Test method: According to ISO11357-5. The ramp is 10°C/mins.

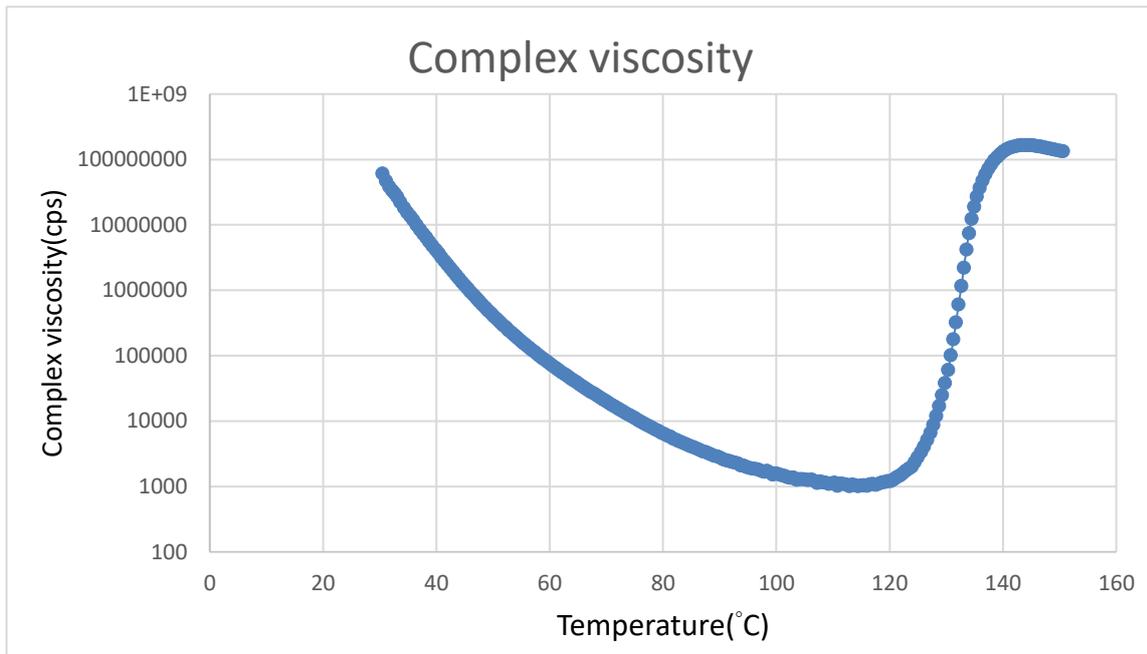
*3 Test method: Equilibrate at 130°C test with Rheometer. Take the intersection of storage modulus and loss modulus.

*4 The recommended curing cycle base on laboratory testing, and the curing cycle can be adjusted according to the process , product sizes and thickness.

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Rheology of epoxy resin(The ramp is 5°C/mins)

Item	GR3303
minimum viscosity (cps)	1014
Temperature(°C)	114



Impregnation & Curing condition

1. Preheating temperature of GR3303-A should be under 70°C.
2. Mixing temperature should be 50~70°C, and could be adjusted according to process.
3. Coating temperature should be 65~75°C to prevent epoxy resin from overreaction.
4. Impregantion should be 85~95°C, and could be adjusted according to process.
5. GR3303 could be cured under 130°Cx 6mins, and it depends on mould, thickness, and ramp temperature.

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Storage Life

Shelf Life after mixing: TBD (Recommended to store at -18 °C)

Shelf life GR3303-A: 12 months at 23°C

Shelf life GR3303-B: 3 months at -18°C

Package

GR3303-A: 20KG in 5/55 gallon barrel

GR3303-B: 20KG in 5/55 gallon barrel

Handling and Safety Precautions

1. Please refer to the SDS for the most current safety and handling information.
2. Resin should be stored in their original, properly closed containers and stored at proper temperature. Shelf life and out life are indicated on the label.
3. It is recommended to heat only applicable quantity before use, properties could be affected while re-heated.
4. During operation, operators should wear clean, impervious gloves to avoid skin contact and prevent contamination of the material.

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