

Description

GR3302 is recyclable epoxy resin designed for towpreg impregnation. It has lower viscosity than other prepreg resin. It is compatible with carbon fiber, glass fiber and other fibers, and has good mechanical properties after curing. GR3302 could be applied in towpreg, and used in pressure vessel.

Neat Resin Properties (Mixing)

Items	GR3302-A	GR3302-B	GR3302-C
Appearance	White liquid	White paste	White paste
Epoxy Equivalent Weight (g/e q)	180~280	NA	NA
Viscosity (cps,50°C)	6000~12000	1000~4000	3500-6500
Viscosity of mixed(cps,50°C)	4,500~6,500		
A/B/C ratio (weight)	100 : 25 : 3.5		
Pot life@50°C	NA		
Tg ^{*1}	>115°C		
Enthalpy ^{*2}	300~450 J/g		
Resin density	1.15~1.25 g/cm ³		
Gel time ^{*3}	130 °C : 13~18 minutes		
Curing Time ^{*4}	130 °C : 30 minutes		

¹ Tg is tested by DSC after cured.

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

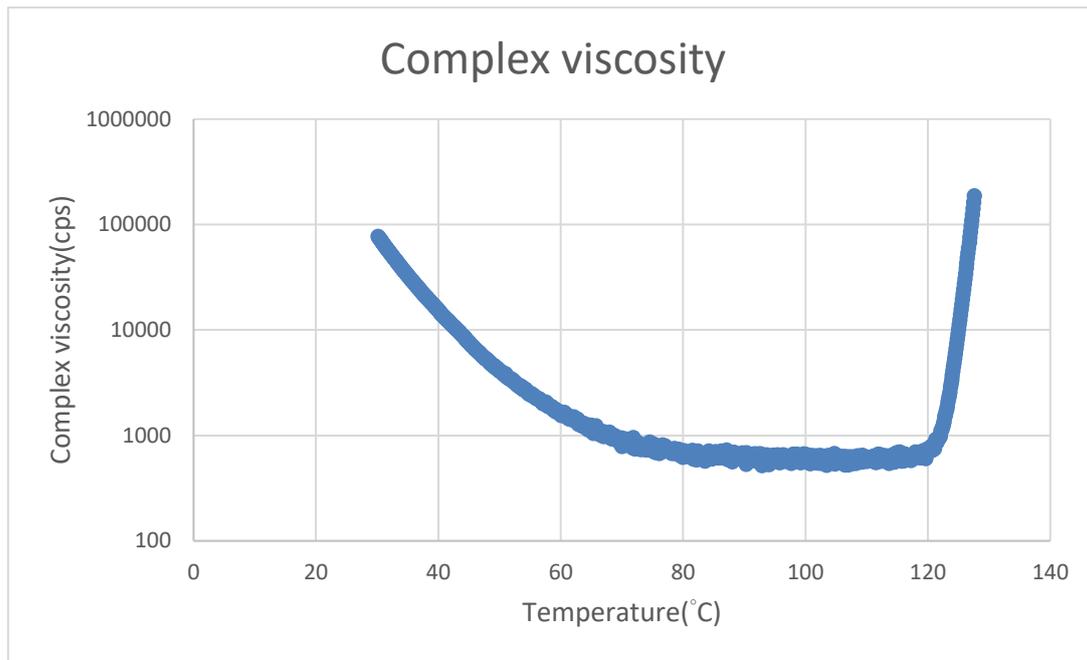
³ Test method: Equilibrate at 120°C test with Rheometer. Take the intersection of storage modulus and loss modulus.

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 1°C/mins)

Item	GR3302
minimum viscosity (cps)	519.7
Temperature(°C)	92.9



Impregnation & Curing condition

1. Preheating temperature of GR3302-A should be under 70°C.
2. Mixing temperature should be 50~70°C, and could be adjusted according to process.
3. Impregnation temperature should be 50~70°C to prevent epoxy resin from overreaction.
4. GR3302 could be cured under 130°Cx 30 minutes, and it depends on oven, thickness, and ramp temperature.

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Storage Life

Shelf Life after mixing: 1 months at 23°C / 6 months at 0°C/ 12 months at -18°C

Shelf life GR3302-A: 12 months at 23°C

Shelf life GR3302-B: 6 months at 23°C

Shelf life GR3302-C: 1 months at 8°C

Package

GR3302-A: 20/200KG in 5/55 gallon barrel

GR3302-B: 20KG in 5/55 gallon barrel

GR3302-C: 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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