Epoxy Casting Resin 9002GA-3/GB-3

Ⅰ. Component

A: Epoxy Resin , Filler, Additive

B: Acid Anhydride, Accelerator

Ⅱ. Characteristics

a) Excellent workability

b) Excellent penetrating

c) The exothermic peak is relatively low, high reliability of encapsulated products

d) Flame resistance (UL-94, V-0)

e) Excellent electronic properties

f) Environmental-friendly

Ⅲ. USE

Casting for Flyback Transformer and other electronic parts

Ⅳ. Packing

A: 33kg

B: 22kg 、220kg

Ⅴ. Transportation

This product does not belong to dangerous article . It can be transported in the way as common chemical do .

Ⅵ. Storage

a) Completely packed, preferably between 15℃ and 25℃

b) Free from direct sunlight

c) Free from humidity

d) Free from fire

Ⅶ. Product property

Items	Standard data		Testing standard
Before cure			
Appearance	A	White liquid	Visual estimation
	B	Light yellow liquid	
Viscosity (40℃, mPa · s)	A	(1.0~1.5) × 10^4	GB-3/T2794
	B	15~23	
	A+B	⩽ 550	
Specific gravity (25℃, g/ml)	A	1.70~1.75	GB-3/T4472
	B	1.18~1.21	
	A+B	1.58~1.63	

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Mixing ratio(WT%)	A: B=100: 30	/
Pot life(40℃, h)	>3.5	/
Gel time（80℃, min）	100~120	/
After cure		
Hardness（25℃, D）	>87	Shore-D
Glass transition（℃）	108-120	DSC
Flexural strength（25℃, N/MM^2）	>74	/
Impact strength（KJ/cm^2）	>2.5	GB-3/T1043
Coefficient of liner thermal expansion（℃-1）(below Tg)	$<5.0 \times 10^{-5}$	GB-3/1036-70
Thermal conductivity（25℃, W/Mk）	>0.48	GB-33399-82
Volume resistivity（25℃, Ω · cm）	$>3.9 \times 10^{15}$	GB-3/T1410
Surface resistivity（25℃, Ω）	$>5.8 \times 10^{14}$	
Dielectric constant（25℃, 10KHz）	3.8±0.1	GB-3/T1409
Dissipation factor（25℃, 10KHz）	<0.008	
Water absorption（23℃, 24h, %）	<0.15	GB-3/T1304
Breakdown voltage（25℃, KV/mm）	>25	GB-3/T1048
Flammability (UL-94, 6mm)	V-0	GB-3/T4069

Ⅷ. Potting Condition

Predegassing		Temperature（℃）	Vacuum （τ）	Time （h）
	A	65±5	<2	4~12
	B	35±5	<2	4~12
Potting	Coil preheating	Temperature （℃）	105±5	
		Time （h）	>1.5	
	Mixing temperature（℃）	40~45		
	Prevacuum pressure	Vacuum （τ）	<2	
	Potting	Vacuum（τ）	<5	
	Post vacuum pressure	Vacuum （τ）	<5	
		Time （s）	>20	
Curing	75℃/2.5h+75~110℃/0.5h+110℃/2.5h			

IX. Cautions

1. Cautions in use

a) Part A should be agitated before use to disperse sufficiently the settled filler.

b) Part B may be crystallized when it is stored at low temperature, in this case, heat it to 40-50℃ until it is completely dissolved.

c) Weigh both A and B respectively, into specified amounts and mix them uniformly.

2. Cautions in handling

a) Work place should provide a ventilator for performing sufficient ventilation

b) Protective garments, gloves, goggles are necessary to workers to avoid direct contact of the materials.

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c) In the event of the agent contacting the skin wash it off immediately with warm water and alkali-free soap. Medical treatment is needed if skin is seriously imitated.

d) Avoid breathing vapors, which can cause respiratory damage.

3.Cautions in Storage

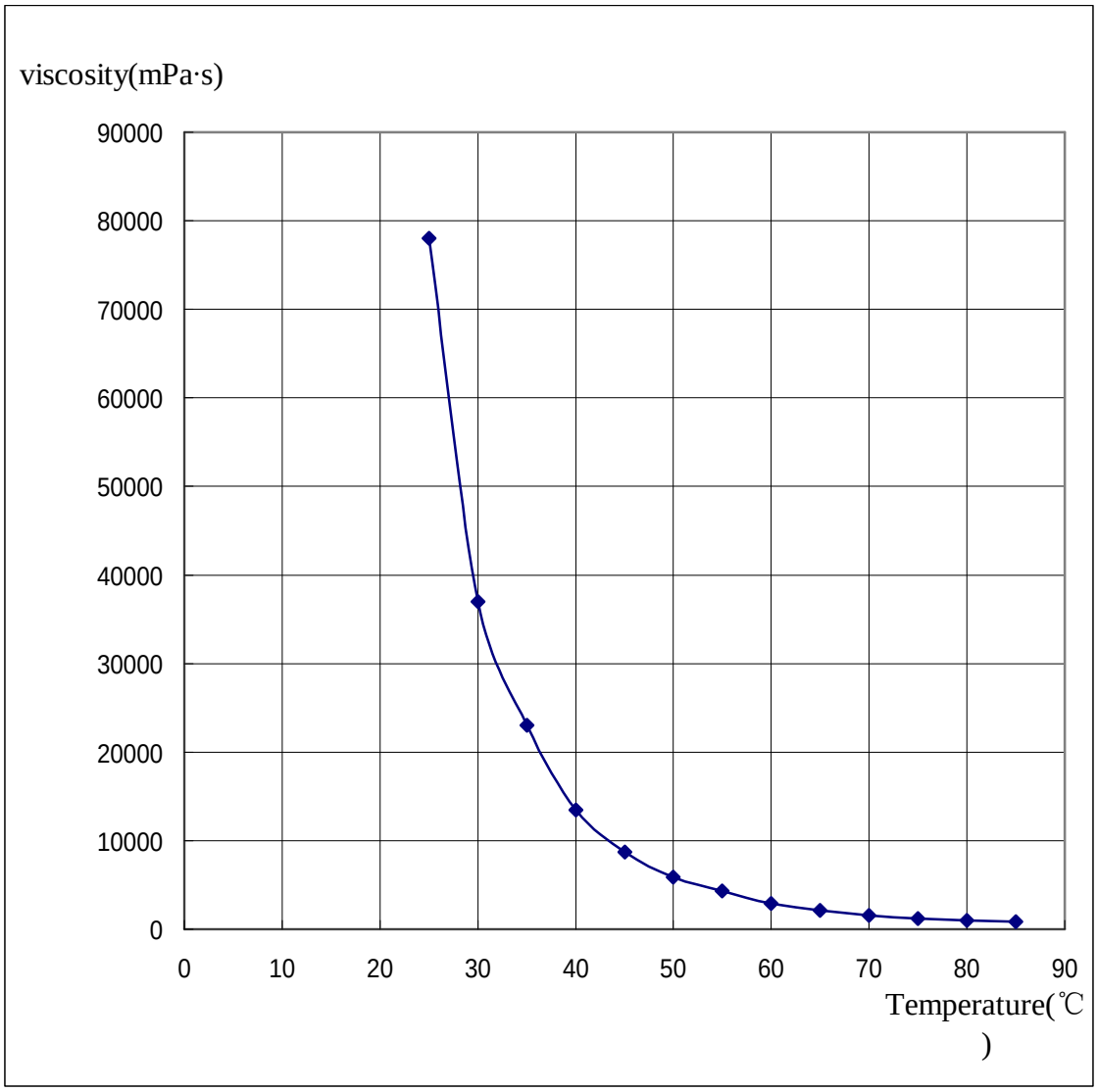
a) Store it at the cool and dark place (preferably between 15℃ and 25℃)

b) Seal the products to avoid mixing of water into the products.

c) Keep to the first-in first-out

d) Once the container is opened, the material should be used as fast as possible, to prevent properties from deterioration by foreign substance and moisture absorption

Viscosity Vs. Temperature of 9003GA-3



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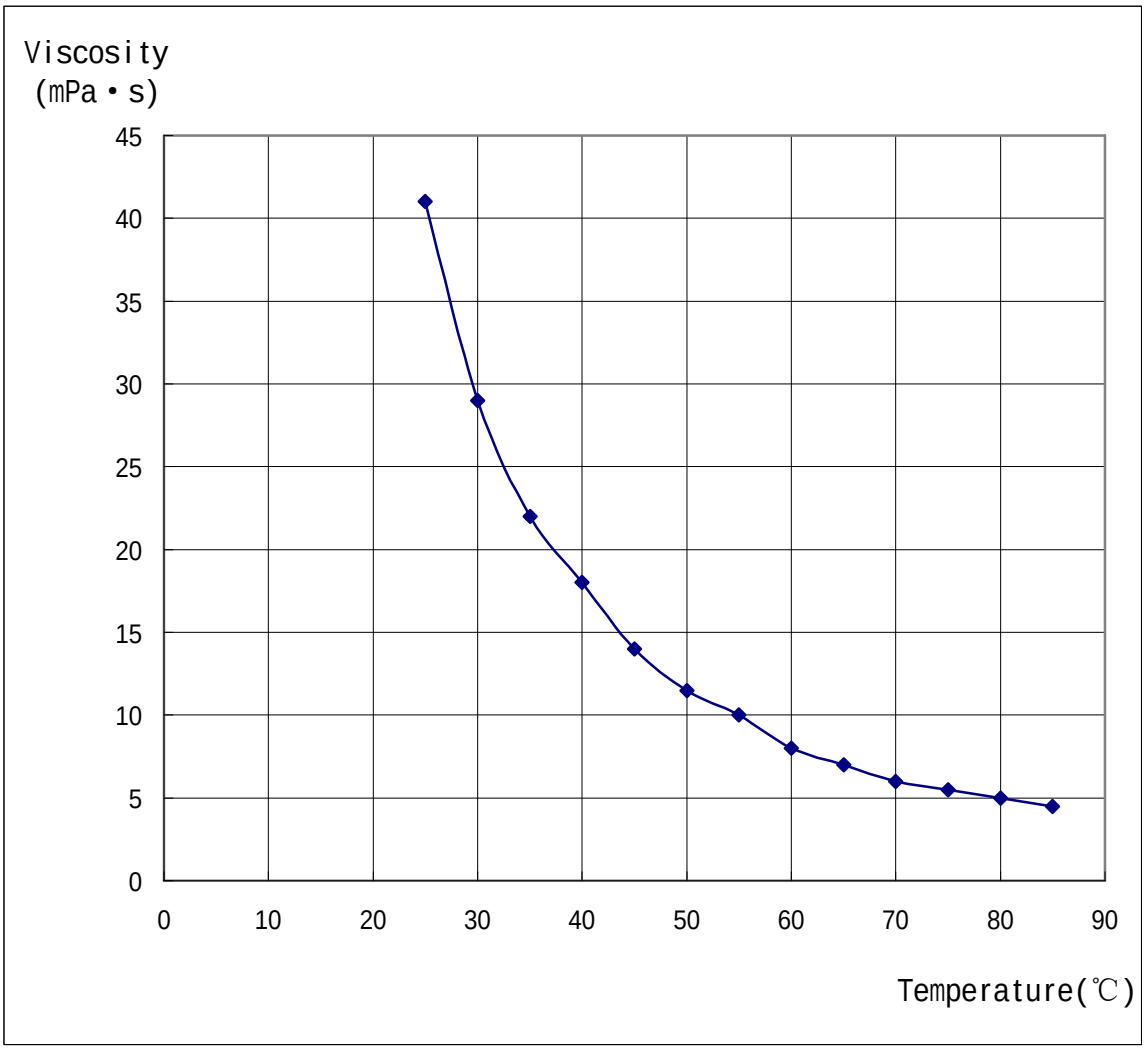
Viscosity Vs. Temperature of 9002GB-3



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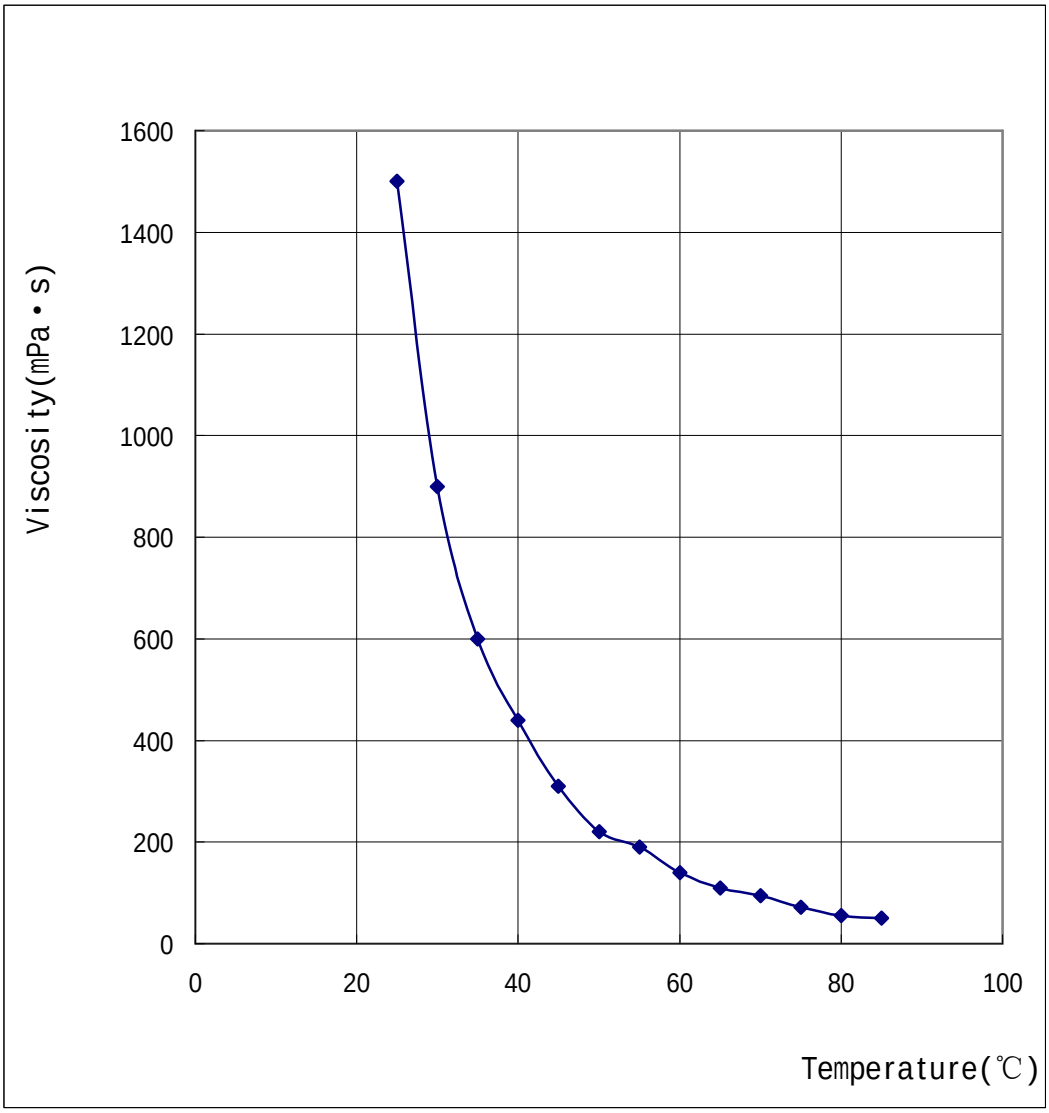
Viscosity Vs. Temperature of 9002GA-3/GB-3



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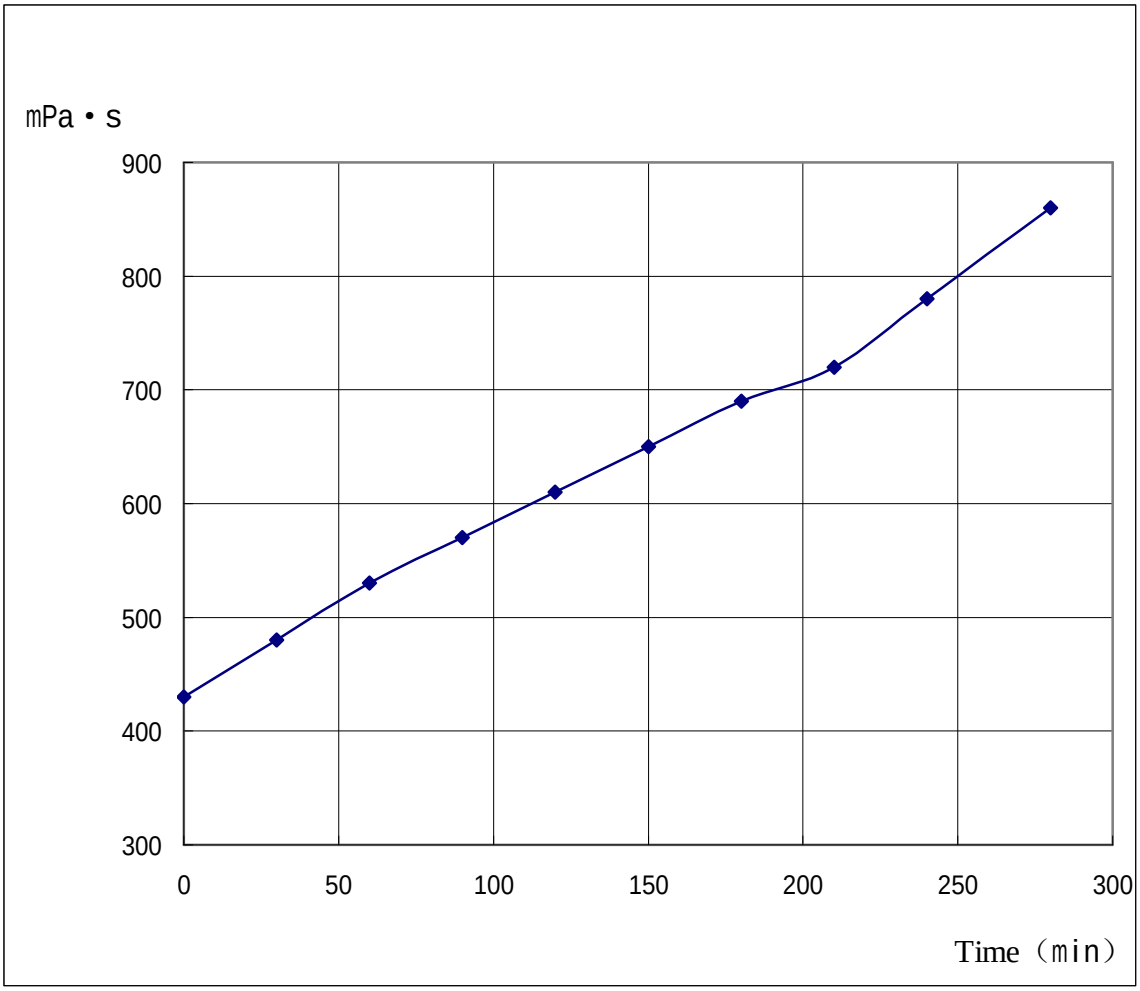
Viscosity at 40℃ Vs. Time of 9002GA-3/GB-3



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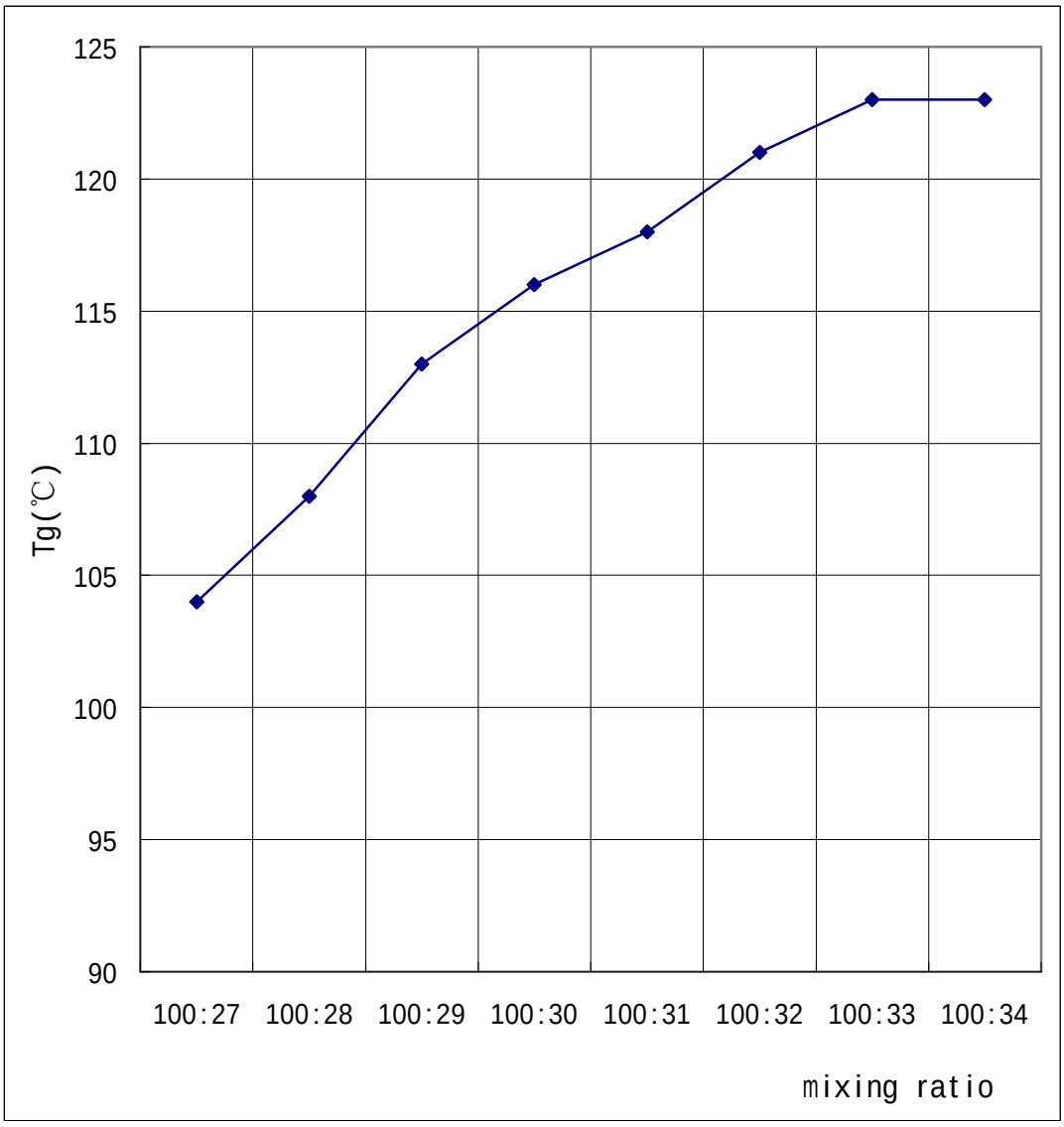
Glass Transition Temperature VS. Mixing Ratio of 9002GA-3/GB-3（75℃/2.5+75-110℃/0.5h+110℃/2.5h）



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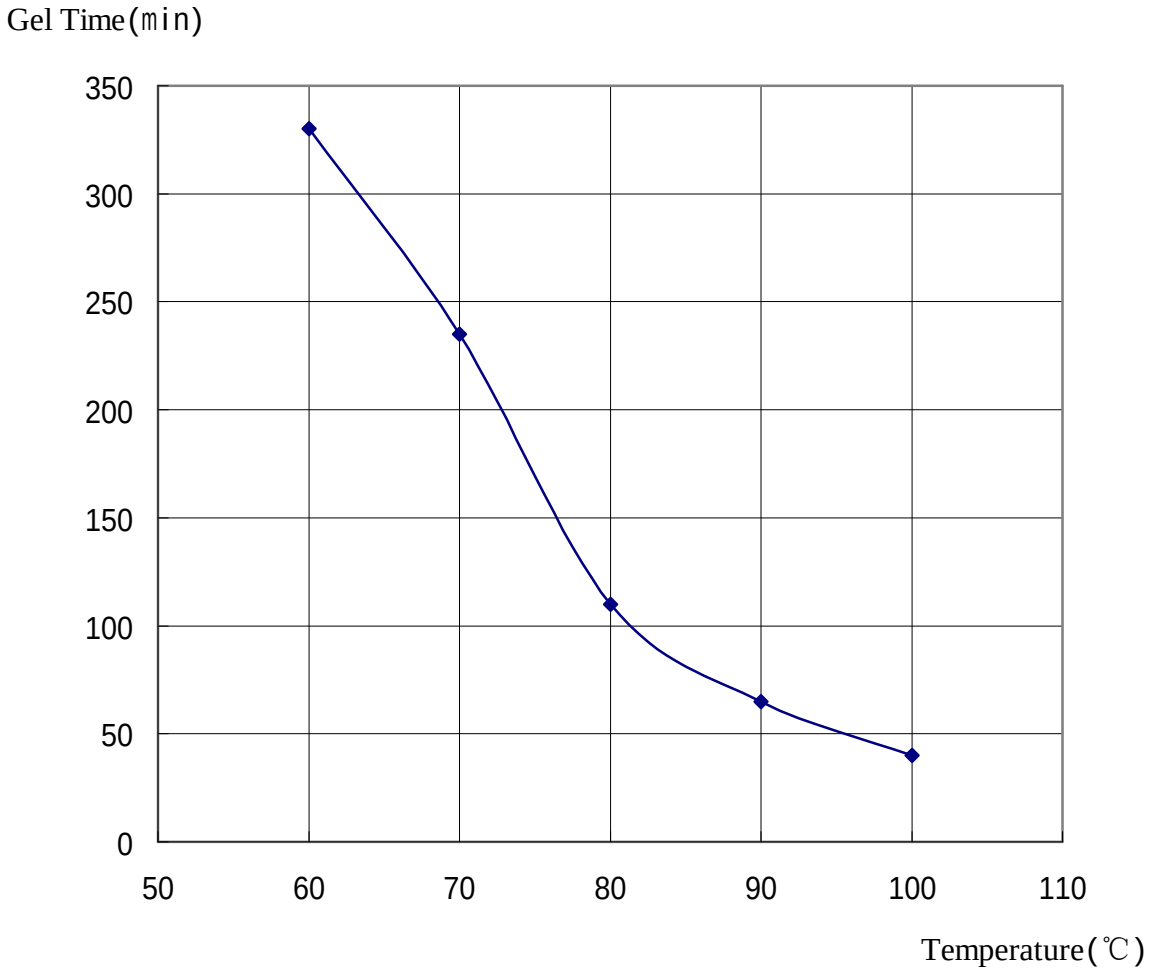
Gel Time VS. Temperature of 9002GA-3/GB-3 mixture



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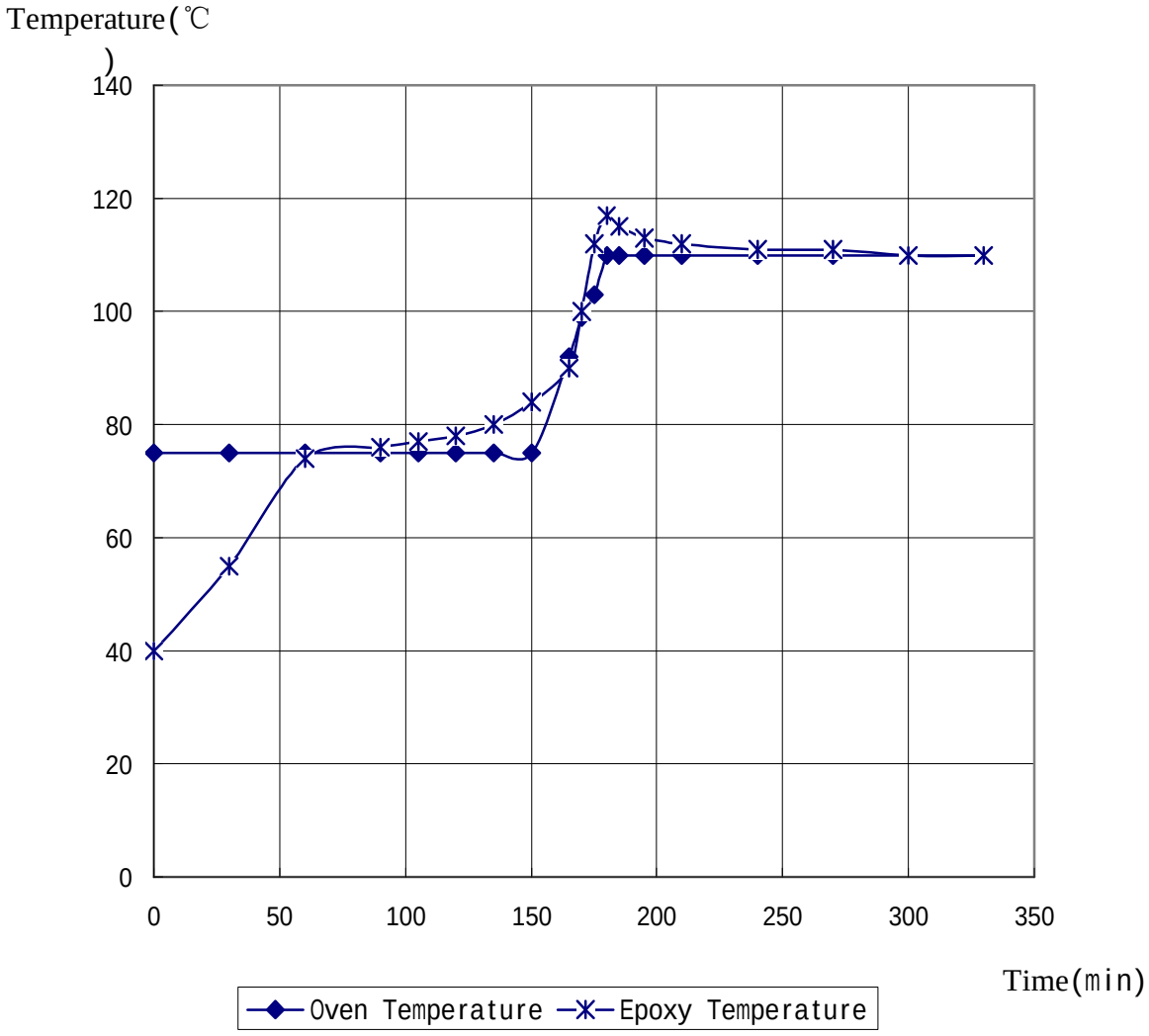
Exothermic Peak of 9002GA-3GB-3(65g,75℃/2.5h+75-110℃/0.5h+110℃/2.5h)



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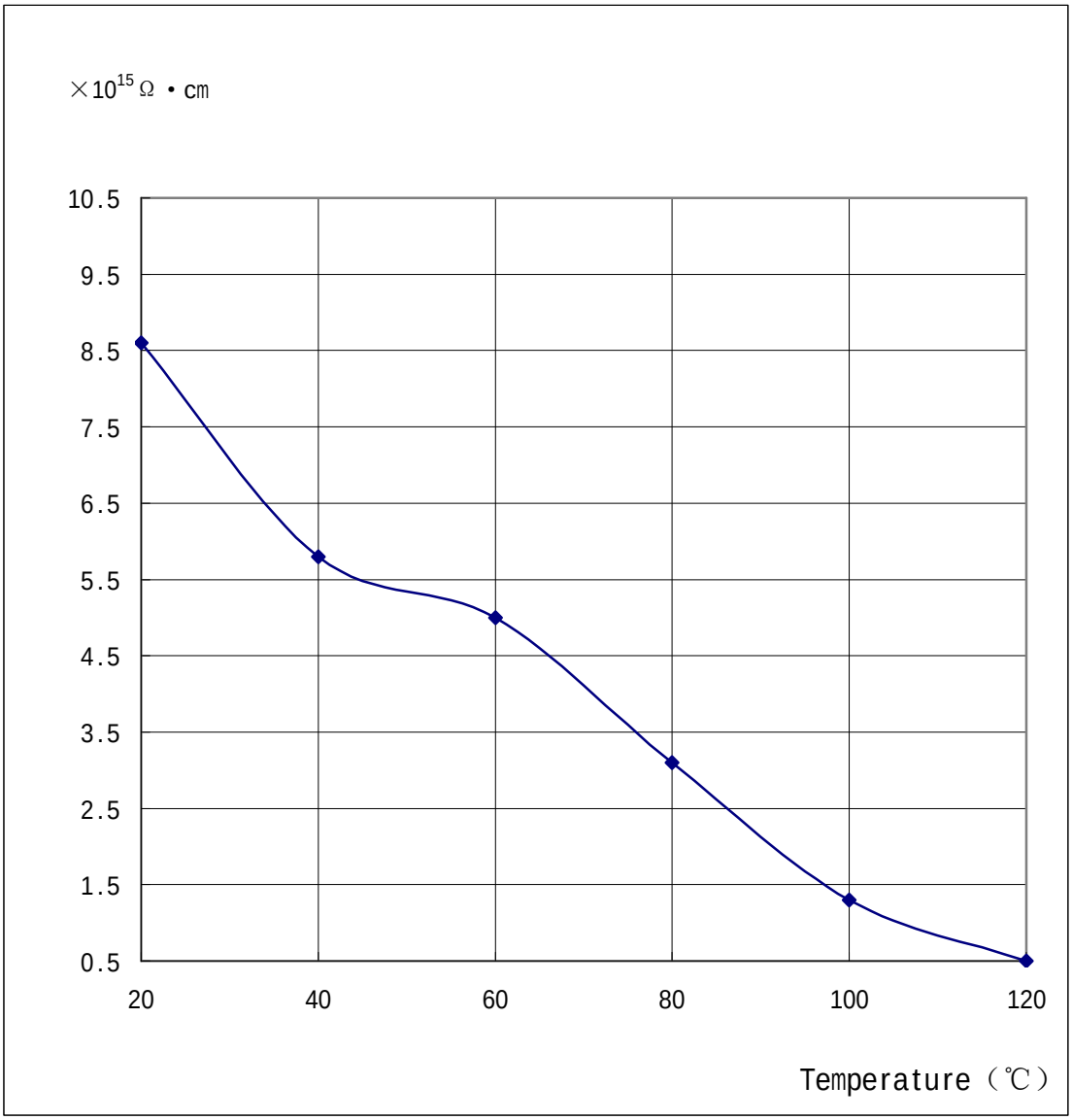
Volume Resistivity Vs. Temperature of 9002GA-3/GB-3



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Material Safety Data

1. Identity: 9002GA-3

- Material characteristics

  Components: BPA type epoxy resin、filler、environmental-friendly、flame retardant、additive

- Physical chemical characteristics:

  Appearance: white liquid

  Odor: non

  Boiling point: non

  Specific gravity (H_20-1): 1.74

  Vapor pressure (mmHg and temperature): non

  Melting point: not available

  Flash point: 216℃

  Solubility in water: negligible

- Hazard data

  Health hazard : not available

  Fire and explosion hazard: non

  Stability: stable

  Hazardous decomposition products: carbon monoxide、carbon dioxide、hydrochloric acid

- Control and protective measures

  Protective clothing: needed

  Protective gloves: needed

  Goggles: needed

  Work place: provide a ventilator for performing sufficient ventilation

- Treatment of overflowing material

  Soak up with cotton waste or saw dust and deposit in plastic-lined bin.

- Emergency treatment

  Skin contact : wipe the material from skin with absorbent paper , then wash with warm water and alkali-free soap. Medical treatment is needed when skin is seriously imitated.

  Eye contact : deal with running water for 15 minutes, then seek medical treatment.

  Inhalation: transfer the sick to outside and keep the air fresh.

- Fire treatment:

  Extinguished media: carbon dioxide、foam.

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- Waste disposal methods

Regular procedures approved by local authorities.

2. Identity: 9002GB-3

- Material characteristics

Components: acid anhydride, accelerator

- Physical chemical characteristics:

Appearance: light yellow liquid

Odor: irritative

Boiling point: non

Specific gravity (H_20-1): 1.20

Vapor pressure (mmHg and temperature): non

Melting point: <-10℃

Flash point: 156℃

Solubility in water: solubility

- Hazard data

Health hazard :

Fire and explosion hazard: non

Stability : stable

Hazardous decomposition products: carbon monoxide carbon dioxide hydrochloric acid

- Control and protective measures

Protective clothing: needed

Protective gloves: needed

Goggles: needed

Work place : provide a ventilator

- Treatment of overflowing material

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- Emergency treatment

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