

### Description

GL311-1 is a structural epoxy adhesive based on epoxy resins. It has very good water resistance and has enhanced adhesion. This system is of low viscosity and wets the glass fiber network well. It is recommended for structural applications, laminations, and for quality boats.

### Features

- Low viscosity,
- Good seepage

### Applications

- Epoxy adhesive for fiber reinforced structures or composites

Uncured Properties	Typical Value	Unit	Test Method
Color (Part A)	Clear viscous liquid	-	PEN 10
Color (Part B)	Clear yellowish liquid	-	PEN 10
Color (Mixed)	Clear viscous liquid	-	PEN 10
Viscosity at 25°C (Part A)	7,000	cP	PEN 144
Viscosity at 25°C (Part B)	20	cP	PEN 144
Viscosity at 25°C (Mixed)	1,400	cP	PEN 144
Mix ratio by weight (A:B)	4:1	-	-
Pot Life at 25°C	0.5	Hour	PEN 37
Shelf life at 25°C	12	Month	PEN 26
Cured Properties	Typical Value	Unit	Test Method
Hardness	83	Shore D	ASTM D2240
Tensile strength	65	MPa	PEN 41
Young modulus	2600	MPa	PEN 41
Strain to failure (percent elongation)	2.6	%	PEN 41

\* The values above are tested based on batch to batch basis. These values are not use as a basis for preparing specifications.

\* PEN is referring to Penchem standard test method, ASTM is for Test reference only

\* All the test specimens were cured at 30°C for 24 hours prior to test

### Guideline of Use

#### Direction for use

- 1) Mix Part A resin and Part B hardener at recommended standard ratio by weight (A:B = 4:1), then stir it with a suitable spatula or mixer until it is uniform.
- 2) The pot life is 30 minutes. Processing or pouring the mixed epoxy after 0.5 hour may tend to trap bubbles.
- 3) The epoxy may be poured over the object, spread with a brush, or dispensed with a syringe.
- 4) Blowing hot air over the surface of the epoxy can break any bubbles formed during mixing.
- 5) Apply the product on area to be filled.
- 6) This product may be dispensed with a variety of manual and automatic applicators or other equipment as required. The user is responsible to determine the suitability of the product for all intended uses.
- 7) The substrate should be clean and free from grease, mold release, or other contaminants prior to dispensing the adhesive.
- 8) The epoxy will harden in 24 hours. Full hardness will be achieved in 3 days. Faster curing can be achieved at elevated temperatures.

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**Penchem Technologies Sdn Bhd**(767120-A),

Address: 1015, Jalan Perindustrian Bukit Minyak 7, Kawasan Perindustrian Bukit Minyak, Mk.13, 14100 Penang, Malaysia.

Tel: +604-501 5976, 77, 78

Email: [enquiry@penchem.com](mailto:enquiry@penchem.com)

Fax: +604-501 5979

Website: [www.penchem.com](http://www.penchem.com)



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### Recommended Cure

Cure condition:

30°C /24hours

Cure time will be varying at different cure temperature.

### Storage & Shelf Life

This product has a 12 months shelf life from date of manufacturing, unless otherwise specified, when stored at room temperature in the original and unopened container.

### Packaging

- 1kg plastic bottle
- 5kg plastic bottle

Other packaging enquiry, please contact our sales department.

### Environment, Health & Safety

This product is intended for industrial use only. For more safety information, please refer to Product Safety Data Sheet (SDS).

### General Information

All right reserved. The information in this document is subjected to change without notice.

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Address: 1015, Jalan Perindustrian Bukit Minyak 7, Kawasan Perindustrian Bukit Minyak, Mk.13, 14100 Penang, Malaysia.

Tel: +604-501 5976, 77, 78

Email: [enquiry@penchem.com](mailto:enquiry@penchem.com)

Fax: +604-501 5979

Website: [www.penchem.com](http://www.penchem.com)



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