

# GL 311-1 Structural Epoxy Adhesive

## Description

GL 311-1 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.

## Applications

1. Low viscosity, good seepage epoxy adhesive for fiber reinforced structures.

## Guidelines for Use

1. Mix Part A resin and Part B hardener in the ratio of 4:1 by weight.
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. Wipe off any excess uncured epoxy with a piece of dry cloth or tissue. Further cleaning may be achieved with tissue wetted with isopropanol (IPA).
6. The epoxy will harden in 24 hours. Full hardness will be achieved in 3 days. Faster curing can be achieved at elevated temperatures.

## Properties

Property	Test Method	Unit	Typical Value		
			Part A Resin	Part B Hardener	Mixed
Chemical type	-	-	Epoxy	Amine	
Appearance	Pen 10	-	Clear liquid	Clear liquid	
Mix ratio, by weight	-	-	4	1	
Shelf life, 25°C	Pen 26	Month	12	12	
Pot life, 30°C	Pen 57	Hour			0.5
Viscosity, CAP 2000+ Viscometer, 30°C	Pen 44	cP	7,300	35	1400
Hardness, cured 30°C for 24 hours	Pen 29	Shore D			83
Tensile strength, cured 30°C for 24 hours	Pen 41	MPa			65
Young's Modulus, cured 30°C for 24 hours	Pen 41	MPa			2600
Strain to failure (percentage of elongation), cured 30°C for 24 hours	Pen 41	%			2.6

## Storage

Tightly close original container of unused product. Store in a cool and dark place.

## Packaging

- 1 kg plastic bottle
- 5 kg plastic bottle

## Environment, Health & Safety

This product is RoHS compliant. It does not contain any known carcinogenic, mutagenic or teratogenic components.

## Contact Information

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