

GL 305 (Preliminary TDS) Structural Epoxy Adhesive

Description

GL 305 is a structural epoxy adhesive based on epoxy resins. It is recommended for marine structural applications and bonding. It has high thixotropic which can control the flow of the adhesive. It has very good water resistance and has enhanced adhesion.

Applications

1. High thixotropic, good adhesion for structural application and bonding.

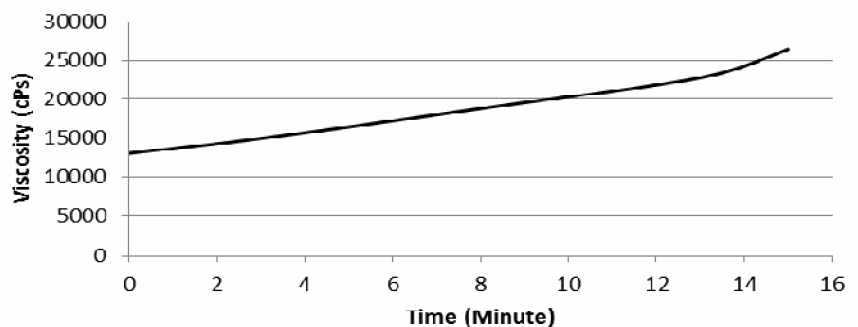
Guidelines for Use

1. Mix Part A resin and Part B hardener in the ratio of 8 : 1 by weight.
2. The pot life is around 15 minutes. Processing or pouring the mixed epoxy after 15 minutes may tend to trap bubbles.
3. The epoxy may be poured over the object, spread with a brush.
4. 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).
5. The epoxy will harden in 24 hours. Full hardness will be achieved in 5 days. Faster curing can be achieved at elevated temperatures, eg. 90°C for 2 hours.

Properties

Property	Test Method	Unit	Typical Value		
			Part A Resin	Part B Hardener	Mixed
Chemical type	-	-	Epoxy	Amine	
Appearance	Pen 10	-	White paste	Translucent White to translucent yellow paste	White paste
Mix ratio, by weight	-	-	8	1	
Shelf life, 25°C	Pen 26	Month	12	12	
Pot life, 25°C	Pen 57	Minute			15
Viscosity, 25°C	Pen 44	cPs	14063	393	13050
Density	Pen 60	g/cm ³			1.292
Hardness, cured 25°C for 3 hours	Pen 29	Shore D			66
Hardness, cured 25°C for 5 days	Pen 29	Shore D			80
Water Boil Test	Pen 85	%			0.46%
Tensile strength, cured 25°C for 5 days	Pen 41	MPa			38
Young's Modulus, cured 25°C for 5 days	Pen 41	MPa			4142
Strain to failure (percentage of elongation), cured 25°C for 5 days	Pen 41	%			1.22
Lap Shear Strength, , cured 25°C for 5 days	Pen 43	kgf/cm ²			101
Lap Shear Strength, , cured 90°C for 2 hours	Pen 43	kgf/cm ²			115

Changes in viscosity with time for GL305 at 25°C



Recommended Cure

Alternative cure	Temp. (°C)	Cure time
A	25	5 Days
B	90	2 hours

Storage

Store both Part A resin and Part B hardener in a cool, dark place to prolong shelf life. They must be kept away from sunlight and bright room lights.

Part B is moisture sensitive. Close the seal and cap of the bottle tightly immediately after use.

Packaging

- 5kg plastic pail
- 1kg plastic pail
- 300g plastic jar

Environment, Health & Safety

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

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