

Description

GL163 is a two-part room temperature fast cure structural epoxy adhesive. It has very good water resistance and has enhanced adhesion. It is recommended for structural bonding applications and laminations.

Features

- Fast cure
- Excellent adhesion to various materials

Applications

- Epoxy based structural adhesive for bonding purpose.

Uncured Properties	Typical Value	Unit	Test Method
Colour, Part A	Clear liquid	-	PEN 10
Colour, Part B	Clear yellowish liquid	-	PEN 10
Viscosity at 25°C, Part A	8,912	cP	PEN 144
Viscosity at 25°C, Part B	11,504	cP	PEN 144
Mix ratio by volume (A : B)	1 : 1	-	-
Gel time at room temperature	7	minutes	-
Liquid density at 25°C, Part A	1.16	g/cm ³	-
Liquid density at 25°C Part B	1.15	g/cm ³	-
Refractive index, 589nm	1.54	-	PEN 28
Cured Properties	Typical Value	Unit	Test Method
Hardness, shore D	75	-	ASTM D2240
Glass transition temperature, Tg	34	°C	ASTM D3418
Adhesion Properties	Typical Value	Unit	Test Method
Lap shear strength (after 24hours cured)			
Aluminium to aluminium	15.17	kgf/cm ²	PEN 43
Stainless steel to stainless steel	32.92	kgf/cm ²	PEN 43
Polycarbonate to polycarbonate (PC)	19.99	kgf/cm ²	PEN 43
Polypropylene to poly propylene (PP)	5.76	kgf/cm ²	PEN 43
FR-4 to FR-4	32.76	kgf/cm ²	PEN 43
Polymethyl methacrylate to polymethyl methacrylate (PMMA)	15.19	kgf/cm ²	PEN 43
Acrylonitrile butadiene styrene to acrylonitrile butadiene styrene (ABS)	11.44	kgf/cm ²	PEN 43
Polyvinyl chloride to polyvinyl chloride (PVC)	8.52	kgf/cm ²	PEN 43

* PEN is referring to Penchem test method.

* The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on certificate of conformance or please contact Penchem representative.

* Viscosity was measured by MCR72 Rheometer CP25-1, 0.05mm gap, shear rate 100s⁻¹, 25°C.

* All specimens were cured at room temperature for 24 hours.

Guideline of Use

Direction for use

- 1) Insert a new static mixer nozzle to the dual barrel cartridge of GL163
- 2) Use either a manual or a pneumatic dispenser to dispense equal amount of the part A and part B through the static mixer nozzle, recommended standard mix ratio is 1 :1 (by volume).
- 3) Apply the product on area to be filled. The user is responsible to determine the suitability of the product for all intended uses.
- 4) It is recommended to use the product within gel time. The gel time is varies by difference environment condition and application.

Revision 01: 02-Dec-2024

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- 5) The substrate should be clean and free from grease, mold release, or other contaminants prior to dispensing the adhesive.

Recommended Cure

Cure condition:

Pre-cure: room temperature for 7 to 10 minutes

Post cure: room temperature for 24hrs

Cure time will be varying at different cure temperature, volume / weight of the sample, type of substrate, etc.

Storage & Shelf Life

Tightly close original container of unused product. Store it at room temperature. The unopened original products have a shelf life of 12 months from the date of production.

Environment, Health & Safety

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

Packaging

- 50 mL 1:1 dual barrel syringe

Other packaging enquiry, please contact our sales department.

General Information

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