



TECHNICAL DATA SHEET

EPOXY-BOND GENERAL PURPOSE

Description

Alcolin Epoxy-bond is a solvent-free, non-shrink, high strength epoxy adhesive designed with a 1:1 mix ratio for general use in the construction industry. It is extremely versatile and cures to a waterproof and chemical resistant compound capable of forming strong gap filling bonds between a wide variety of poorly mated surfaces. Alcolin Epoxy-bond can be smoothed immediately after application with water, and once set, it can be drilled, sawed, sanded, screwed or filed. It has a non-slump, thixotropic rheology allowing for both horizontal and vertical application. It is suitable for both interior and exterior applications.

Features & Benefits

- 1:1 mixing ratio for ease of use.
- Water smoothable to achieve desired finish.
- Durable, waterproof, gap-filling bonds.

Applications

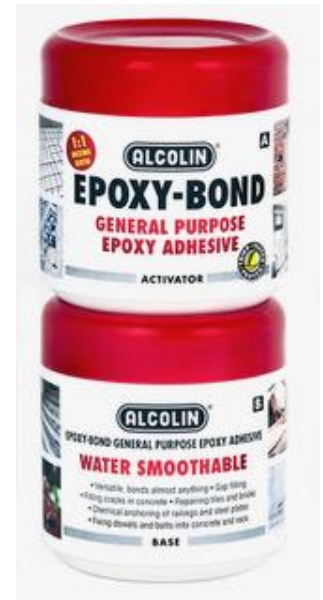
- General purpose gap filling adhesive (up to 15mm) on the construction site.
- Chemical anchoring of railings, legs, machine housing, steel plates to concrete.
- Fixing of dowels and bolts into rock and concrete.
- Steel reinforcing of concrete (grouting)
- Filling of cracks in concrete and sealing of leaking irrigation pipes.
- Repairs to tiles, birdbaths, bricks and concrete.
- Patching of cuts, gouges and holes in fiberglass, metal, and wooden boat decks and hulls.
- Laminating timber in the boat building industry.

Adhesion

Steel, glass, concrete, fiberglass, wood, asbestos, cement, bricks, stone, ceramic tiles and most other building materials.

Limitations

- Not suitable where a flexible or elastic bond is required
- Not suitable for applications requiring heat resistance above 80°C
- Not suited for some plastics such as polypropylene, polyethylene and Teflon.
- Not suitable for filling gaps exceeding 15mm in diameter.
- Not suitable for bonding stainless steel.



Safety instructions

Although the product is non-toxic, safe handling practices should be implemented. Always work in a well-ventilated area. Always wear gloves to avoid direct contact with skin. If product comes into contact with skin or eyes, flush thoroughly and immediately with water. Seek medical attention if irritation continues. Keep out of reach of children. Refer to our Safety Data Sheets for further toxicological information and comprehensive handling instructions. Cured Alcolin Epoxy-bond is inert and harmless.

Surface preparation

Ensure that surfaces are clean, dry and free of loose materials, dust, surface laitance, grease, rust and other contaminants. Smooth surfaces such as metals and rubbers should be abraded with sandpaper and degreased with a solvent such as acetone or ethanol. Glass should be cleaned with a solvent such as acetone or ethanol. Poor surface preparation may result in bond failure.

Directions for use

- Ensure that surfaces are prepared as above.
- Mixing ratio: 1 part of base with 1 part activator (by volume). Measure out the required quantities on to a clean flat surface.
- To avoid contamination, use different tools to scoop up the base and activator.
- Do not mix the parts if the site of application is not set up.
- When the site of application is ready, thoroughly mix the base and activator together with a spatula or putty knife until a uniform colour is achieved.
- Apply with a putty knife or paint scraper.
- Apply the mixture thinly to both surfaces to be bonded. Join the two surfaces and hold them together under compression until the adhesive has cured. Thin glue lines will yield higher strength than thick glue lines.
- For vertical applications, the object needs to be supported until practical cure is achieved.
- Remove excess material before hardening begins.
- For a smooth appearance of the cured compound, hand rub with water or a damp cloth prior to handling.
- Do not mix more product than can be used in a 45-minute period.
- Practical cure time is achieved after 8 hours, while full cure will take up to 7 days.
- Cold conditions will retard cure time.
- Allow for a minimum 12-hour cure time if over-coating with an epoxy or polyurethane coating.

As a grout for reinforcing concrete:

The optimum hole width is approximately 1.5x the bar diameter. Insert the bar using a rotary motion ensuring wetting of all faces of the bar. Ensure that the bar is embedded to a depth of at least 15x the bar diameter. Seal the mouth of the hole with a little dry mortar grout to retain the epoxy grout during setting time.

Cleaning

Fresh epoxy can be cleaned with methyl ethyl ketone. Cured epoxy must be removed mechanically or heated above 150°C.

Storage stability

Alcolin Epoxy-bond has a shelf life of 24 months if stored in a safe, cool (below 25°C), and dry place in its original moisture-tight container. If the material is kept beyond the recommended shelf life, it is not necessarily unusable, but a check should be performed to observe whether the product is still workable.

Product packaging

- Alcolin Epoxy-bond 250 ml
- Alcolin Epoxy-bond 500ml
- Alcolin Epoxy-bond 1L

Product data

i. Physical data

Colour	Hardener: Light Grey Activator: Dark Grey Mixed: Grey (concrete colour)
Consistency	Thixotropic
Solids content	100%
Mixed density	Approx. 1.5 g/ml

ii. Application data

Mixing ratio	1:1 by volume, Base: Activator
Pot life	Approximately 45min @ 23°C
Thin Film Set Time	Approximately 4 hours @ 23°C
Practical Cure	Approximately 8 hours @ 23°C
Full Cure	Approximately 7 days @ 23°C
Coverage	1m ² /L at 1mm thickness
Application temperature range	10°C to 45°C

iii. Performance data

Bond strength Sand Blasted steel Acid-Cleaned Aluminum Concrete	14 - 16 N/mm ² 6 - 8 N/mm ² 100% substrate failure
Chemical resistance	Dilute acids, alkalis, aliphatic solvents, seawater and petroleum products.
Compressive strength [DIN EN 196]	~70 N/mm ²
Flexural strength [ASTM D790]	~30 N/mm ²
Service temperature	-10°C to 60°C
Tensile strength [ASTM D638]	~20 N/mm ²
Water resistance	Waterproof

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