

# INDUBOND-VK4034

## 2-Component, Solvent-Free, Moisture-Insensitive, Chemical & Water Resistant Epoxy Bonding Agent, Pore-Sealing Putty And Skim Coat Suitable For Contact With Potable Water

### Product Description:

INDUBOND-VK4034 is a 2-component, solvent-free (100 % solids), moisture-tolerant, non-toxic, non-sag, impervious, abrasion, chemical & water resistant epoxy resin-based bonding agent. INDUBOND-VK4034 is supplied as a two-component product, which after mixing produces a smooth & non-sag, paste-like consistency easy to apply on horizontal, vertical & overhead surfaces. Once cured INDUBOND-VK4034 provides an easy-to-clean, non-toxic surface; suitable for contact with potable water.

### Primary Uses:

INDUBOND-VK4034 is formulated to be used as a high-modulus, multi-purpose, non-sag bonding agent for horizontal, vertical & overhead surfaces providing a permanent bond greater than the tensile strength of the host concrete. INDUBOND-VK4034 is suitable for many applications such as:

- Pore sealing, smoothing putty and skim coat.
- Bonding concrete segments; providing a water resistant joints.
- Dowel bar anchoring.
- Filling bar pockets.
- Thin film bonding in concrete repairs.
- General bonding & leveling compound for concrete, mortars, stones, renders, steel, aluminum, polyester, etc.
- As a chemical resistant tile adhesive.
- As structural bonding agent for precast concrete.
- Crack and surface sealing.
- Bonding carbon, glass and basalt fibers to concrete surfaces: dry strengthening systems.
- Multipurpose bonding agent.

### Advantages:

- Easy to mix and to apply.
- Solvent-free, odourless.
- Adheres well to dry & damp surfaces.
- Non-sag: suitable for vertical & over head applications.

- Shrinkage - free curing.
- Provides excellent mechanical properties such as abrasion and impact resistance.
- Homogeneity of mix is easily determined: each component has a different colour.
- Durable & waterproof, can resist both negative and positive water pressures.
- High chemical resistance.
- Non-toxic; suitable for contact with potable water.

### Standards:

INDUBOND-VK4034 is formulated to comply with all the requirements of ASTM C-881; "Epoxy Resin - Base Bonding Systems for Concrete" Types I, III and IV, Grade 3, Class B & C as well as EN 1504: "Products and systems for the protection and repair of concrete Structures - Definitions, requirements, quality control and evaluation of conformity" - Part 4: Structural bonding.

INDUBOND-VK4034 also complies with the requirements of EN 12004: "Adhesives for tiles - Requirements, evaluation of conformity, classification and designation as Reaction resin adhesives (R)".

### Typical Properties:

Appearance (mixed material):	Smooth, non-sag grey consistency
Specific gravity:	1.55 ± 0.05 at 20 °C
Pot-life:	60 mins at 20 °C
Open time:	90 mins at 20 °C
Water absorption (ASTM D-570):	0.10 % by weight
Compressive strength:	70 N/mm <sup>2</sup> after 7 days
Tensile strength (ASTM C-638):	18 N/mm <sup>2</sup>
Bond strength:	3.5 N / mm <sup>2</sup>
Chemical resistance:	Very good
Flexural strength (ASTM D-790):	25 N/mm <sup>2</sup>

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# INDUBOND-VK4034

## Consumption:

The following table may be used as a guideline based on a theoretically smooth, flat, well primed surface:

Wet film thickness (µm)	Dry film thickness (µm)	Coverage kg/m <sup>2</sup>
500	500	0.78
1000	1000	1.55
1500	1500	2.33
2000	2000	3.10

Actual consumption is influenced by surface condition, ambient temperature and application method. Always allow for realistic wastage. Trial areas to determine exact consumption at a specified thickness is always recommended.

## Application Guide

Surface Preparation:

All surfaces must be sound, clean and free from dust, grease, oils, curing agents, mould release agents and other contaminations adversely affecting bond with the substrate.

Steel or metal surfaces should be free from rust or scale in accordance with SA 2&½ (white metal finish).

Mixing:

Stir each component of INDUBOND-VK4034 well before mixing. Pour the entire contents of Component B into the Component A container and mix well using an appropriate paddle at 350 RPM for 2 to 5 minutes until a uniform consistent colour is achieved. Empty the mixed material into a clean and dry mixing vessel & mix again for another 3 minutes.

Application:

*Skim coat and blowhole filler:*

Apply the material once mixed directly to the well-prepared substrate using a suitable steel trowel or spreader. Skim coats up to 3 mm thickness and filling of blowholes up to 7 mm deep can be achieved in a single application. Once applied surfaces may be worked to a smooth finish.

Tile adhesive:

Towel apply with a 3 mm serrated trowel to the prepared surface ensuring a continuous bed is

maintained. Using light pressure fix the tiles in place within the specified "pot life" and adjust within the specified "open time". Do not mix more material than can be tiled (fixed and adjusted) within 90 minutes.

*Structural strengthening:*

Apply the mixed INDUBOND-VK4034 onto the prepared concrete surface with a trowel or spatula at a nominal thickness of 1.5 mm. Within the open time of the epoxy, place the fiber/laminate onto the INDUBOND-VK4034 dressing. Using a hard rubber roller, press the laminate into the epoxy resin until the adhesive is forced out on both edges. Remove excess adhesive whilst INDUBOND-VK4034 is still unhardened. Glue line should not exceed 3 mm. External reinforcement must not be disturbed for at least 24 hours. INDUBOND-VK4034 will reach its design strength after 7 days.

## Packaging:

INDUBOND-VK4034 is supplied in 3.0 kg & 6.0 kg kits.

## Storage & Shelf-life:

Components A & B have a shelf life of 24 months, when original, unopened containers are stored in a dry, well ventilated warehouse away from moisture, direct sunlight, extreme temperatures (keep above 6 °C and below 35 °C) on pallets, elevated from the floor.

## Health and Safety:

- INDUBOND-VK4034 is non-toxic, non-hazardous during handling, storage and use.
- Do not dispose of components A & B or any unhardened material into water sources or onto soil. Expired or out of pot-life material should be disposed of in accordance with local environmental regulations.
- Splashes on skin can be washed with soap and warm clean water.