

## BAL-40 & BAL-FZ INSTALLATION SHEET

OCTOBER 2015

The Australian Standard AS 3959-2009 *Construction of buildings in bushfire-prone areas* requires certain performances of building materials for various determined levels of Bushfire Attack Level (BAL). This standard currently comprises six categories, namely BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40 and BAL-FZ.



**INEX>DECKING** is a unique engineered cementitious composite material which has been tested for Combustibility under Australian Standard AS/NZS 1530.1:1994 Part 1: *Combustibility test for materials* and has been deemed Non-combustible. This is the standard of non-combustibility that is required by the Australian Standard AS 3959-2009 Construction of buildings in bushfire-prone areas – clause 1.5.19 Non-Combustible.

Therefore **INEX>DECKING** can be used in all bushfire-prone areas and this document outlines how it can be used in both BAL-40 and BAL-FZ construction.

**INEX>DECKING** is a unique engineered cementitious composite material that has been profiled to deliver a 140mm wide decking board. The ‘**COATINGS**’ section of UBIQ’s website provides you with many approved options for stain products that can be applied to deliver a range of finishes. Download and read carefully the relevant document(s) for your preferred coating system.

Follow these 4 steps to achieve an attractive and long lasting finish for your deck.



## 4 STEP GUIDE FOR YOUR INSTALLATION & COATING SYSTEM

### STEP 1 – PLAN YOUR DECK AND PREPARE YOUR BOARDS

Select your construction materials (timber or steel joists) and your preferred coating system. If your boards are to be fixed without spaces then we recommend that your joists allow for a slight fall in the direction of the boards to allow surface water to run off.

Ensure your boards are; dry, clean and dust free and ready for the first coat of your selected coating system. When storing them on site ensure they are stored flat and under cover in a well ventilated space. Review the application recommendations of the coating company prior to commencing your coating. Do not apply if temperatures are below 10°C or in high humidity.

### STEP 2 – COAT ALL FACES PRIOR TO FIXING

Apply a single first coat to **ALL SIDES** of your **INEX>DECKING** prior to fixing. This first coat can be applied with a foam roller and then a brush to lay off in the direction of the boards. Ensure all surfaces (top, back, sides and ends) are coated and are allowed to dry prior to fixing.

### STEP 3 – FIX YOUR BOARDS AND TOUCH UP ANY CONSTRUCTION CUTS

Use a pre-drill and countersinking tool as part of your fixing process. Take care not to overdrive the screws as this may result in some chipping of the surface. Apply a 6mm diameter bead of **INEX>BOND** at each joist; and for all steel sub-structures, this is important to provide a cushioning effect to reduce noise of footfall.

At this stage any construction cuts or chips that expose the grey or raw part of your boards need to have the first coat re-applied to that area prior to fixing.

### STEP 4 – SUBSEQUENT COATS

These coats should be applied within 2 weeks. Under all circumstances ensure your boards are; dry, clean and dust free. Once the **INEX>DECKING** boards are fixed apply the second and third coats of your coating system, both of which should be applied with a brush. The second coat will be another coat of your selected stain. Careful application of this coat and laying off in the direction of the boards will achieve the best results for you. We recommend that you trial a small test area first to establish the rate of application suitable for the desired effect.

Ensure that all screw heads are sealed with these subsequent coats. **INEX>DECKING** may absorb moisture and while this will not affect the structural performance of the board, it may result in a small amount of discolouration. This discolouration will fade away as the board dries out, though sealing the heads will minimise the risk.

**Note:** UBIQ’s concrete is a natural product and UBIQ sees it as such, with all its vital signs and characteristics. Each **INEX>DECKING** board is regarded as a single piece, just like natural timber. Efflorescences or small, visible pores or patches are not defects. They add to the character of the final finished and stained product. Differences in the surface appearance, which do not affect the fit for purpose of the boards, are permitted. The surface is not homogenous and the variations and texture are what deliver the remarkable appearance once these coatings are applied. They are what set these boards apart from other composite decking products.

# PRODUCT



## WEIGHT

At approx. 9kg per 2700mm length **INEX>DECKING** is relatively lightweight and easy to handle on site.

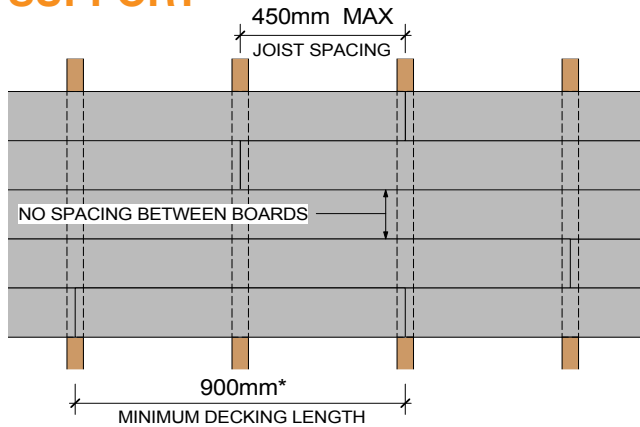
## LOADING

**INEX>DECKING** is suitable for all decking applications, where the required Live Load is not greater than 1.8 kN.

## STORAGE

**INEX>DECKING** should be stored dry, flat and with all edges protected from damage. We recommend storage undercover and raised from the ground. Do not store **INEX>DECKING** vertically.

## SUPPORT



## FRAMING

In BAL-40 or BAL-FZ construction **INEX>DECKING** can be fixed to either timber or steel joists; depending on whether the deck or verandah subfloor space is enclosed – SEE DIAGRAM BELOW.

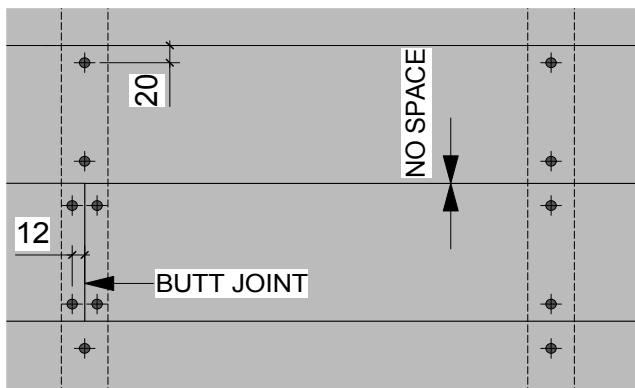
Timber framing must be in accordance with AS 1684 – ‘Residential timber-framed construction’.

Steel framing must be in accordance with AS 3623 – ‘Domestic metal framing’.

For BAL-40 or BAL-FZ **INEX>DECKING** boards **MUST NOT** be spaced. Since the decking boards are **NOT SPACED** UBIQ recommends that the framing structure allows for a slight fall to allow for run off. This fall should be in the direction of the boards.

\*When installing, **CUT LENGTHS** of **INEX>DECKING** **MUST NOT BE LESS THAN 900mm**. **INEX>DECKING** boards must span over a **MINIMUM 3 JOISTS**.

## FIXING



**Figure 1** FOR BAL-40 or BAL-FZ **INEX>DECKING** BOARDS **MUST NOT BE SPACED**.\*\*

## ASSEMBLY

Ensure **INEX>DECKING** boards have their first coat applied prior to fixing and are fixed rough side up. Apply a 6mm diameter bead of **INEX>BOND** at each joist; and for all steel sub-structures this is important to provide a cushioning effect to reduce noise of footfall.

### FIXINGS:

Ensure all fixings are located according to Figure 1 and all holes are pre-drilled and countersunk. Most self-embedding screws will countersink neatly into **INEX>DECKING**. However due to the cementitious nature of **INEX>BOARDS** if the correct pressure and torque is not applied there may be some surface blow out of the material, particularly at screw points close to the edges or ends of the material. This can be alleviated by pre-drilling a nominal 2mm to 3mm deep hole of the approximate screw head diameter at the screw point.

### FIXINGS – TIMBER JOISTS – Class 3 Galvanised Fixings or higher.\*

**Screws:** 10g x 50mm self embedding countersunk head screws.

### FIXINGS – STEEL JOISTS – Class 3 Galvanised Fixings or higher.\*

**Screws:** 10g x 40mm self-drilling, self-embedding, countersunk head screws.

\*Class 4 or stainless steel screws for sea spray zone in accordance with AS 3566.

### \*\*Alternative Solution with decking spaced at not greater than 2.5mm.

Clauses 8.7.1 (BAL-40) and 9.7.1 (BAL-FZ) of AS 3959-2009 *Construction of buildings in bushfire prone-zone areas* require that “Decking shall not be spaced”.

However UBIQ is aware that in some circumstances the Building Certifier and/or the NSW Rural Fire Service has permitted spacing of decks if not greater than 2.5mm as an Alternative Solution to the standard.

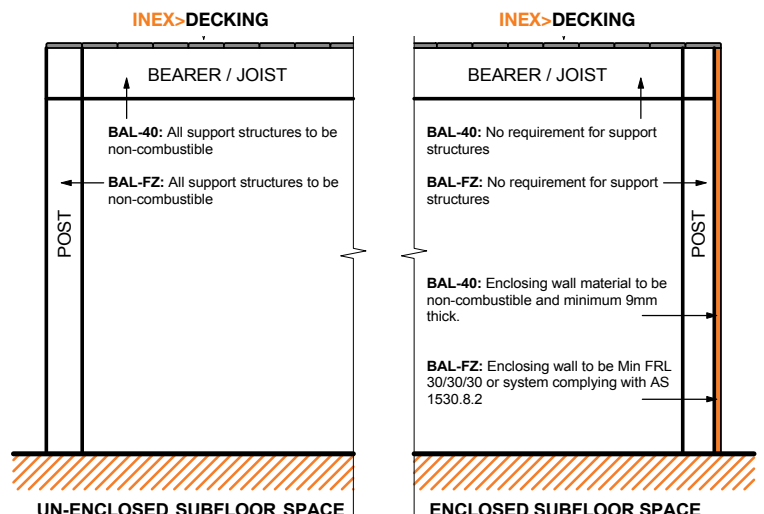
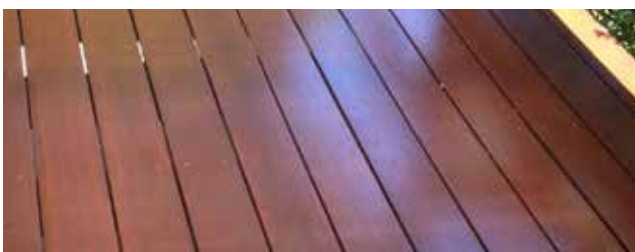
UBIQ advises that if this solution is desired then approval by the Building Certifier must be obtained prior to installation.

## APPLICATION

### FINISHES

If a natural timber appearance is desired then **INEX>DECKING** offers the perfect solution, and comes with a reduction of the long term maintenance issues of timber itself. UBIQ’s unique textured surface on **INEX>DECKING** allows for complete flexibility of finishes to be achieved; from an authentic natural timber appearance to many other staining or painting options.

For further details of approved coating options refer to the COATINGS menu at: [www.ubiq.com.au](http://www.ubiq.com.au).



This diagram outlines the requirements under AS 3959-2009 *Construction of buildings in bushfire-prone areas* for the framing of verandas, decks, steps, ramps or landings for either BAL-40 or BAL-FZ construction.

## INSTALLATION EQUIPMENT

UBIQ recommends the following equipment and accessories for the installation of **INEX>DECKING**:

**STORAGE:** **INEX>DECKING** must be stored flat and in a well ventilated covered and dry area.

**GENERAL:** **INEX>DECKING** can be machined and worked in same way as comparable fibre cement sheeting.

**CUTTING:** **INEX>DECKING** should be cut using a mechanical drop saw with a fitted dust extraction system. To achieve the best cutting results, use a diamond edge blade similar to that used to cut softer brick or stone or a specific cutting blade for fibre cement sheets. See also Health & Safety section below.

**SCREW FIXING:** Use a cordless drill or automatic screw gun. **INEX>DECKING** must be fixed to joists by screw fixings. We recommend using a pre-drilling and countersinking tool as the best method of fixing.



### Important Notes:

Ensure all components are compatible with each other and suitable for **INEX>DECKING** and/or the intended surface finish.

Failure to install, finish or maintain this product in accordance with relevant building codes, regulations, standards and UBIQ's current published instructions may lead to personal injury, affect system performance, violate local building codes, and possibly void the product warranty.

### MATERIAL PROPERTIES

**INEX>DECKING** is an advanced high strength, low carbon fibre reinforced Engineered Cementitious Composite (ECC) product, containing 60% of post industrial recycled materials.

**INEX>DECKING** conforms to the requirements of AS/NZS 2908.2 2000 'Cellulose-cement products Part 2: Flat sheets', other than the optional 'Warm Water' test item 6.4. The warm water test is not considered relevant to **INEX>DECKING**.

**INEX>DECKING** is moisture resistant and retains its structural integrity when subjected to multiple soak/dry cycles in accordance with clause 8.2.5 of AS/NZS 2908.2 2000 'Cellulose-cement products Part 2: Flat sheets'.

**INEX>DECKING** conforms to AS 4964 2004 as containing no asbestos. It is toxin free and is 100% recyclable.

**INEX>DECKING** is deemed non-combustible when tested in accordance AS/NZS 1530.1 and is therefore a non-combustible material suitable for **Bushfire BAL-40** and **BAL-FZ** constructions under AS3959-2009.

**INEX>DECKING** when tested in accordance AS/NZS 1520.3 displayed no; Ignitability, Spread of Flame, Heat Evolved or Smoke Developed.

**INEX>DECKING** when tested in accordance AS/NZS 3837-1998 for heat and smoke release rates is classified **Group 1 for Specification A2.4 of the BCA**.

**INEX>DECKING** is not susceptible to Termite Attack.

### LOADING PROPERTIES

**INEX>DECKING** is suitable for all residential or commercial decks with joist spaces at a maximum of 450mm centres, and where the support of a concentrated action to a limit of 1.8kN is permitted.

### HEALTH & SAFETY

UBIQ advises that **INEX>DECKING** contains fibreglass reinforcing and causes fine dust when cutting or machining. Continuous or excessive inhalation of fine dust containing fibreglass particles can cause irritation and may cause lung scarring (silicosis). Exposure to such dust may cause irritation to the skin or other body surfaces.

When cutting **INEX>DECKING** use methods recommended in this brochure to minimise dust production, and in addition:

**LOCATION:** Do not cut **INEX>DECKING** indoors. Cut in a well ventilated outdoor location.

**CLOTHING, MASK & GOGGLES:** Always wear protective clothing and properly fitted and approved mask (respirator) and eye protective goggles.

**DUST LIMITATION:** Always use a mechanical circular saw equipped with a fitted dust extraction system. When cutting is finished always vacuum up residual dust. Maintain the work area as a dust free environment.