

## PLEASE READ CAREFULLY BEFORE ANY INSTALLATION OF SILVADEC® DECK BOARDS

### 1. WARRANTIES

This notice applies to Silvadec® wood composite deck boards in the Elegance, Emotion and Atmosphere ranges. These deck boards are designed for pedestrian use outdoors. They are non-structural, with a load-bearing capacity (dynamic instant load) of 500 kg/m<sup>2</sup>, evenly distributed.

Silvadec composite decking is suitable for the type of use specified in Eurocode 1, for different structures in both residential areas and public spaces, within the limits of the usage stipulations provided in these installation instructions.

Silvadec deck boards are also suitable for creating decking to cover outdoor ground surfaces, installed not more than 1 metre above the ground below; this use falls under the scope of NF DTU 51.4, French standard on external timber decking. If its above-ground height exceeds 1 m, the decking no longer constitutes a wearing or decorative surface, but rather a structural floor. In this case, for safety reasons, an additional load-bearing floor must therefore be built under the decking.

Silvadec deck boards are also suitable for creating decking that primarily protects against moisture, a use that falls under the scope of the French CSFE (*Chambre Syndicale* for waterproofing) Professional Regulations.

Elegance and Emotion deck boards must not be installed indoors, under cover or in semi-covered locations. Only Atmosphere boards are suitable for covered or semi-covered locations. Before beginning installation, check the boards all match for colour and finish (brushing and texture). Since these are wood-based products, there may be minor differences between boards. Silvadec® SAS disclaims responsibility, and will void its warranty, in the event of failure to follow the installation instructions below.

### 2. REFERENCE STANDARDS

The reference standards for installing Silvadec® decking are Eurocode 1 – Actions on structures (EN 1991) and Eurocode 5 – Design of timber structures (EN 1995). Local regulations should also be observed.

### 3. ADDITIONAL INFORMATION

Additional information is available in the technical notices for other products in our range (PU26 – Decking Accessories, PU32 – Removable Clip), downloadable from our website fr.silvadec.com.

## STORAGE AND HANDLING

Silvadec® boards and accessories must be stacked on a flat, dry surface, in a well-ventilated area, so as to prevent any deformation. We recommend breaking open the pallet to help with airflow. Boards should be kept with the brushed surface downwards, to avoid temporary colour differences with products that have not been exposed to sunlight. Caution must be taken in handling, as wood composite boards can be heavier than similar wooden boards such as treated pine or some exotic wood species. During installation, avoid leaving the pallet in full sunlight to avoid expansion variations.

## PLANNING

### 1. LAYOUT

With 5 mm lateral gaps between boards, and 40 cm between adjacent joists (centre to centre), 1 m<sup>2</sup> of decking requires:

| Using 138 x 23 mm boards   | Using 180 x 23 mm boards   |
|--|--|
| 7 linear metres  | 5.4 linear metres  |
| Approximately 18 to 20 fastening clips, depending on the complexity of your decking's surface pattern or cut lengths (one clip at each board/joist junction) | Approximately 14 fastening clips, depending on the complexity of your decking's surface pattern or cut lengths (one clip at each board/joist junction) |
| About 3 linear metres of joists (and joists must be doubled up if installing without butting clips)  | About 3 linear metres of joists (and joists must be doubled up if installing without butting clips)  |

#### Board sizing tolerances to be considered for layout and installation:

Width: ..... +/- 2 mm,  
 Length: ..... +/- 10 mm.  
 Board dimensions: ..... 138 x 23 mm or 180 x 23 mm (+/- 2 mm)  
 Standard length: ..... 4 m (+/- 10 mm)  
 Maximum length: ..... 6 m (+/- 10 mm) Minimum length: 1 m (+/- 10 mm)  
 Linear mass: ..... board 138 mm = 3.5 kg/lm; board 180 mm = 4.6 kg/lm (+/- 5%).

You can use the MyProject configurator, accessible on [www.silvadec.com](http://www.silvadec.com), to configure any type of layout in accordance with the recommendations given here.

## PLANNING (CONTINUED)

### 2. RECOMMENDED TOOLS AND EQUIPMENT FOR INSTALLING SILVADEC® BOARDS

All normal tools for installing a timber decking may be used.

We recommend tungsten carbide-tipped saw blades and an electric screwdriver with adjustable torque. Never use a screwdriver in percussion mode.

## PREPARING THE GROUND

### 1. WATER DRAINAGE

On non-draining ground, ensure a slope of at least 10 mm per linear metre in the lengthwise direction of the joists for water to run off, ensuring there is no water catchment at the lowest point of the decking.

### 2. STABILITY OF THE SUPPORT

The decking may be installed on sloping level ground (concrete slab with no dips or bumps; re-profile if necessary), on piles or pedestals. For stable ground surfaces covered with a geotextile, the joists should be laid on polymer pedestals. On easily-draining ground, concrete expansion spacers are a suitable choice for supporting the joists.

## INSTALLATION

### 1. INSTALLING THE STRUCTURE

For pedestrian access developments (paths, walkways, etc.) it is important to note that **deck boards must be placed perpendicular to the walking direction, especially in public areas.**

To allow for proper ventilation, boards must never be installed directly on the ground, but on Silvadec® wood composite or aluminium joists, or on durable timber joists (class 4 treated pine or exotic hardwood). These joists must be at least 42 mm wide, with a below-board height of at least 50 mm.

Do not install any mesh, felt or geotextile above the joists, so as not to obstruct ventilation or drainage between the deck boards.

Silvadec® wood composite joists (50 x 50 mm) are not made of load-bearing material. They must only be used on **flat surfaces** and must be in contact with the ground all along their length (concrete slab or compacted ground, with concrete beams embedded in the ground). **They must not sit in water. They must not be used directly on weather proofing (see reference standard).** They must only be cut for length, and never for width or height. When using pedestals or piles, we recommend Silvadec® joists in aluminium or solid wood (class 4 treated pine or exotic hardwood), installed according to regulations (see reference standard). Addition of dividers is advisable, to improve the rigidity of the structure. For installation using Silvadec® aluminium joists, please refer to PU39 – installation instructions for Silvadec® aluminium joists – also available on our website.

**Whichever type of joist is used, the spaces between them must be regular and not exceed the following:**


|                                  |       |       |       |
|----------------------------------|-------|-------|-------|
| Angle between joists and boards  | 90°   | 45°   | 30°   |
| Maximum centre-to-centre spacing | 40 cm | 20 cm | 10 cm |

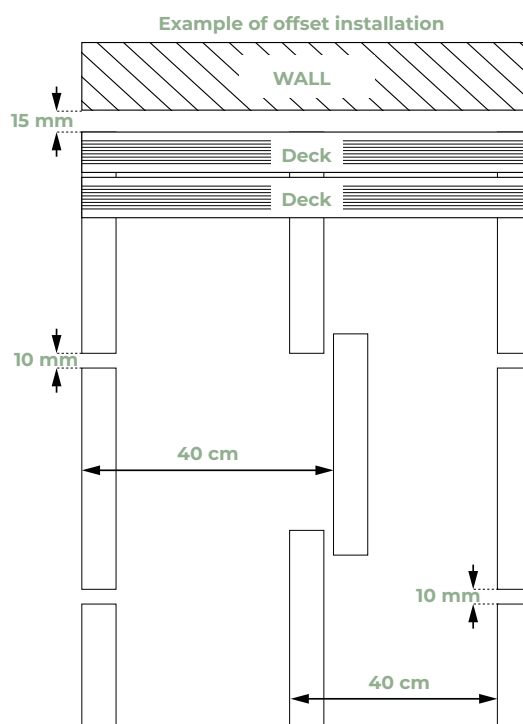
Silvadec® wood composite joists are installed as floating items: they are held in place by the weight of the boards and by the fastening clips. They must not be set or embedded in concrete, fixed to the ground in more than one place, fixed to each other or glued.

When butting, a gap of 10 mm must be left between joist ends, or, if possible, install joists so that the butting ends are offset rather than in a line. It is essential to leave a gap of 15 mm between the joist end and a wall or obstacle, to allow for drainage and expansion. (see diagram, opposite).

To correct height discrepancies of no more than 5 mm, use only rigid expansion spacers sold specifically for this purpose. Insert them every 30 cm (max. distance) under Silvadec® wood composite joists, which are not load-bearing components.

You are also strongly advised to install the joists in the direction of the gradient of the ground, to encourage water run-off.

 We recommend initially installing joists such that they overhang the edge of the decking, cutting them to length when the decking is complete.



## 2. INSTALLING DECK BOARDS

The upper surface of deck boards and exposed accessories has a brushed finish to imitate the appearance of wood and increase grip. The non-brushed surface must not be uppermost. During installation, we recommend laying all boards with the brushed finish in the same direction, to reduce colour differences from board to board.

### 2.1. Recommendations

- It is important to maintain **lateral spacing of 5 mm** between the boards (if clips are used, this spacing will be automatic). Pay attention to this spacing if you are using exposed screws.
- It is important to maintain spacing of **5 mm between board ends**. Check this spacing using the plastic expansion spacers provided with the clips.
- In addition to clips, boards less than 2 m in length must, at one end, be screwed or nailed to the joists from above.
- For short boards (< 80 cm), use at least three support and fixing points.
- The ends of each board must be fixed to a joist in order to prevent any risk of deformation or breakage of the end of the board. Any overhang must not exceed 25 mm.
- Do not place screws within 25 mm of the edge of a board, to avoid splitting (see section 2.2.3.b).
- Use of glue is strongly discouraged, in order to allow ventilation, expansion and contraction.



**Do not use too much torque when inserting screws.** We recommend doing a test beforehand on a board off-cut.

- For the best results, we recommend beginning installation next to building walls, and evening up the opposite ends using a straight-edge and a circular saw.
- Where boards are butted, make sure the ends are resting properly and stably on the joists, cutting them to length if necessary.
- We recommend staggering butted joints, for aesthetic reasons.

### 2.2. Fixing in place

We propose three fixing systems for different installations and appearances.

#### 2.2.1. Stainless steel clips for a concealed fastening

These three types of stainless steel clip facilitate the installation of a Silvadec® wood composite decking. Supplied with screws, the clips are concealed, further enhancing the decking's appearance. The single fastening and butting clips help maintain a minimum lateral gap of 5 mm between boards. To ensure the correct gap is achieved, the clip must be properly bedded into the groove, without forcing. Do not use a different brand of clip.



**NB1 – Aluminium installations:** The screws supplied with the clips must be replaced with the Ø4 mm countersunk stainless steel self-tapping screws supplied with Silvadec® aluminium joists.



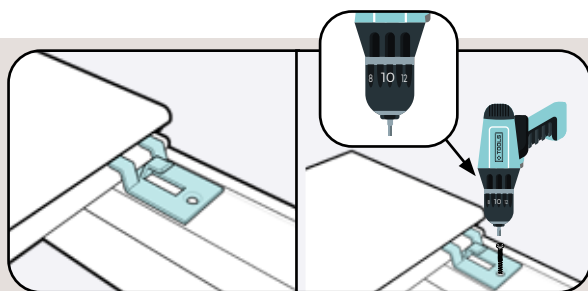
**NB2 – Galvanised steel installations:** The screws supplied with the clips must be replaced with countersunk galvanised steel self-tapping screws no bigger than Ø4 mm (not supplied).

#### SINGLE FASTENING CLIP

With the first board in position, slide the clip underneath the board.

Screw the clip to the joist, applying appropriate torque.

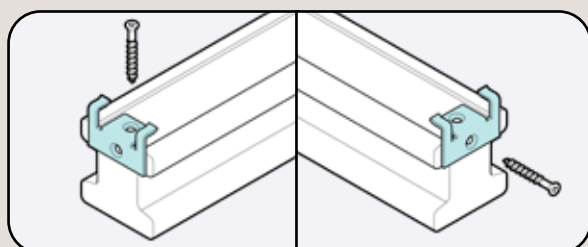
N.B. Pre-drilling, using a drill bit with diameter 2 mm, is required for exotic hardwood joists.



#### START AND END CLIP

Edge boards can be fixed with start **and** end clips.

These clips are screwed to the joist from the side or above (e.g. decking edge against a wall). They secure the peripheral boards without exposed screws.

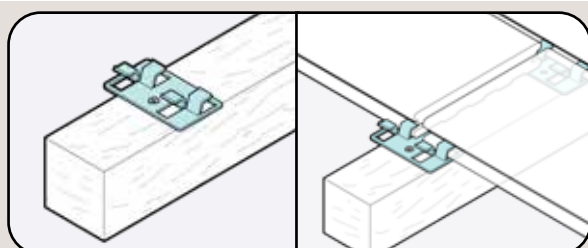


#### BUTTING CLIPS

The butting clip is fixed in the same way as the single fastening clip.

The butting clip fixes 2 boards end to end, and provides extra support for the board ends.

N.B. The butting clip is not compatible with the Silvadec composite joist or aluminium joist.



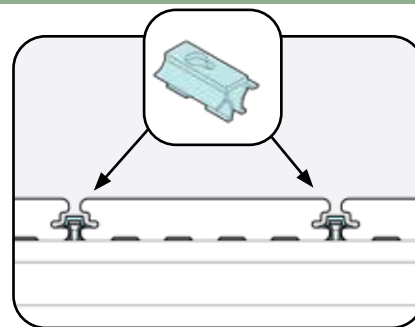
## INSTALLATION (CONTINUED)

### 2.2.2. Removable clip (concealed fastening)

The Silvadec® decking removable clip can be used:

- To give access to a feature underneath the decking (weather proofing, electrical connection block, etc.),
- To render the decking partially removable by inserting one or two rows of removable clips at regular intervals between 2 boards, instead of stainless steel fastening clips.

To install removable clips, refer to “PU32 – Removable clips”, available on our website.

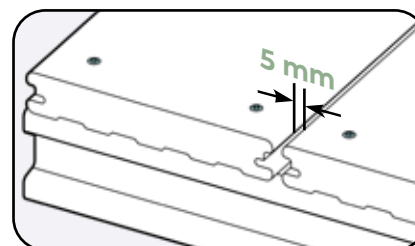


**Removable clips are not compatible with aluminium joists**

### 2.2.3. Visible screws

#### 2.2.3.a. Correct screws to use

- Special Silvadec® coloured composite screws. Pre-drilling is **ESSENTIAL**, using a bit no bigger than 3.5 mm – screws sold separately. Use a screwdriver setting that delivers low torque and high rotation speed. N.B.: Our coloured screws are not suitable for edging sea water or salt water swimming pools. In this instance use standard A4 stainless steel screws.
- VBA 5\*50 mm screws. Pre-drilling is **ESSENTIAL**, using a bit no bigger than 3.5 mm.



#### 2.2.3.b. Screwing boards to joists

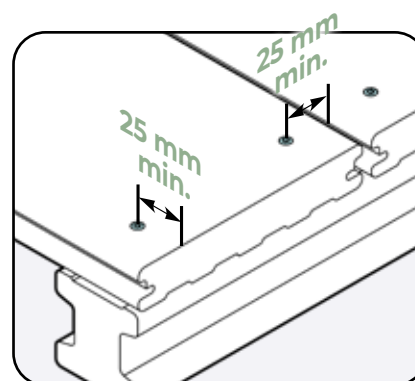
**Screws MUST NOT be inserted less than 25 mm from the edge of the board (even with pre-drilling). Boards and joists must be pre-drilled, using a bit no bigger than 3.5 mm.**

**It is ESSENTIAL to leave the correct expansion gaps (see section 2.3. Board spacing, below). It is essential to insert 2 screws at each junction between board and joist, i.e. every 40 cm.**

**Tip:** for an elegant finish, countersink the pre-drilled hole to embed the screw head.

**NB1 – Aluminium installations:** Recommended screws: maximum Ø5 mm / min. length 35 mm countersunk stainless steel self-tapping screws (not supplied).

**NB2 – Galvanised steel installations:** Recommended screws: bi-metal (stainless steel shaft + case-hardened steel tip) self-tapping screws with wings; maximum Ø5 mm / min. length 35 mm (not supplied).

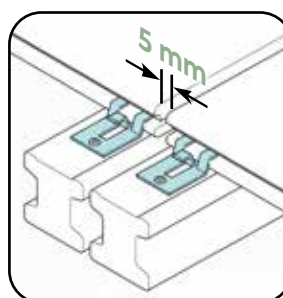


### 2.3. Board spacing

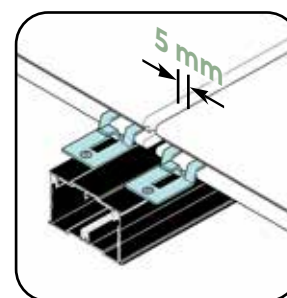
A **lateral gap of at least 5 mm** is essential, allowing for expansion due to temperature variations, as well as drainage of water and snow-melt. This gap between boards must not be obstructed.

Similarly, a gap of **5 mm** must be left between **board ends**; do not butt boards longer than 4 metres. When butting, we recommend using double joists, Silvadec® aluminium joists, or joists wider than 70 mm, with single fastening clips:

Double composite joists  
+ single fastening clips

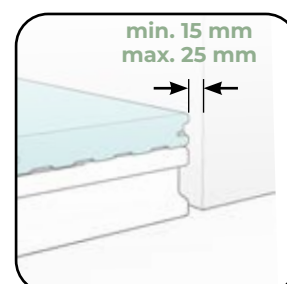
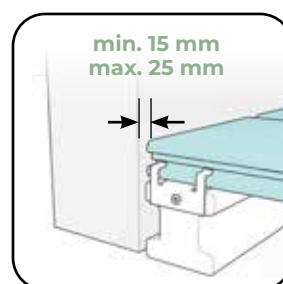


Silvadec® aluminium  
joist + single fastening clips



The **expansion spacer** from the packet of clips must be used to maintain these gaps between board ends. We strongly discourage, for both aesthetic and technical reasons, having the butted joints in a continuous line.

Also, a gap of at least **15 mm**, in length and width, must be left between a board or joist and any **wall**:



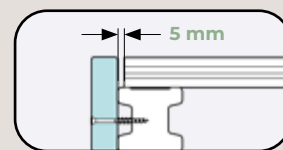
## 3. FINISHES

### 3.1. Fascia boards

Before fitting any finish, the ends of the fixed deck boards must be trimmed so they are even, using a straight-edge and a circular saw. Fascia boards are fixed to the joists using Silvadec® 5\*50 mm special composite screws (sold separately), leaving a 5 mm gap at the ends. Do not use nails.

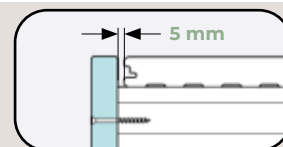
#### FASCIA BOARDS: PERPENDICULAR TO DECK BOARDS

To conceal joists along their length (perpendicular to the boards), screw the fascia board to the joist, leaving a gap of 5 mm between the deck board and the fascia board.



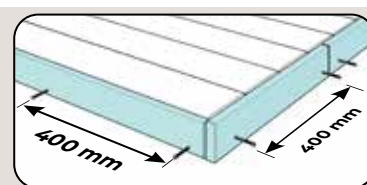
#### FASCIA BOARDS: PARALLEL TO DECK BOARDS

To conceal joist ends (along the boards' length), screw the fascia board to the joist end, leaving a gap of 5 mm between the deck board and the fascia board.




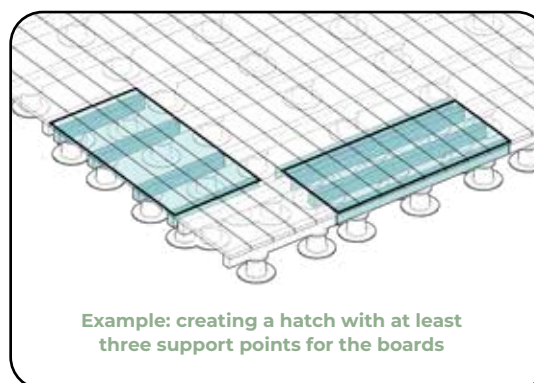
#### FIXING FASCIA BOARDS

Pre-drill the fascia boards with a 3.5 mm bit, then insert screws every 40 cm.



## 4. TECHNICAL DETAILS

- For **decking installed above weather proofing**, plan access hatches to inspect and clean the weather proofing, as per the applicable professional regulations and this document's stipulations on laying the boards (see example opposite).
  - When **installing floor grating** (access hatches) above manholes, a structural framework is essential (metal or solid wood). Leave an expansion gap of 1 cm around any grating.
  - Do not use deck boards to create **anchor points** for fixing pool covers, lamp-stands, fence-posts, etc.
  - Leave expansion gaps around **items embedded** into decking (spotlights, posts, etc.).
  - Posts for **pool shelters** must not be placed on non-structural boards. Wheels should run on rails to avoid gouging.
  - For **pool surrounds**, we do not recommend fixing profiles made from wood composite (deck, fascia, or finishing boards, or corner profiles) at the water's edge. Use a trim designed for this purpose.
  - The embossed finish may wear down over time. This is not a defect. The boards are entirely suitable for their intended use.
-  Cutting suggestions for the Atmosphere range of co-extruded materials: for a clean cut to Atmosphere boards, avoiding unsightly splintering at the edges, the advice is the same as for cutting melamine boards. Use a large-diameter saw blade and set it to cut only a few millimetres deeper than the board.
- To extend board life, especially for large areas of decking, we strongly recommend maximising air-flow under the deck, for example by using anti-rodent grills rather than fascia or finishing boards.



## 5. FINALISING THE INSTALLATION

### 5.1. Warranty reminder

Consult the decking installation regulations applicable in your municipality.

Silvadec® wood composite is not a conventional product. Please notify your insurer.

Silvadec® SAS disclaims responsibility and will void its warranty in the event of failure to follow the usage instructions above, and/or if fastening clips or accessories from other manufacturers are used.

The colour of Elegance and Emotion boards will change in the first weeks following installation. This means additional boards ordered subsequently may have a different appearance to the installed decking. This difference will fade over time. Nevertheless, differences in colour may persist between one board and another, or between different batches, since the wood used in production comes from various sources. Similarly, the colours and finishing of samples we provide are not contractually binding.

Deck boards are guaranteed against structural damage from the action of termites and moulds: 25 years for residential use and for 10 years for public or commercial use. This guarantee is limited to the supply of replacement boards.

The complete warranty can be consulted by visiting:

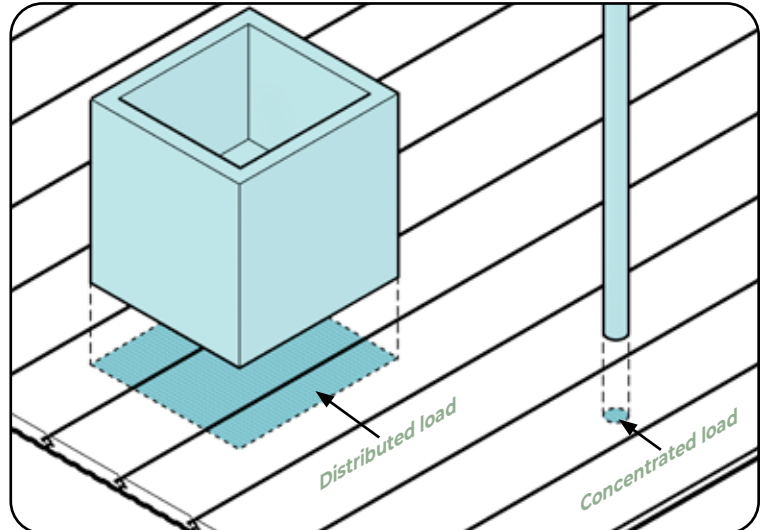
<https://en.silvadec.com/info-library/understanding-decking-warranty>



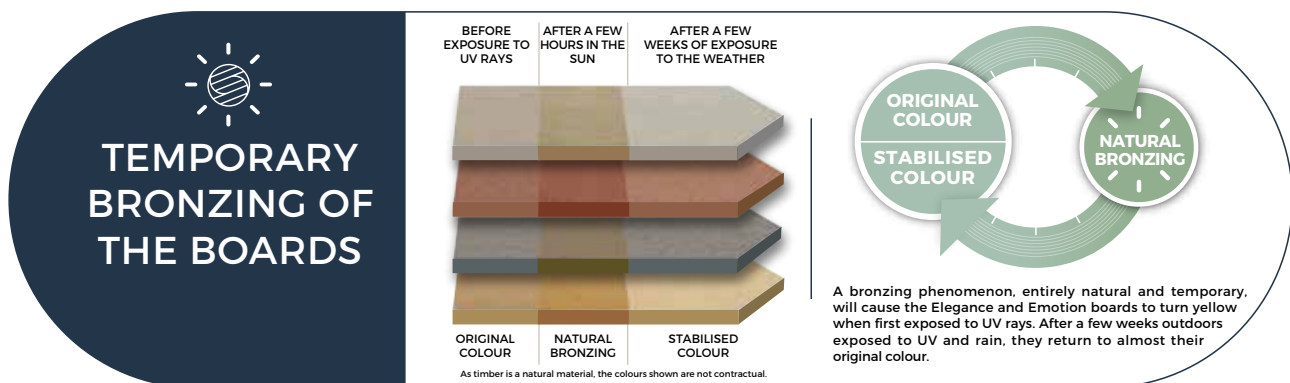
## HOW TO USE

Reminder: These deck boards are designed for pedestrian use outdoors. They are decorative and non-structural, with a load-bearing capacity (**dynamic / instant load**) of **500 kg/m<sup>2</sup>**, evenly distributed, on joists spaced 40 cm apart. If the load exceeds 500 kg/m<sup>2</sup>, the structure must be adjusted.

Difference between distributed load and concentrated load: examples



Elegance and Emotion deck boards must not be installed indoors, under cover or in semi-covered locations. Only Atmosphere boards are suitable for covered or semi-covered locations.



The Elegance and Emotion boards yellow temporarily during the first few weeks after installation. This natural phenomenon disappears after exposure to the sun and to the weather, at which point the boards will revert to almost their original colour! This tanning may last longer if the boards are installed in semi-sheltered or sheltered areas. In this case, if water spots persist, it is possible to speed up their disappearance by using a jet of water and a broom to brush along the length of the boards.

## MAINTENANCE OF SILVADEC® DECK BOARDS

Refer to our maintenance sheet delivered with the boards. It is available from our distributors and can be downloaded from our website, [www.silvadek.com](http://www.silvadek.com). We can also simply send you one on request. This sheet must be passed on to the end user of the products.

## END OF LIFE RECYCLING

### DISMANTLING

As with all household waste, it is forbidden to burn wood composite in the open air. We also strongly advise against using wood composite as fuel for boilers or barbecues. Burning wood composite produces a significant quantity of clinker. Consult the decking installation regulations applicable in your municipality.