

# ASSEMBLY INSTRUCTIONS

## DECKING PROFILE

### 137 CLASSIC



- Please read these installation instructions in detail before starting the installation. If you are unsure, contact the manufacturer or your dealer. For more information, visit [www.terafest.eu](http://www.terafest.eu) or [www.woodplastic.eu](http://www.woodplastic.eu).

#### Important product information

- Composite wood products are not a structural material and cannot be used as material for supporting structures, e.g. for balconies, raised decking and hatches. In these cases, a supporting structure made of different material must be constructed under the composite wood decking. Railings, pergolas, pool roofs and similar elements cannot be anchored only to decking boards or composite wood joist.
- Before installation, store composite wood decking boards on a dry and level surface so that the face (brushed) side of the board is protected from sunlight and uneven color maturing.
- Do not treat the surface of composite wood decking boards with stains, paints, varnishes, waxes, oils or other similar products unless recommended by the manufacturer for composite wood materials. Avoid the use of solvents and thinners!
- Composite wood products are designed primarily for outdoor use. Exposure to the sun's UV rays and rain makes them easier to maintain, so consult your dealer when using them indoors.
- Composite wood decking boards, joist and finishing boards undergo volumetric changes (expanding and contracting) as the temperature changes. Therefore, observe the prescribed expansion and ventilation gaps.
- It is a natural product, which may have slight color variations and shading that suggest the natural appearance of the wood, but do not reduce the quality of the product or its durability. We recommend checking the color of the planks when laying and mixing the decking on the decking if necessary, to emphasise the natural character of the decking. We recommend ordering the boards for the whole decking at once.
- When working with composite wood, you can use the same tools as when working with hardwood. To assemble the composite wood decking you will need a hand circular (mitre) saw (we recommend a blade with teeth made of carbide), a drill with drill bits and a countersink, an electric screwdriver with bits, a tape measure, a spirit level, a pencil, a rubber mallet, a square, safety glasses.
- The dimensional tolerances of the boards are: width +/- 2 mm, thickness +/- 1 mm, length +/- 10 mm and the tolerance for longitudinal deflection of the board (so-called bow) is max. 5 mm per standard meter of length.

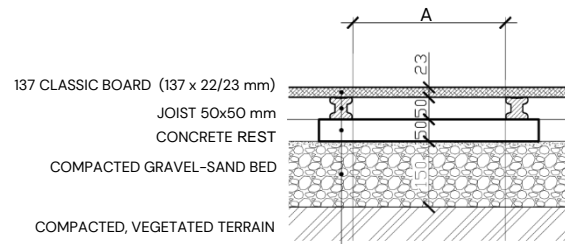
#### MATERIAL CONSUMPTION ESTIMATE PER 1 m<sup>2</sup>

137 CLASSIC boards (137 x 22 / 23 mm)	clips	joists
7 bm	20 pcs	2,8 lm

#### 1. Preparation of the subsurface

- It is necessary to prepare the subsurface according to the specific situation and construction readiness at the place of installation.
- Recommended subsurface types: sufficiently graded concrete slab, compacted gravel bed preferably with concrete rests (e.g. kerbs), graded waterproofing (consult insulation supplier), metal or timber joist structures.
- Ensure that the subsurface allows water to drain away. Joists and composite wood decking boards must not be permanently standing in water.
- The subsurface should be stable enough to prevent it from sinking over time.
- The air gap between the bottom surface of the board and the subsurface must be at least 30 mm.**
- In the case of the use of 25 mm high aluminium joist (AL - 25 joist), it is necessary to ensure water drainage and ventilation in the deck area by supporting the joist to keep minimum 30 mm gap between board and subsurface.

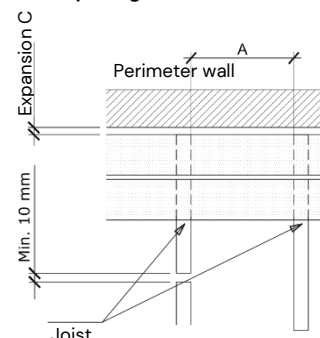
Fig. 1 Decking composition when using Terafest® 50x50mm joists



#### 2. Installing Terafest® joists

- The Terafest® joists are freely laid on the subsurface with the groove up, smooth side down. They do not need to be anchored or embedded in concrete.
- The maximum distance (gap) between joists (A), see Figure 2, is given in Table 1.** When combining several board profiles with different spacing of the joists, the smaller value is always chosen. Do not exceed the specified values, otherwise any claim will not be accepted.
- For larger or more complex decking, prepare a laying plan before you start laying the base, showing the composition and lengths of the individual boards and joists. **Each segment of a decking board (even short pieces) must be supported by at least three joists.**
- If boards are used on footbridges or walkways, they should, as far as possible, be laid perpendicular to the direction of movement of persons and therefore parallel to that direction. This is especially true for commercial premises.
- Leave an expansion gap of min. 10 mm, between two adjacent joists and an expansion gap (C) min. 10 mm between the joist and the wall or other fixed barrier. (see Fig. 2 and Tab. 2)
- Use levelling pads or pedestals to compensate for any height differences under the joists.
- The unsupported part of the Terafest® 50x50 joist can be max. 300 mm. Overhangs without rest can be max. 50 mm.**
- The unsupported part of the Terafest® 50x30 joist can be max. 150 mm. Overhangs without rest can be max. 30 mm.**
- If possible, cut the joists to the required length before laying the last row of boards.
- WPC Terafest® joists can be replaced by, for example, the AL-SMART aluminum system, provided that the prescribed spacing is maintained.
- In the AL-SMART system, the 25 mm AL joist can be used with the 137 CLASSIC profile only if a min. **air gap of 30 mm can be maintained between the lower surface of the board and the substrate.**
- In the AL-SMART system, the unsupported part of the AL joists can measure a maximum of 400 mm (AL25), 600 mm (AL40) and 1000 mm (AL75) for classic terraces.** Overlaps without support can be a maximum of 50 mm and only for AL75 then a maximum of 100 mm – see the AL-Smart carrier product sheet.

Fig. 2 Laying of joists and spacing between them



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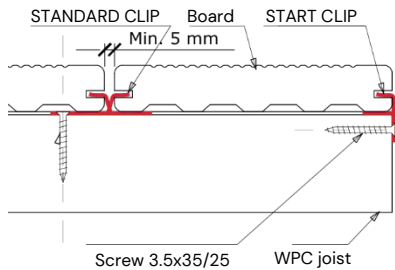
**Tab. 1 – Prescribed distances between the supports for the boards – i.e. the maximum unsupported part of the board from below between the supports – distance A – see Fig. 2 and 4**

Angle between board and joist	90°	45°	30°
MAXIMUM allowed distance A between joists for residential premises per ASTM D6662-01 and ASTM D7032-04, Load capacity 450Kg/m <sup>2</sup>	350 mm	250 mm	175 mm
MAXIMUM allowed distance A between joists for commercial and residential premises according to EN 15534-4. Load capacity of the decking 800Kg/m <sup>2</sup>	300 mm	210 mm	150 mm
RECOMMENDED distance A between joists for commercial and residential premises according to EN 15534-4. Load capacity of the decking 1,100Kg/m <sup>2</sup>	250 mm	175 mm	125 mm

### 3. Laying and anchoring of decking boards

- It is recommended to check/observe the laying direction of the boards, which are always brushed in one direction, which can be identified by marking (arrow) on the underside of the boards.
- Any crossing of the board and the joist must be secured with clips or screws.
- Overhang of boards is not recommended (max. 50 mm unsupported overhang).
- Do not adjust or modify the stainless-steel clips.
- The START CLIP is designed for anchoring the outermost boards.** The first and last decking board is fixed by it. If the building disposition does not allow it, the last decking board at the wall can be attached to the joist with a screw or with a CLICK CLIP.
- The STANDARD CLIP is designed for anchoring decking boards inside the decking.** The STANDARD CLIP is inserted into the side groove of the board and attached to the joist with a screw. If necessary, the board can be tapped to the clip with a rubber hammer. Once the screw is attached, the next board is slid onto the clip. It is necessary to check the distance between the boards is **min. 5 mm**.

**Fig. 3 Anchoring of decking boards with stainless steel clips and screws**

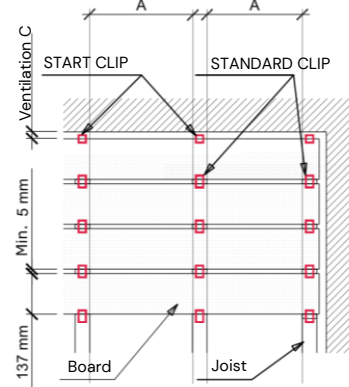


**Tab. 2 – Minimum expansion and ventilation gaps (for standard 4 m long boards) depending on temperature and weather changes – see Fig. 4 and 5**

Air temperature	Under +10 °C	+10 °C to +25 °C	Above +25 °C in the shade
Expansion gap B between decking boards (adjacent)	5 mm	4 mm	3 mm
Ventilation gap C between the end of the decking board (width- and lengthwise) and the wall	12 mm	10 mm	10 mm

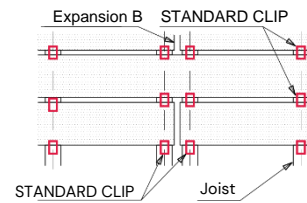
- It is always necessary to pre-drill the hole for the START CLIP, pre-drilling is recommended for the STANDARD CLIP. For 3.5 mm screws, use a 2 mm drill bit.
- Tighten stainless steel screws with feeling – when using an electric screwdriver, test and set the appropriate torque for the screw type.
- When using Terafest® 50x50 mm joists, 3.5 x 35 mm stainless steel screws are used.**
- When using Terafest® 50x30 mm joists, the shorter 3.5 x 25 mm stainless steel screws are used.**

**Fig. 4 Expansion gaps between boards and between boards and solid wall**



- Always use 2 STANDARD CLIPS with 2 parallel beams to connect the decking boards, see Fig. 5. **The distance between parallel joists is 10 to 50 mm.**
- Leave an expansion gap B between the adjacent boards, see Tab. 2 and Fig. 5.

**Fig. 5 Connecting decking boards with STANDARD CLIP**



### 4. Anchoring of decking boards with screws

- We recommend using VBA 5x50 screws.
- The hole in the decking board must always be pre-drilled (e.g. when using a 5x50 mm drill with a 4 mm drill bit).
- Never fasten screws closer than 20 mm from the edge of the board.
- Use 2 screws for each crossing of the board and the joist.

### 5. Completion of installation

- It is recommended to cut the overhanging boards after all the boards have been laid due to the expansion of the composite wood material.
- To cover the supporting structure, the decking edges can be lined with finishing boards.
- A ventilation gap min. 5 mm must be maintained between the finishing boards and the surrounding terrain, in cases where this cannot be guaranteed, for example in a flower bed or grassland, min. 5 mm wide ventilation gap must be created between the decking boards and the finishing board.
- Do not cover the finishing board with soil. If the decking is embedded in the surrounding terrain, it must be separated from the surrounding soil, for example by concrete or other kerbs with a ventilation gap between the kerb and the decking/finishing board min. 10 mm, or by other suitable means.
- Use stainless steel screws, e.g. size 4 x 60 mm, to fix the finishing boards.
- The finishing boards are screwed into the middle of the decking board about 10 mm from the top edge.
- The hole must be pre-drilled for the entire length of the screw** (e.g. when using a 4 x 60 mm screw for the finishing boards with a 3 mm drill bit).
- Screw the finishing board every 400 mm, shorten the distance if the load is greater or if the finishing board is bent.
- For proper fitting of the finishing board to the decking board and joists, cut a space in the finishing board to sink the START CLIP.
- If necessary, the finishing boards can be shaped after heating.

## WARRANTY

An extended 25-year TERAFEST® product warranty applies to all composite wood products to the extent against wood decay fungi, rot and insects in standard conditions. For all other cases, the basic warranty applies.

As part of the warranty, we will replace damaged products. In case the given product is no longer produced, it will be exchanged for similar. No further financial or other compensation can be claimed under this warranty. Assembly and other related cost associated with the replacement of cladding profiles are excluded from the warranty.

This warranty does not apply to:

- **Color fastness** – The TERAFEST® products have UV protection. However, it is a wood product and, therefore, may over time experience color changes as a result of exposure to sunlight and humidity.
- **Maturation of the wood component** – during the first weeks or months after installation, depending on the intensity of sunlight, rainfall and the season, there is a maturation of color in the surface of the deck boards. It is the leaching of lignin from the wood component in TERAFEST® material, which is a blend of wood (60%) and HDPE (40%). Lignin as a natural part of any type of wood. Due to leaching of lignin, which is caused by water and sunlight, in the first weeks or months, boards temporarily change their color shade, usually yellow tinge. This process over time, with exposure to sunlight and rain will return to the original shade.
- **Water dust spots** – are caused by slow evaporation of the water and dust or pollen stays on the surface of the decking mostly in the partially sheltered areas (like around and under patio furniture, planters, eaves, etc.). These areas need to be cleaned on a regular basis to avoid staining.
- **Occurrence of static electricity** – under some specific weather conditions the TERAFEST® decking may accumulate static electricity. This is a common physical phenomenon for materials consisting of polymers. The polarity and strength of electrostatic charge varies depending on the types of touching materials, surface roughness, temperature etc. This phenomenon is not predictable. Accumulation of static electricity on the TERAFEST decking may occur in windy weather and low relative humidity. The intensity varies depending on the climate and age a decking. The appearance of static electricity on the TERAFEST decking carry no health risks, and its occurrence is not eligible reason for complaint.
- **Normal wear and tear**, see detailed breakdown Tab. 1 on second page of this document
- **Problems caused due to poor preparedness of the foundation** and lack of drainage, e.g. subsidence of the foundation under the decking.
- **Failure to follow installation instructions** – the warranty does not apply to TERAFEST® products that have not been installed in accordance with the installation instructions supplied with our material. Or products that are used for purposes other than those specified by the manufacturer.

TERAFEST® WARRANTY	RESIDENTIAL / PRIVATE	COMMERCIAL
BASIC	5	5
EXTENDED	25	10

## MAINTENANCE

### Maintenance right after the installation

- Right after the installation rinse the decking with water, you can use the high pressure cleaner (max. 80 bars, spray from a constant distance of 400 mm and do not use rotating nozzle). It is important to get all the dust from the decking to significantly reduce effect of water-dust spots (see Properties of the Material).

### Preventive precautions

- We recommend washing the decking twice a year (in spring and autumn) with water. Use a hard brush (brush the boards gently in the longitudinal direction) followed by rinsing the entire surface of the decking with a stream of clean water (you can also use the pressure washer).
- Keep the gaps between the boards clean, to ensure proper water drainage of the decking. Remove the dust, leaves, needles and other debris.
- Avoid the formation of dirt, scratches and stains. Grease and oil stains must be removed as soon as possible.
- Avoid contact of the decking with direct fire and protect it from embers. For location of a fireplace or grill on the decking, we recommend installing a non-flammable surface.

### Removing the dirt and stains

- Avoid using aggressive solvents and thinners. Do not paint TERAFEST® products with stains, paint, wax, oil, varnish or other similar products, if they are not approved by the manufacturer.

Tab. 1 – Removing common dirt and stains from TERAFFEST® decking.

Type of dirt	The cause and reason	Removal method
Normal dirt	Dust and ash in the air, mold, pollen, etc.	Use common household cleaners (or special product for WPC decking) with scrub brush or pressure washer and after rinse.
Color stains	Red wine, concentrated fruit juices, soft drinks, etc.	Immediately rinse the surface of the boards with fresh water, then brush lengthwise and rinse again.
Greasy spots	Oils, fats, sunscreen products, grilled foods, etc.	Immediately rinse with clean water, then use a degreaser (soap or a special product for WPC decking) and scrub brush or pressure wash the stain and then rinse with clean water. The remainder of the stain (if some exist) will disappear within a few weeks when exposed to UV light and rain.
Resistant stains	Stains from mold, fungus, moss, leaves and other organic material.	Use cleaners containing chlorine (SAVO, Cilit Bang etc.). Before using cleaning products, rinse the decking. Apply the cleaner and let it work, then rinse the treated area with clean water. Always follow the instructions and precautions on the cleaner packaging.
Water-dust spots	Slowly evaporating water keeps dust or pollen on the surface of the decking mostly in the partially sheltered areas (like around and under patio furniture, planters, eaves, etc.)	Rinse with clean water then use common household cleaners. Scrub and brush lengthwise and rinse again. These areas need to be cleaned on a regular basis to avoid staining.
Yellow shade of board surface	Maturation of the wood component	This is a natural process of board surface maturation after exposure to sunlight and water. Yellow shade of the surface gradually disappears. The process can be partially accelerated by frequent rinsing.
Surface scratches	Movement of the furniture, rocks, etc.	Clean the surface with scrub brush lengthwise and rinse. If the scratches are visible you can use very light grade sandpaper sponge (for GROOVE) or scotch brush (FOREST, RUSTIC and NATUR designs) to gently remove the scratches lengthwise and rinse.
Burned areas	Embers from the grill, cigareties	Clean the surface with scrub brush lengthwise and rinse with fresh water.