

# INSTALLATION MANUAL

## FENCE SLATS



### IMPORTANT INFORMATION ABOUT THE PRODUCT

• The TERAFEST® fence slat profile is made of the Wood-Plastic Composite (abbreviated WPC) material, which is composed of wood flour and HDPE. It is designed to create fences, fence panels, gate fillings, screens or exterior structure claddings.

• WPC is not a construction material, so it cannot be used as a support structure. TERAFEST® fence slats cannot be used as safety balcony fillings / railings. That means that TERAFEST® fence slats cannot be used in the place with the risk of person falling from the height.

• When installing other accessories on the fence (e.g. lighting, bells, mailboxes, etc...) it is not recommended to be anchored only to WoodPlastic® fence slats.

• Store the TERAFEST® profiles prior to installation on a dry, flat and ventilated surface so that the visible (brushed) side of the profile is protected from direct sunlight and to prevent an uneven matured color.

• Do not treat the surface of the TERAFEST® profiles with coating, paints, varnishes, waxes, oils or other similar products not recommended by the manufacturer. When cleaning, avoid using solvents and thinners!

• TERAFEST® products are designed primarily for outdoor use. Exposure to sunlight and rain eases their maintenance; consult their possible interior use with the supplier.

• TERAFEST® is a natural product, it may have slight differences in color and shadows that evoke the natural look of wood, but do not detract from the quality of the product and its durability. We recommend you to check the color of the profiles and mix them before the installation to achieve the natural look of the fence. We also recommend to order profiles for the whole fence at once.

• In regards to partially roofed fences water dust stains may occur due to the effects of rain, which do not affect the functionality of the fence slat profiles.

• The influence of temperature on TERAFEST® profiles results in volume changes (stretching and shrinking). Therefore observe the required expansion spaces.

• When working with WPC material you can use the same tools as when working with hardwood (drills, saws, sanders, tape measures, levels, screwdriver with bits and drills, etc).

• The TERAFEST® profiles are made of flammable material (class D-s1) – always use this material in compliance with fire safety regulations and other building standards, best after the approval of an authorized building engineer or designer.

### TECHNICAL INFORMATION

**Profiles:** 70 x 15 mm  
90 x 15 mm  
120 x 11 mm  
150 x 19 mm

**Weight of 1 meter of profile:** 1.3 kg (70 x 15 mm)  
1.6 kg (90 x 15 mm)  
1.7 kg (120 x 11 mm)  
3.4 kg (150 x 19 mm)

**Dimensional tolerance:** length +/- 10 mm; width +/- 2 mm; thickness +/- 1 mm

**Reaction to fire according to ČSN EN 13501:** D-s1

### INSTALLATION OF FENCE SLATS

#### GENERAL RULES

• Take in consideration the weight of the WPC material, which is higher than normal wood.

• We recommend to make a supporting frame of a combination of concrete (columns) and iron or aluminium alloy (cross rails).

• If you are coating the support frame with final paint, please wait with the installation of the fence boards until it dries (according to the instruction manual of the paint, varnish, etc.).

• Due to the gradual degradation of wood because of shrinkage, twist and bending. We don't recommend using wood as a support frame. In the case of the use of wood as a structural component, we cannot guarantee the stability of the shape of the WPC fence boards.

• The recommended direction of fence is vertical. It is necessary to reduce the spacing between cross rails appropriately in different direction.

#### CROSS RAILS

• Minimum recommended dimensions:

aluminium - 60 x 20 x 2,5 mm

iron - 40 x 20 x 1,5 mm

• Mount vertically

• It is recommended to use anti-corrosion surface treatment.

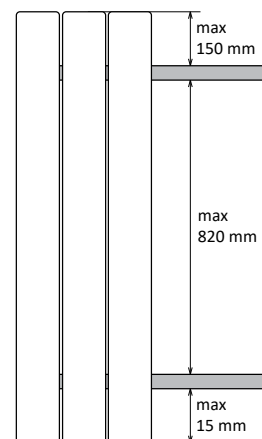
• The maximum overlaps of the top and bottom sides of the fence boards are 15 cm.

• The maximum spacing between the cross rails is 82 cm.

• During vertical mounting of the fence slats, we recommend max.

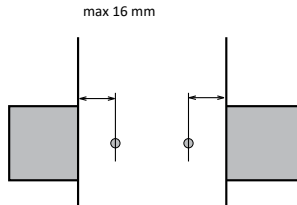
overlaps between the joists 800 mm. In this direction, we place the fence slat at least on the 3 joists.

• Recommended space between the end of the fence slat and the solid part of the fence is 3 mm.

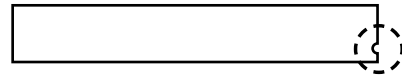


## FENCE BOARD INSTALLATION

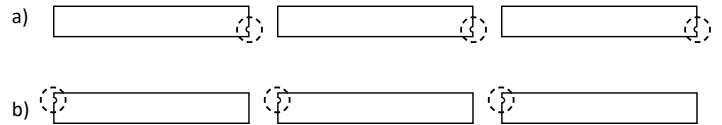
- It is recommended to control / observe the direction of laying the slats, which are brushed in one direction. This direction is marked with the slight groove in the side of the fence slat (see picture num. 1 and picture num. 2).
- Use 3,5 mm stainless steel screws, choose the length according to the used cross rails.
- Pre-drill the hole for the screw with the drill with 1 mm wider diameter. In the cross rail follow the instruction of their manufacturer.
- Fix the screws at least 16 mm from the edge of the board



Pic. 1 Mark / thin groove on one side, for laying fence in one direction.

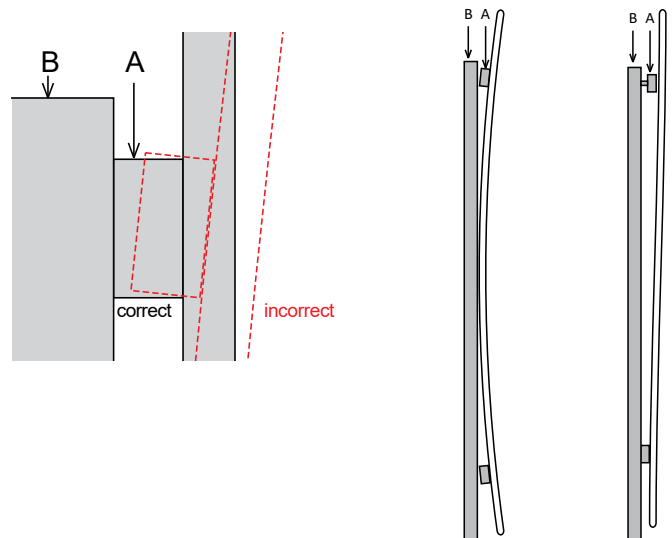


Pic. 2 When attaching the fence slat, it is necessary to monitor the location of the thin groove in the slat so that it is always in the same direction.



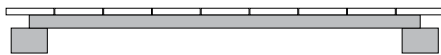
## THE MOST COMMON FAULTS IN THE INSTALLATION OF CROSS RAILS, WHICH LEAD TO DEFLECTION OF THE FENCE BOARDS

- Deflection of the cross rails (A) from the vertical axis of the posts (B).
- Various distance of the cross rails (A) from the posts (B).

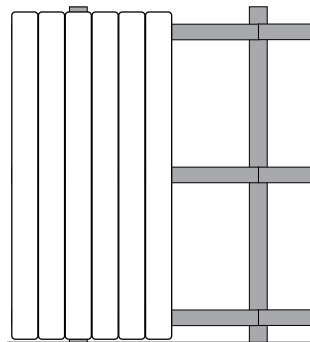


## OPTIONS OF MOUNTING THE FENCE BOARDS

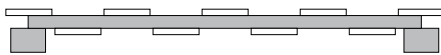
### Option A



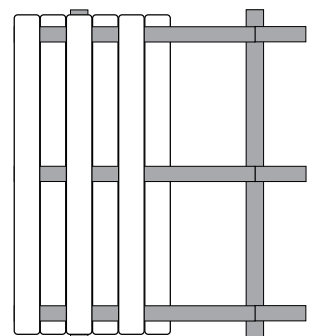
Leave the minimal 1 - 2 mm space between the fence board due to thermal expansion.



### Option B



Mount the fence boards to the cross rails alternately from both sides of the fence. The spacing between them choose according to your desired transparency, they may also overlap.



# FENCE SLATS

## MAINTENANCE, PROPERTIES, WARRANTY



**TERAFEST®**

### MAINTENANCE OF TERAFEST® FENCE SLATS

Maintenance right after the installation

- Right after the installation rinse the fence with fresh water, you can use the high pressure cleaner (max. 80 bars, spray from a constant distance of 40 cm and do not use rotating nozzle). It is important to get all the dust from the fence to significantly reduce effect of water dust spots (see Properties of the Material).

Preventive precautions

- We recommend washing the fence once a year (in spring) with soapy water. Use a hard brush (brush the boards gently in the longitudinal direction) followed by rinsing the entire surface of the fence with a stream of clean water (you can also use the pressure washer).

Removing the dirt and stains

- Avoid using aggressive cleaners, solvents and thinners. Do not paint TERAFEST® products with stains, paint, wax, oil or varnish, unless they manufacturer's approval.

| TYPE OF DIRT                  | THE CAUSE AND REASON   | THE METHOD OF REMOVAL  |
|-------------------------------|--|--|
| Normal dirt                   | Dust and ash in the air, mold, pollen, etc.  | Use common household cleaners (or special product for WPC products) 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. Before using cleaning products, rinse the fence. 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              | Slow evaporating water keeps dust or pollen on the surface of the fence mostly in the partially covered areas. | 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 unlight 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 to gently remove the scratches lengthwise and rinse.   |
| Burned areas                  | Embers from the grill, cigarettes  | Clean the surface with scrub brush lengthwise and rinse with fresh water.  |

### SAFETY INSTRUCTIONS

- As when dealing with any other building material, observe all safety measures and all relevant legislation. When handling TERAFEST® fence slats maintain caution due to their greater weight and greater length. If this installation manual does not match applicable legislation or other regulation in any particulars, we consider the applicable legislation and regulations as prevailing over this manual. When cutting the TERAFEST® fence slats it is necessary to use protective equipment. For more detailed information on health safety please refer to the Material Safety Data Sheet on our website.

### PROPERTIES OF THE MATERIAL

- Maturation of the wood component – during the first weeks or months after installation, depending on the intensity of sunlight and the season, there is a maturation of color (a yellow tinge). It is a maturation of the wood components in WPC (wood-plastic composite material is a blend of 60% wood and 40% of HDPE). 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 fence 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.

- Under some specific weather conditions the TERAFFEST® fences may accumulate static electricity. This is a common physical phenomenon, and therefore there is no reason for concern.

| PROPERTY   | TEST METHOD   | VALUES                                |
|--|---|---------------------------------------|
| Flexural strength  | EN 310, conditions according to EN 15534-1:2014, 7.3.2.         | 21,7 MPa                              |
| Shrinkage (100 °C, 60 min, longitudinal direction)             | EN 479, conditions according to EN 15534-1:2014, 9.3            | 0,02%                                 |
| Impact strength (resistance to impact by falling mass in cold) | EN 477, conditions according to EN 15534-1:2014, 7.1.2.1        | 0% damaged                            |
| Swelling in water (28 days, 20 °C)                             | EN 317, conditions according to EN 15534-1:2014, 8.3.1          | 1,00%                                 |
| Swelling up after moisture resistance test by cycling          | EN 317, conditions according to EN 15534-1:2014, 8.3.1          | 1,10%                                 |
| Flexural strength after moisture resistance test by cycling    | EN 321, conditions according to EN 15534-1:2014, 7.3.2., EN 310 | 20,3 MPa                              |
| Coefficient of Thermal Linear Expansion                        | EN 15534-1:2014, 9.2  | 2,9*10 <sup>-5</sup> °C <sup>-1</sup> |
| Reaction to fire   | EN 11925-2, EN ISO 9239-1, EN 13501-1+A1                        | Dfl - s1                              |

| PROPERTY                             | VALUES  |
|--------------------------------------|---|
| Density                              | 1210 kg/m <sup>3</sup>  |
| Surface Hardness (Janka test method) | 127 MPa, very hard wood, according to ČSN 49 136                    |
| Termite resistance                   | No attack in the initial state and also over time                   |
| Resistance to fungus N34/EN318       | Very durable material, the aging tests do not affect the durability |

| DIMENSIONAL TOLERANCE |                 |                     |
|-----------------------|-----------------|---------------------|
| LENGTH: +/- 10mm      | WIDTH: +/- 2 mm | THICKNESS: +/- 1 mm |

## WARRANTY ON THE FENCE SLATS

A 25 year warranty applies to all TERAFFEST® products against: wood-destroying fungi, rot and insects under normal conditions. For all other cases, the standard warranty of 24 month applies. For commercial use, the extended warranty is 10 years. For commercial use, the extended warranty is 10 years.

This guarantee means that we will replace damaged products. If your product is not produced anymore, it will be exchanged for a similar. Under this warranty, you cannot claim any additional financial or other compensation. All work and related costs are excluded from the guarantee.

This warranty does not apply to:

- Color fastness - The TERAFFEST® 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 and the season, there is a maturation of color (a yellow tinge). It is a maturation of the wood components in WPC. This process over time, with exposure to sunlight and rain will return to the original shade. These color variations are not a defect and do not constitute a reason for reclamation.
- Water dust spots – It is a common phenomenon, and therefore does not compromise the quality of the product.
- Normal wear and tear.
- Occurrence of static electricity.
- Failure to follow installation instructions – the warranty does not apply to TERAFFEST® 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.

## MANUFACTURER

### WPC – WOODPLASTIC a.s.

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