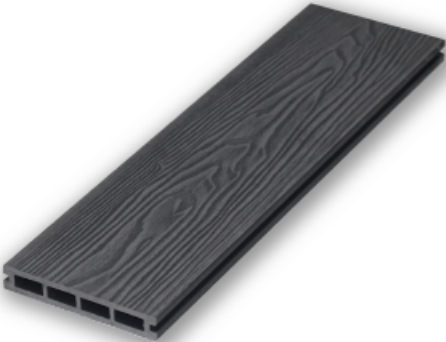




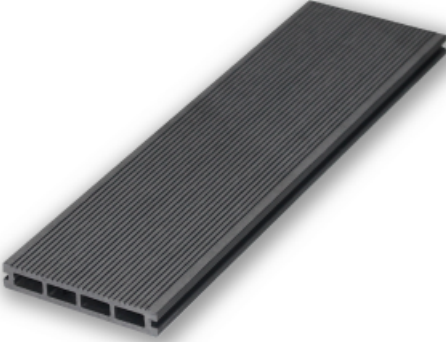
INSTALLATION & MAINTENANCE GUIDE

WPC DECKING

PRODUCTS



WPC001



WPC002



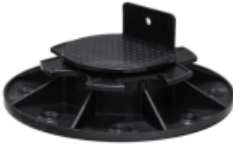
Subfloor



Mounting Clip



Starting Clip

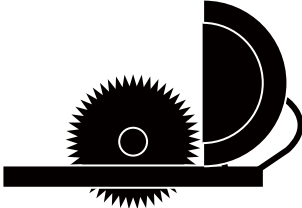


Adjustable Pedestal



End Cap

TOOLS



GENERAL INSTALLATION INFORMATION

For fitting WPC decking boards

Read the fitting instructions carefully. Failure to follow the instructions in them will render the warranty void. All the information is provided in good faith and reflects the latest status of our knowledge and can therefore not be used against use (date of issue march 2020).

When fitting the product ensure that the boards are stored for 2 – 3 days before fitting at the intended decking location and are not fitted in temperatures of less than 5°C since this increases the risk that they may break.

Place the boards on strips in a location where they are protected from direct sunlight and rain. The beams must be placed on a flat surface and must not be more than 50 cm apart. Check every deck board carefully before fitting. A board which is defective before being fitted but is nevertheless fitted will not be covered by our warranty.

The boards and the sub-structure strips must not be used as the load bearing construction or foundations for railings, balconies, steps, etc. Special precautions must be taken to comply with current safety standards.

Minor colour and finish differences may occur in isolated cases and DO NOT constitute grounds for complaint.

Ensure that there is adequate rear ventilation for your decking. The space between the boards and the ground must not be backfilled to ensure unhindered air circulation. The warranty will be rendered void if there is inadequate rear ventilation. DO NOT connect the decking surface directly to a lawn or soil in any circumstances.

Please note that during assembly, seasonal temperature and humidity fluctuations may cause the boards to expand and shrink in thickness, width and length. This must be given due consideration during assembly by inserting appropriate expansion joints to all solid structures (for example house walls, garden walls, shafts, edging, supports, railings, rainfall pipes, etc.) since otherwise stresses may occur which may cause the boards to warp or bulge.

The substructure is made of the same material as the boards and therefore has the same properties. In the following table you can see the specific expansion joints to be observed to solid components or edge areas.

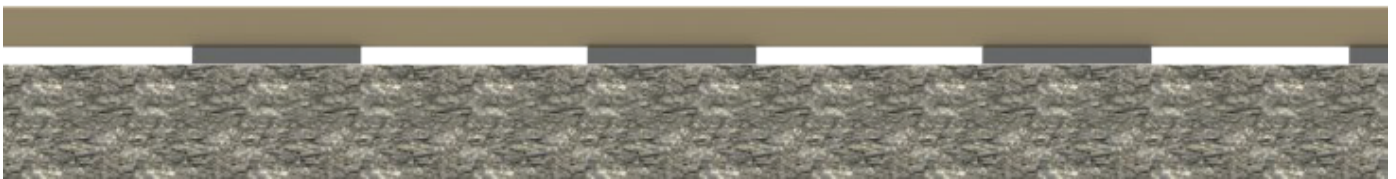
The expansion of a plank is 0,5 mm per meter, with a temperature difference of 10 °C, referring to temperature of the plank and NOT to the ambient temperature.

In summertime, at an ambient temperature of 40 °C, the plank surface temperature can rise up to 75 °C. That means, if the terrace was assembled at a temperature of 20 °C, it can reach an expansion of: $0,5 * (75 \text{ °C} - 20 \text{ °C}) / 10 = (+/-) 3 \text{ mm per meter}$.

PREPARING THE SURFACE

In the case that there is not a concrete slab a load-bearing and appropriately compacted surface consisting of ballast or gravel and with an approx. 5 cm thick layer of crushed stone should be placed on the soil. If necessary, a drainage system must be installed to guarantee the the rapid run-off of water.

If the surface has not been compacted sufficiently, the soil must be excavated to a depth of at least 20 cm. Then fill the trench with rubble or mineral concrete and compact it. Level it with a straight edge and make sure there is a gradient of 1-2 % in the longitudinal axis. Using a root-resistant fleece will prevent undesirable growth below the decking.



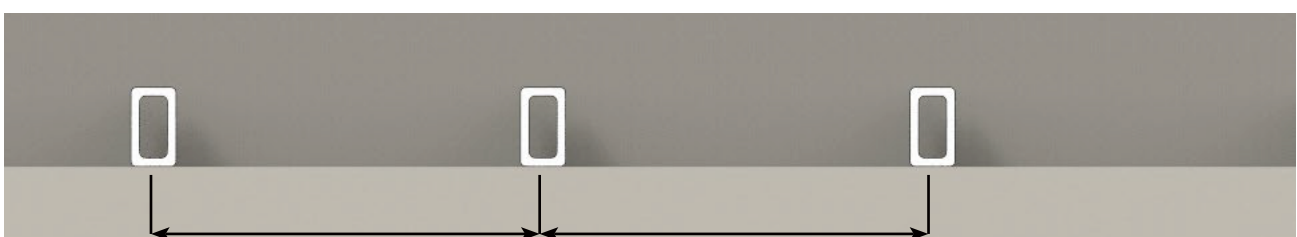
When using the substructure of 40 x 70 mm, you should lay concrete plates measuring 30 x 30 x 4 cm with a maximum spacing of 40 cm between them.



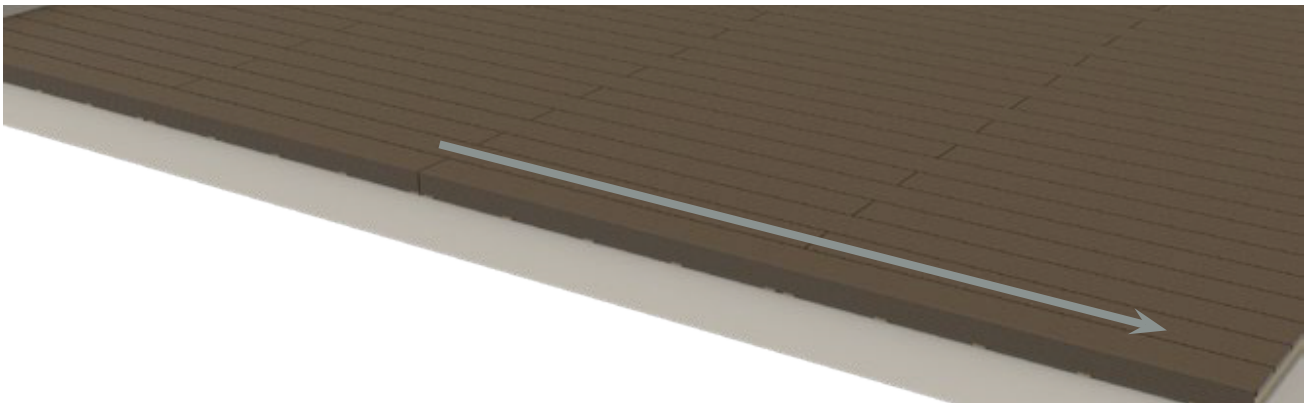
In the case of using the 23 x 40 cm substructure, you should lay concrete plates measuring 100 x 25 x 5 cm so that the substructure and the plates are always in contact.

INSTALLING THE SUBFLOORS

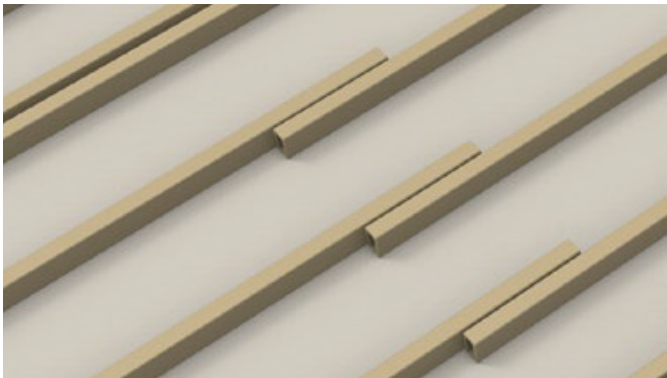
Please note that the maximum spacing between the individual substructure strips for installation in a straight line are shown in the table. For diagonal installation the spacing dimensions must be adjusted accordingly. Halve the spacing dimensions for steps to prevent the individual steps oscillating.



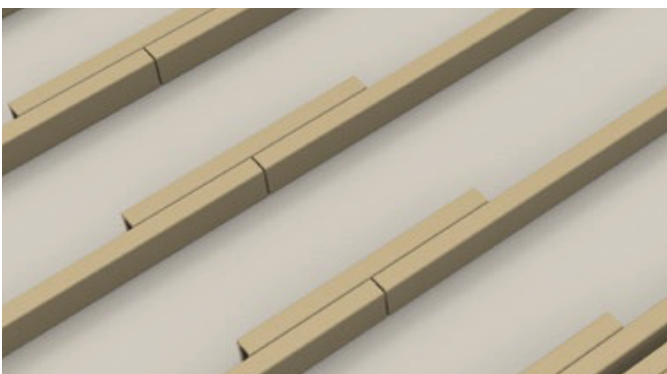
| Boards | Substructure edge to edge spacing if installed in a straight line | Substructure edge to edge spacing if installed diagonally at an angle of 45° |
|-------------|---|--|
| 146 x 23mm | 400 mm | 300 mm |
| 146 x 23 mm | 400 mm | 300 mm |
| 130 x 19 mm | 300 mm | 200 mm |



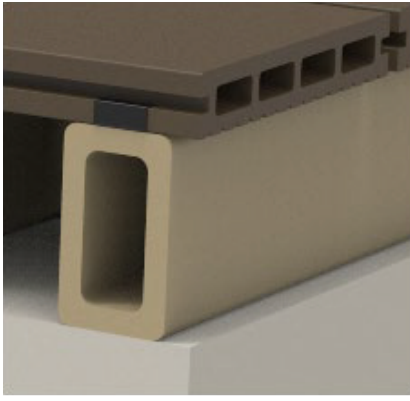
The gradient along the decking boards must be at least 1% to 2%.



If the length of the substructure is inadequate, a joint must be used. An offset joint is ideal for this purpose, in other words the substructure strips are secured next to each other on a at the joint and each strip must extend over a minimum length of twice the board width + 10 cm over the length of the neighbouring strip.



The alternative version for a substructure joint is a centre joint with a minimum spacing of 10 mm at the ends. A piece of substructure strip must be fitted in the centre of the joint with a minimum length of twice the decking board width + 10 cm. In general every joint / offset must be arranged such that the board is secured to the offset on the two substructure strips to ensure that the forces are transferred to both of them.

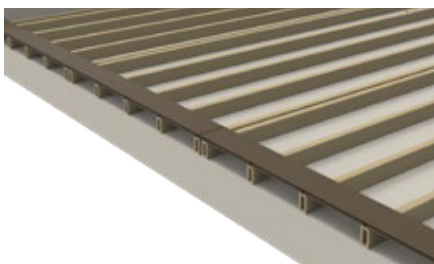
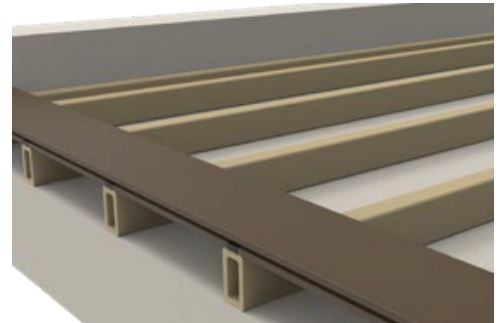
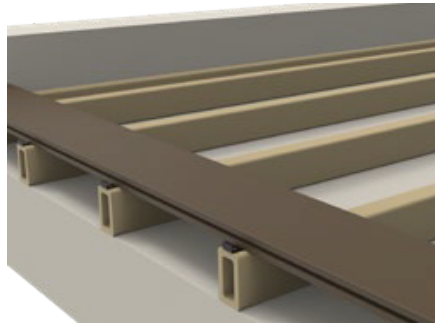
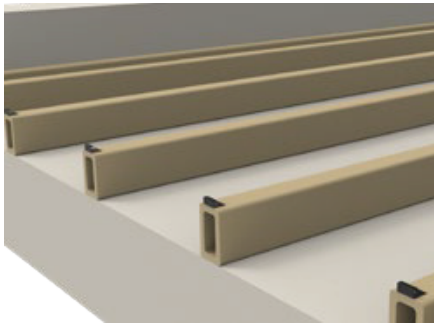


To prevent warping and breakage, when fitting the boards ensure that the ends of the boards do not overhang the substructure by more than 2 cm over at any point. The outer substructure strips must be secured to the surface at least every 400 mm, for example by screwing them to the concrete pavers.

A separate substructure strip must be fitted on every joint in the decking boards to provide added support and has to be secured to the surface at least every 400 mm

FITTING THE BOARDS

Generally all the fastenings must be predrilled for screws. Ensure that you use a low torque on your cordless screwdriver to ensure that the screws do not power through the clip.



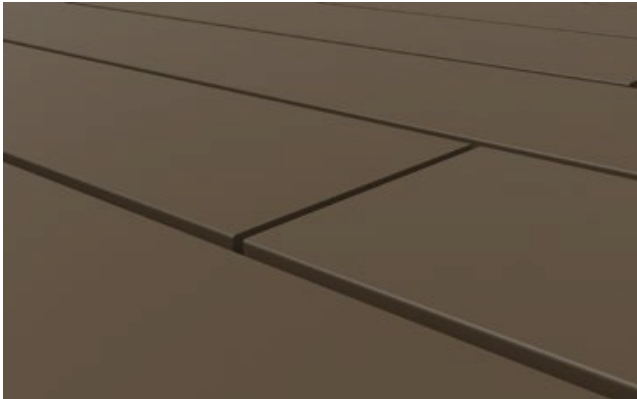
Ensure that you fit the boards parallel and secure them to each substructure strip using the appropriate clip. Now place the installation clip into the groove and tighten the screw slightly without stressing the clip.



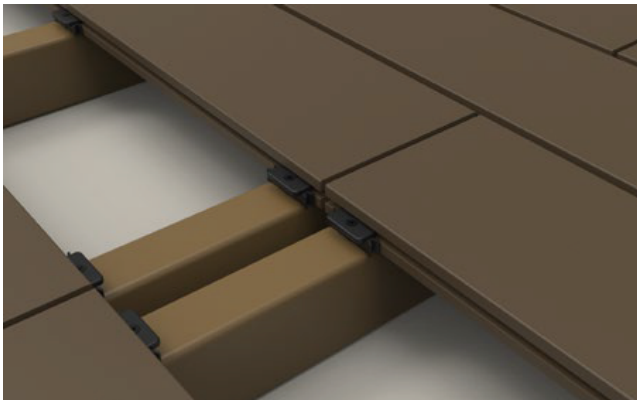
Now slide the second row into the installation clips and secure them again with another clip; then tighten the previous clip fully. Continue to fit the other boards as described above.



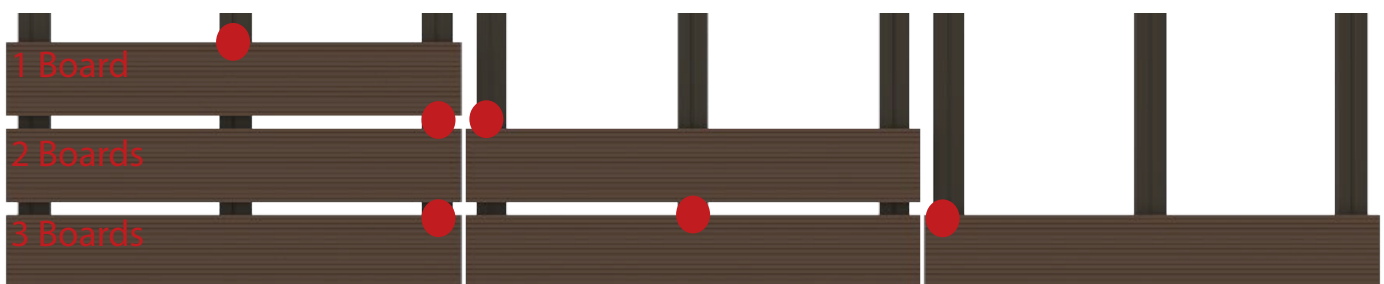
SPECIAL FEATURE FOR LARGE AREAS



Due to the installation type or the size of a terrace, it may be necessary to join the planks in the length. It is necessary to keep a distance of 8 mm between the head sides of the planks.



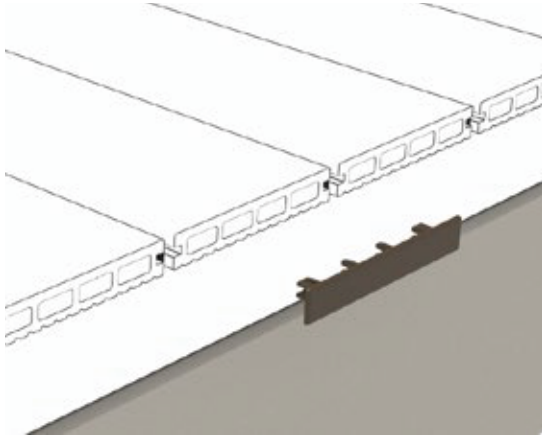
Decking areas with a length of more than 5 m must be fitted with offset joints. The boards must not be fitted using parallel joints. The decking boards must be secured on both sides at every substructure support point using a clip. Ensure that the boards are fully supported by the substructure. The maximum side overhang of the substructure strips is 2 cm.



Preventing board migration

To prevent the phenomenon of board migration (longitudinal movement of the boards due to lengthwise expansion and contraction) screw the boards to the points shown in the illustration using the “Move-Stop clips”. It is essential that you predrill the fastening holes. The screw fastening does not replace fastening the boards with the clips. The clips must still be used on all the boards.

DECK ENDS



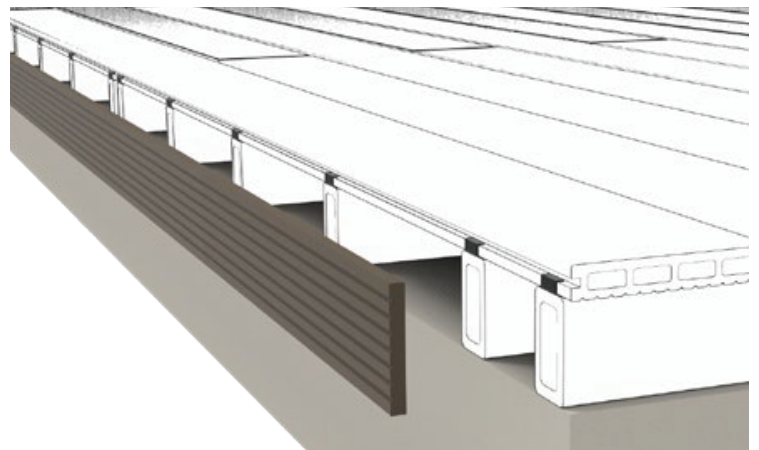
END CAPS

The boards should be fitted with the end caps to prevent the ingress of animals and insects. Drill holes using a 5 mm drill bit in the various cavities on the underside at the end of the gradient to allow water or condensation (frost damage) to drain away. Ensure that the holes on the underside are not on the installation strips since otherwise the water will not drain properly.

If the board elements have end caps on both sides drill the 5 mm holes in both ends.

COVER STRIPS

Cover strips made of the same material as the decking in matching colours are available as alternatives to end caps. These can be used either lengthwise or at the ends to cover the boards and will also enhance the overall appearance of your decking.



Drill the cover strips before fitting them and countersink the holes to ensure that the screw head can be completely hidden.

For fitting the cover strips lengthwise place the boards on the substructure (secure the substructure to the ground). Then secure the cover strips to the substructure with screws.

Fitting the cover strip to the ends requires you to take account of the longitudinal expansion of the boards. If the cover strips are fitted at the ends it is important to include the longitudinal expansion of the boards when calculating an expansion joint. This is calculated as follows: Length of board x 3 mm = Expansion joint.

MAINTENANCE

WPC decking is easy-care but the environment and usage will always leave their mark. Do not use cleaning or abrasive products for occasional cleaning, simply use clean water. Always remove the main dirt, first using a dry brush. If you cannot re-move the dirt with a brush, wash it off with clean water and the brush. The following rule applies: first use the brush then use water. If the decking requires a thorough clean, you can use a pressure washer. It is essential in this case that you use low pressure (max. 80 bar) and keep an appropriate distance between the nozzle and the decking (at least 30 cm). Do not use hot water. Avoid making marks from fine dust, oil, paint and other coatings at all costs.

If your decking is partly covered with a roof, water marks will form in the area between the roof and the open-air area, because rainwater will wash over the decking from the roof. Later the surface will dry, but dust particles will be moistened on the surface and thereafter stay on the surface, which cause this effect.

These marks can generally be removed with clean water and conventional cleaning products and equipment. This will not adversely affect the quality of the material.

WPC decks will fade slightly in sunlight initially but thereafter their colour will remain stable. As a result of the high amount of wood fibre in the products, they may have slightly darker and lighter patches when they are first delivered. These discrepancies will most disappear within a few weeks and do not constitute reasons for complaint.

WPC decking can heat up when exposed to strong sunlight. A barefoot usage may thus possibly be impaired.

Extensive trials have been conducted with a large number of products that come into contact with the material through during application.

- Resistant: These products do not leave any permanent stains on the material or the stains disappear quickly with the influences of the weather.
- Few resistant: These products leave a slight mark on the material.
- Not resistant: These products leave clearly visible stains on the material.

| Principal products | Product | Special cleaning instructions |
|---|-----------------|---|
| Vegetable / animal fats and oils and others | butter | Use a soap solution and rub vigorously. Allow to work in for a few minutes. Then rinse thoroughly with water. |
| | Soft roe | |
| | Yoghurt | |
| | Olive oil | |
| | Cooking oil | |
| | frying oil | |
| | Mayonnaise | |
| | Cocktail sauce | |
| | Oil for frying | |
| | Sunscreen | |
| | Lubricant | |
| | Engine oil | |
| | Gas | |
| Fuel oil | | |
| Burn spots | Cigarette | Lightly sand the surface with fine sandpaper, steel brush or steel wool (**) |
| | Charcoal | |
| Stubborn stains | Ketchup | Use a soap solution and rub vigorously. Then rinse thoroughly with water. For stubborn residues, the use of a high pressure cleaner (***) is recommended. |
| | Tomato paste | |
| | Spaghetti sauce | |
| | Red wine | |
| | Fruits | |
| Lemonades and juices | Coke | Use a soap solution and rub vigorously. Then rinse thoroughly with water. For stubborn residues, the use of a high pressure cleaner (***) is recommended. |
| | Fruit juice | |
| | Lemonade | |

(1) Stains that are not removed immediately for various reasons may dry out on the surface. In most cases, these spots will fade and disappear after exposure to external conditions (sun and weather).

| | | |
|-------------------------------|---------------------------------------|---|
| Hot Drinks | Coffee | Use a soap solution and rub vigorously. Then rinse thoroughly with water. For stubborn residues, the use of a high pressure cleaner (***) is recommended. |
| | Tea | |
| Cleaning products usual | Soap, floor cleaner , bleach products | Use a soap solution and rub vigorously Then rinse thoroughly with water. |
| Cleaning products specialized | Cement Scrub Remover | Use a soap solution and rub vigorously Then rinse thoroughly with water. |
| | graffiti cleaner | Lightly sand the surface with fine sandpaper, steel brush or steel wool (**) |
| Organic Solvents | sulphuric acid | Lightly sand the surface with fine sandpaper, steel brush or steel wool (**) |
| | nitric acid | |
| alkalis | caustic soda | Lightly sand the surface with fine sandpaper, steel brush or steel wool (**) |
| | ammonia | |
| shades | Water soluble | Remove the paint with a spatula and sand the surface lightly with fine sandpaper, steel brush or steel wool (**). |
| | finishes | |
| Hardened residues | silicone | Treat the surface several times with a soap solution. If this treatment is not successful, remove the material with a spatula and lightly sand the surface with fine sandpaper, steel brush or steel wool (**). |
| | gluten | |
| | wax | |

(2) To avoid unnecessary damage to the surface, sand in the longitudinal direction of the grooves. The treated surfaces regain the original colour of the material. Slight differences in colour will level out again after a maximum of 12 weeks.

(3) Use high-pressure cleaners (max 80 bar) in combination with a mild detergent if necessary. Always direct the water jet in the longitudinal direction of the grooves and avoid circular movements as far as possible. The use of a rotor nozzle is not recommended.