

# Practical tips on using clinker paving bricks

## General information

Clinker paving bricks are very durable. Due to the high stability and bulk density of their material, clinker paving bricks are unaffected by environmental influences. Clinker paving bricks are characterised by their low water absorption. The high firing temperatures used during the manufacturing process result in the production of a particularly strong ceramic composite.

Clinker paving bricks comply with the standards DIN EN 1344/DIN 18503 and their strict quality testing requirements. When used outdoors and exposed to natural weathering, professionally designed clinker brick surfaces require no special care. As a result, clinker paving bricks are a maintenance-free product. Only when clinker paving bricks are used in protected spaces such as living areas or covered outdoor areas may occasional cleaning be necessary.

## 1. Soiling caused by other building work

To ensure the attractive aesthetics of a clinker paving brick area, the clinker brick surface must be protected with construction foil of a sufficient thickness during the construction phase if there is a risk of it becoming soiled by other building work.

If splashes of mortar or paint nonetheless land on the clinker brick surface, they can be removed using commercially available cleaning agents.

Be sure to follow the instructions for use of the cleaning agent manufacturer when using such substances. It is generally a good idea to pre-wet the bricks and test the cleaning agent on a small sample surface.

## 2. Efflorescence on the clinker brick surface

Due to their composition of raw materials and ceramic firing, clinker paving bricks are colour-fast through and through and have been proven to have no efflorescent properties. Nevertheless, efflorescence may occasionally appear on the surface of the bricks after they have been laid but will disappear naturally within a short space of time when exposed to rain. This coating is actually formed by water-soluble salts such as sodium, potassium or magnesium sulphate, which may come from the foundation material and rise to the surface due to water transport. Given that this coating is solely salt efflorescence, these water-soluble compounds can also be rinsed off with water. Depending on the type of coating, it will also disappear when exposed to natural weathering.

In some cases, planting material is also placed on clinker paving brick surfaces while gardening work is being carried out. Contact with humus, lime or other substances may lead to crust-like stains.

## Stain removal

Purely water-soluble salt deposits that have risen to the surface as a result of capillary transport can be removed by sweeping or washing the clinker paving bricks. You can wipe the bricks with a damp cloth to determine whether the coating is a water-soluble compound that can be removed without any difficulty. This type of deposit will also disappear naturally when exposed to rain. Additional cleaning may speed up the removal process. If a deposit cannot be removed by sweeping or washing the bricks, a reaction of an efflorescent substance has occurred on the clinker brick surface.

In this case, the coating has to be removed using a pressure washer or, for particularly stubborn stains, by means of semi-mechanical cleaning or with stone cleaning agents. When dealing with such stains, you should be sure to consider the installation conditions and the foundation and grouting material used because they may contain the efflorescent substance.

## 3. Road salt surface deposits

A whitish deposit may form on the surface of clinker paving bricks, especially in the spring. This is formed by the road salt often used in winter, which either remains on the surface or is returned to the surface by means of capillary transport, particularly during dry weather.

We recommend simply sweeping the surface as a suitable way to remove this deposit. Exposure to natural rainfall will also cause the road salt to be gradually washed away. As a result, the general recommendation is to spread grit or granules on icy surfaces instead of salt because they can be swept up in the spring. The cleansing effect of rainwater can be sped up by using corresponding cleaning procedures on the dry bricks or adding water. Please avoid using thawing agents that contain urea. The use of such thawing agents is also prohibited in many areas due to environmental and plant protection concerns.

**4. General greasy and oily residues** When clinker paving bricks are used for common purposes, stains caused by liquids such as grease or dripping motor oil may occur. In areas exposed to the elements, such stains disappear by themselves. To remove such stains in unexposed areas, you can use the cleaning agents available from specialist retailers. Be sure to also follow the instructions for use of the cleaning agent manufacturer when using these substances too. It is generally a good idea to pre-wet the bricks and test the cleaning agent on a small sample surface.

## 5. Green deposits on clinker paving bricks

In damp, shady areas, a green deposit may form on the surface of clinker paving bricks. This occurs in areas in

which the clinker paving brick surfaces are only exposed to minor loads. Such an occurrence is natural and also occurs on other materials.

If you find such mild green deposits disturbing, you can remove them with simple cleaning methods. Flame-treating the surface will also remove green deposits. Such green deposits do not have a deteriorating effect on the durability of the clinker paving bricks. In the case of larger joint widths in particular, grass may grow between the clinker paving bricks. This growth actually helps to stabilise the joint and provides harmonious overall aesthetics. If you do not want grass to grow between your clinker paving bricks, you can scrape out the joints. If you choose to do, it is essential to ensure that you subsequently fill up the joints with sand so that the stability and accessibility of the clinker paved area remain unimpaired.

## **6. Joint dispersal**

If the joint sand and foundation material are not coordinated, rain and dynamic loads on the paved area may cause the joint sand to be washed out of the joint and into the foundation material if it has a high proportion of fine particles. This results in the emptying of the joints. If this only occurs to a mild extent, it will not have a deteriorating effect on the stability of the clinker paving brick surface. If the joint sand is fully dispersed, this may cause the bricks to shift or, if two clinker paving bricks come into contact, it could result in chipped edges.

We therefore recommend that you check the condition of the joints on a regular basis. If dispersal of the joint sand is detected, add new sand to the clinker paved area. If too much sand has disappeared from the joints, it may become necessary to re-lay some sections of the paving or lay a new foundation in individual cases. If the paving bricks are laid properly and with coordinated materials, the joint sand will not disperse.

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