

Subfloor Preparation (restorations)

With Colorex Plus, subfloor preparation is reduced to a minimum. Plus can be installed “as delivered” to the building site, without considerable need for special tools or auxiliary products. Hollows in the subfloor or screed, which may cause local breaks of the tiles in case of intensive use, can be simply and easily repaired prior to or even after the installation of Colorex Plus.

High humidity levels as well as industrial soiling of the subfloor, including paint, oil, grease and chemicals, can generally be ignored. Damages such as holes, wear, sandy concrete subfloors or brittle cement screeds can be repaired with simple methods appropriate to the location (e.g. repair mortars) prior to the installation of Colorex Plus. Thanks to the loose laying of Colorex Plus and its function as pressure distribution tiles, the corresponding subfloor standards and installation provisions need not always to be met.

New Buildings

In the case of new buildings, Colorex Plus can be installed directly on even, levelled concrete without any subfloor preparation at all.

Colorex Plus cannot assume any load-bearing. Although it will bridge small holes ($\varnothing < 5$ cm) and small-size damages, the product cannot perform extensive levelling or even supporting functions. After a short period of time (depending on the temperature), Colorex Plus will self-adjust to the subfloor.

Acclimatisation

Prior to the installation, Colorex Plus must be acclimatised by storing it for 48 hours at a temperature of at least 18°C directly into the room that is to receive flooring. Tiles must be unpacked for acclimatisation and displayed on the floor in small and straight stocks of maximum 10 pieces each.

Beginning of installation

An optimum optical result is achieved when all border tiles are, wherever possible, the same size. In order to achieve this, the first row of tiles is measured from the centre of the room and marked by a chalk line. Squareness deviations in the building structure may lead to considerable extra work and loss of material, unless they are identified and taken into account before the beginning of installation. When measuring and planning the border tiles, it is important to ensure that they are at least 10 cm.





The installation of Colorex Plus starts with the second row of tiles from the wall.



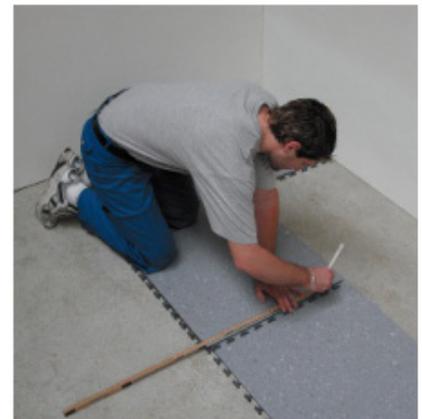
It is important that the second row is installed exactly along the chalk line.



Once the second row is complete, the first row is measured and fitted.



A rubber mallet can be used for engaging the connection system.



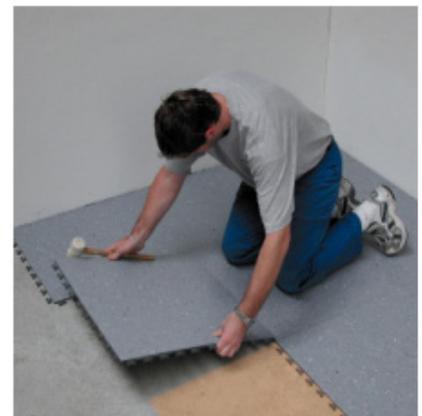
When measuring the border tiles, sufficient distance from the wall (gap) shall be allowed.



Mark out the cutting edge and cut with circular saw or jigsaw.



When inserting the border tiles, the second row must be slightly lifted.



Once the first two rows are complete, the entire area can be gradually laid.

Fix of border areas

A further recommendation for floorings that are driven on by vehicles, is to provide a fixing of the border tiles. Where there is no appropriate stop available (e.g. doors and passages), this can best be achieved by gluing the border tiles to the subfloor, e.g. with a 2-K component adhesive.

Tools

Basically, Colorex Plus can be processed with any woodworking tool. In particular, the following machines can be employed:

- Circular saw
- Jigsaw
- Moulding machine
- Router
- Drilling machine
- Planer

Differences in temperature during installation

If – over extensive areas – tiles are installed in high temperature conditions (e.g. in summer) or with a subfloor temperature that considerably deviates from the air temperature (>5°C), a dimension reduction of the area is to be expected. In such cases and wherever possible, the tiles to be installed should be laid out individually on the subfloor for acclimatisation.

Since the individual tile elements are connected together, the whole floor space will expand or shrink with temperature fluctuations. Due to the thermoplastic properties, the area will expand with higher temperatures and shrink with lower temperatures.

Thermoplastic behaviour the connection system

An expansion of the floor space is unproblematic, provided that the border tiles have been accommodated with appropriate movement joints. As a matter of fact, the material also “softens” with expansion and thus either the connection system and/or the border tiles are only slightly stressed/squeezed. When it is cold, the tiles shrink and become hard. Then a temporary dummy joint may become visible.

Possible deformation of the connection system

When tiles shrink due to low temperatures, the whole flooring area should be able to follow. If movement of the whole floor space is inhibited by high static loads such as machines, frames, etc., a slight deformation of the connection system may appear. **In extreme cases, “open joints” may become visible. It is important to know that the above mentioned phenomena may, at most, impair the optical appearance. This effect can be avoided by correct hot seam welding.**

Support of the connection system

In the case of critical subfloors with hollows and holes, it is absolutely important to pay attention that the connection system is adequately supported.

Wrong! The photo below clearly shows that the hollow is too large. The connection system may therefore hang out when stressed. Colorex Plus is loose laid, so there is no need to necessarily respect existing expansions slots. If needed, they can be cut later into a readily installed floor. We do not recommend to provide a Colorex Plus floor with expansion slots right from the beginning. The need if and where to provide one or more expansion slots is best decided upon observing how the floor will behave, once it has settled down and stabilised.



Machines and machine feet

When installed correctly, Colorex Plus is perfectly viable for vehicle traffic (max. hand pallet trucks 1.5 t, forklifts with hard wheels 2.5 t and with air tires 5 t). What is more critical is the direct placing of machines on Colorex Plus. It must be taken into consideration that the material is thermoplastic and thus softens when it is heated. Machines which must be placed in a horizontal position (e.g. lathes, moulding machines, erosion machines, etc.) can be placed on Colorex Plus, provided that the load is evenly distributed (max. 50 kg/cm²). Unevenly distributed loads (revolving cranes, radial drilling machines, etc.) must NOT be placed on Colorex Plus. The same applies to vibration measurement devices (wheel balancing machines). The cut ends around machine feet/baseboards must always be sealed with polyurethane.

Polyurethane for border sealing (with two-sided lateral adhesion)

Border areas (incl. machine bases) must never be sealed or grouted with silicone. Silicone adhesion is not strong enough for PVC. Polyurethane is recommended for a two-sided adhesive sealing/grouting of border areas. A filling cord should be used as an underlay profile to ensure two-sided lateral adhesion and to reduce material consumption.



Correct! Lateral adhesion of PUR sealing compound. A foam cord is inserted first for optimum result.



Wrong! A three-sided adhesion of PUR sealing compound inhibits free expansion and may lead to damages!



In certain applications, grouting with PUR sealing compound may be reasonable even when skirting are applied.

It should basically be considered that Colorex Plus is a loose laid, thermoplastic material and that it will therefore follow temperature fluctuations by expanding and shrinking. In normally conditioned areas with little fluctuations (working areas with heating, air conditioning etc.) a gap between 3 and 5 mm is generally sufficient.

Skirting Solutions

Skirting are available in different variations and colours.

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Ventilated skirtings are suggested for subfloors with humidity problems (page 12-accessories).



Integrated coving system suggested for highly hygienic areas.

Handling precautions with EC type

The honeycomb structure of Colorex Plus EC type is made of a carbon black filled vinyl compound. Therefore, BE CAREFUL NOT TO DRAG OR PUSH THE TILES OVER ALREADY INSTALLED FLOOR, as this may produce black stripes like heavy scuff marks. Should this happen however, the black marks can be cleaned with white spirit and a piece of white pad.

Conductive installation instructions

The installation of Colorex EC Plus should not begin until the work of all other trades has been completed, especially overhead trades. Areas should be cleaned, fully enclosed and uniformly maintained at a temperature of at least 18°C for 48 hours prior to, during and after the installation is completed.

Subfloor requirements:

Rigid, firm and free of cracks. Patch and repair minor cracks with an appropriate cement-base patching compound.

Permanently dry. Maximum residual moisture for subfloors without floor heating:

- 2,5% CM for concrete
- 0,5% CM for anhydrite screed
- (UK) 75% or less according to the hygrometer method referred to in BS 8203

Clean, especially free of oil, grease, dust, paint and foreign objects.

Copper strip installation and layout

• General recommendations:

Copper strip(s) for electrical grounding must be applied first. Preferably use self-adhesive copper strips, they are quicker to install and they provide best adherence to the subfloor. The electrical connection to the grounding point(s) must always be made by a qualified electrician.

• Layout for rooms smaller than 50m²:

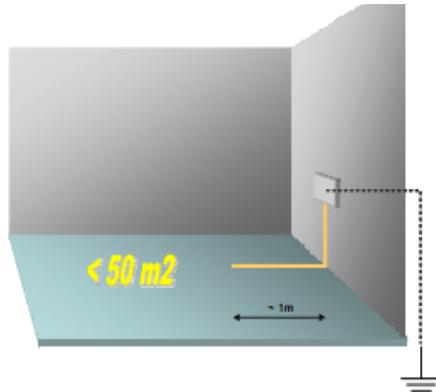
Install approx. one meter length of copper strip straight up to the nearest grounding point. Please refer to picture 1.

• Layout for rooms larger than 50m² - Alternative A:

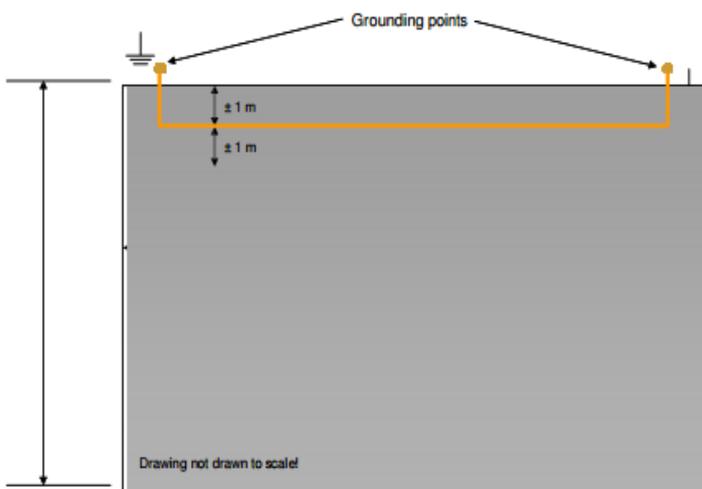
This alternative is recommended for rooms where the shorter side is below 50m. Install a combshaped copper strip circuit as shown on figure 2 on page 6. Punch all strip connections to ensure proper contact and test the conductivity of the copper strip circuit with an appropriate testing device prior to start installing the tiles.

• Layout for rooms larger than 50m² - Alternative B:

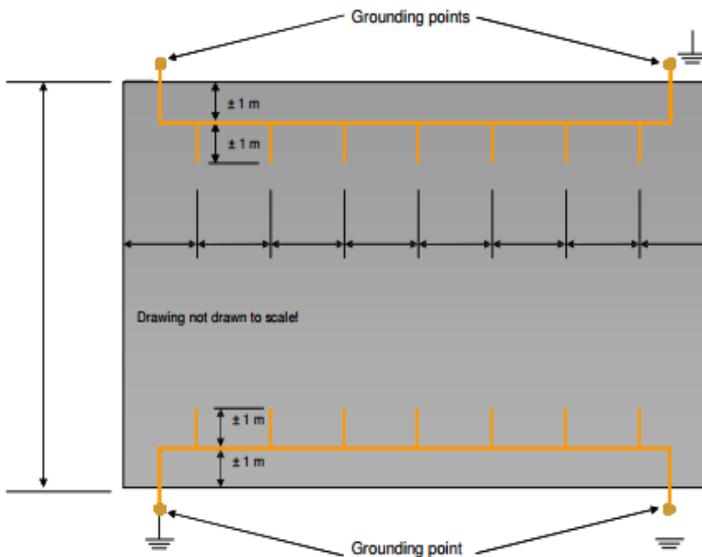
This alternative applies to rooms where the shorter side is exceeding 50m. Install two copper strip systems facing each other as shown on figure 3 on page 7. Punch all strip connections and test the conductivity as described for alternative A.



Picture 1 – Copper strip layout for rooms <math>< 50 \text{ m}^2</math>



Picture 2 – Copper strip layout for rooms > 50 m^2 , alternative A



Picture 3 – Copper strip layout for rooms > 50 m^2 , alternative B

Electrical resistance testing after installation:

Point-to-ground electrical resistance tests according to approved relevant standards.

