

Installation Guidance Note: Colorex Plus

General advice

The appearance, performance and durability of the installed floorcovering will be determined to a large extent by the quality of the prepared subfloor and the conditions in which they are laid.

The installation of Colorex Plus should be carried out in accordance with the local applicable code of practice for the installation of resilient floor coverings. Areas to receive flooring should be clean, free from other trades, fully enclosed and weather tight. Subfloors should be clean and free of contaminants, smooth, sound and permanently dry.

Forbo floor coverings are manufactured for internal use only. The product performance is not guaranteed for use in external environments.

With the unique Colorex Plus product construction and adhesive free treatment, it is possible to reduce subfloor preparation to a minimum. However, large irregularities in the subfloor, such as holes or hollows, must be repaired prior to installation of Colorex Plus.

In the case of new buildings, Colorex Plus tiles can be installed directly on even, levelled, and sound solid substrates without any surface subfloor preparation.

Areas to receive flooring should be adequately lit to allow for proper inspection of the substrate, installation and for final inspection.

Important: prior to installation, Colorex Plus tiles must be unpacked and laid on the floor in small, straight stacks of up to 20 tiles for at least 24 hours at temperature of 18 to 24 °C directly in the room where it will be installed.

The acclimatization time should be extended to at least 48 h if the floor covering has been stored or transported at temperatures less than 10 °C immediately prior to delivery. Extremes of temperature should be protected against, especially day and night temperatures.

Without correct acclimatization, differences in temperature can cause tension, unevenness, and lipping.

Ensure that all recommendations for substrate and jobsite conditions are met prior to beginning the installation. Beginning the installation is an implied acceptance of site conditions by the parties involved and liability for any failure directly related to inadequate site conditions becomes the responsibility of the installer and/or flooring contractor.

Prior to installation tiles should be checked to ensure that the correct colour, batch number and quantity have been received and that the material is in good condition. No claim will be accepted for incorrect colour, pattern, or obvious damage if the material has been fitted.

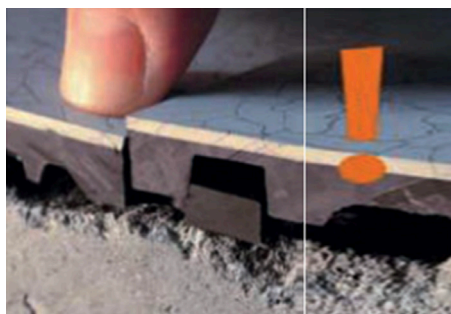
Use material from the same batch/dye lot and install in box number sequence. The use of different production batches will always result in visible shade differences. The batch number is clearly marked on the material packaging and must be checked before commencement of installation.

We recommend that you keep labels or pieces of cardboard with the batch numbers as evidence until the building is accepted.

After installation, Colorex Plus can allow traffic immediately.

Notes:

- Irregularities or undulations in the subfloor can result in the bond of tiles or planks drifting during installation. Particular attention should be given to the preparation of the subfloor and surface regularity.
- Surface regularity should be within the SR2 surface regularity standard – 5 mm under a 2 m straightedge.
- Any nibs, abrupt ridges or changes of level in the subfloor should be removed by sanding or grinding, or by localised application of a levelling compound.
- Greater than 75% RH levels and some surface contaminants (including paint, oil, grease), in industrial locations may be acceptable depending on the area and use.



As in the picture, the hollow is too large and needs filling.

Standard practice for areas to receive flooring is to ensure a clean subfloor, free from other trades, fully enclosed and weather tight.

It is recommended to conduct moisture tests on all substrates. All ground-based level floors should have an effective moisture barrier (unless otherwise specified).

Underfloor heating

Colorex Plus can be used in conjunction with underfloor heating systems. It is imperative that the underfloor heating systems have been previously commissioned and found to be functioning correctly prior to the floor finish being installed. Ensure that the underfloor heating system is switched on 48 hours prior to the floor covering installation commencing and remains on for at least 48 hours after the installation is complete.

The installation at the higher temperature of the system will prevent edge lipping.

During the period of decommissioning of the underfloor heating system, an alternative heating source should be provided, if required, to ensure that the area of installation is kept at a constant temperature of 18 – 24 °C.

Gradually increase the temperature over several days by only a few degrees per day until the desired room temperature is reached.

The temperature should never exceed 27 °C at the surface of the floor covering. Failure to follow these guidelines can result in the joints opening, and on some occasions discoloring, all of which can occur within a long or short period of time.

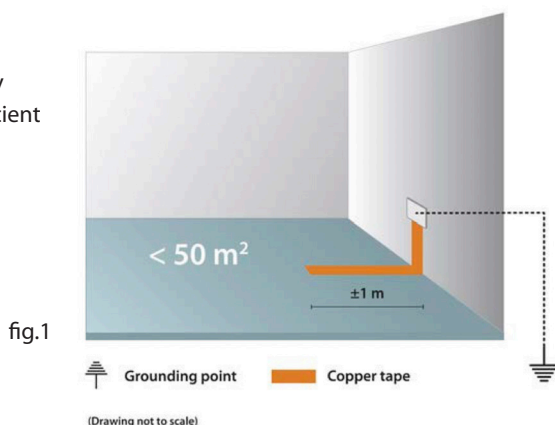
Electrical grounding – layout and installation – ESD applications only

Colorex EC Plus and Colorex SD Plus are designed as conductive/dissipative tiles which are electrically connected to one another by their conductive backside via the dovetail connection system. This means that to ground the Colorex Plus floor it is only necessary to assure the connection of some tiles within the installation to the earthing system.

Following schemes are recommended:

Layout for rooms smaller than 50 m²:

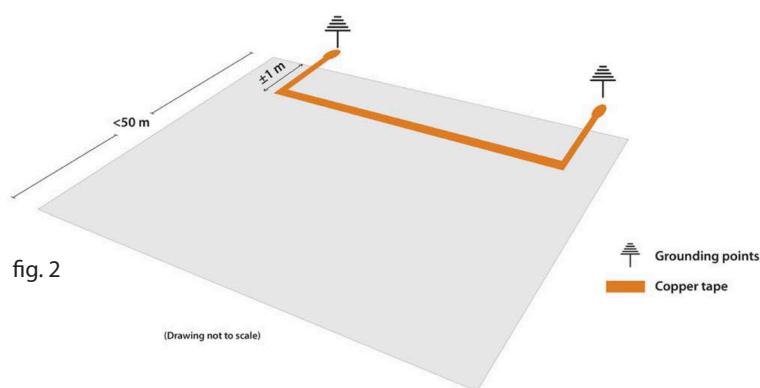
Lay a copper strip extending approximately one meter onto the subfloor allowing sufficient excess to extend up to the nearest grounding point. (see fig.1).



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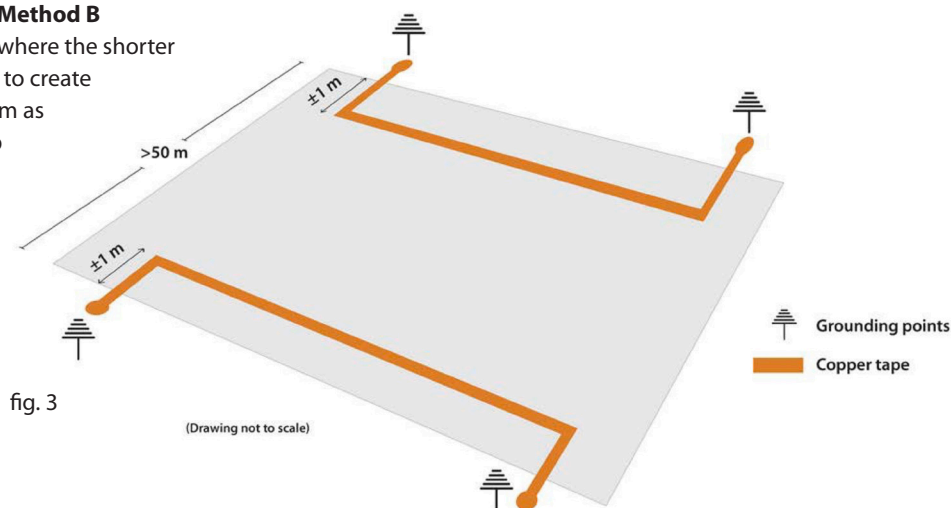
Layout for rooms larger than 50 m² - Method A

This layout is recommended for rooms where the shorter side of the room is less than 50 m. Lay the copper strip to create a circuit as shown in Figure 2. Punch all strip intersections to ensure proper contact and test the conductivity of the copper strip circuit with an appropriate testing device prior to starting installation of the tiles.

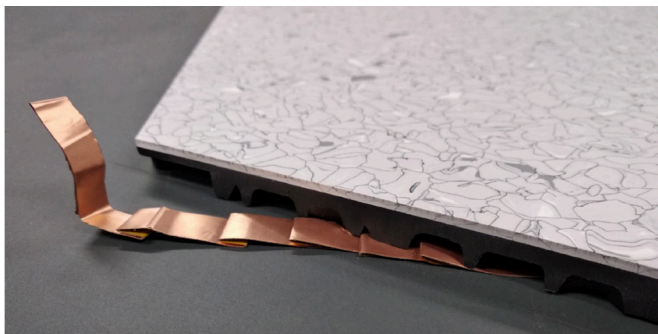


Layout for rooms larger than 50 m² - Method B

This layout is recommended for rooms where the shorter side exceeds 50 m. Lay the copper strip to create two circuits on opposite side of the room as shown in Figure 3 below. Punch all strip intersections to ensure proper contact and test the conductivity of the copper strip circuit with an appropriate testing device prior to starting installation of the tiles.



The connection to the tile can be made with a copper strip fastened with a screw or simply folded underneath the tiles to ease the contact.



General recommendations:

Before starting the installation make a floor plan (see further advice in the layout section of this guide) considering:

- Location of grounding points
- Position of the copper strips

Copper strip(s) for electrical grounding must be installed first.

Important note:

The electrical connection of the copper strips to the grounding points must always be made by a qualified electrician.

Cutting and fitting

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



Circular saw
Jigsaw
Molding machine
Router
Drilling machine
Planer

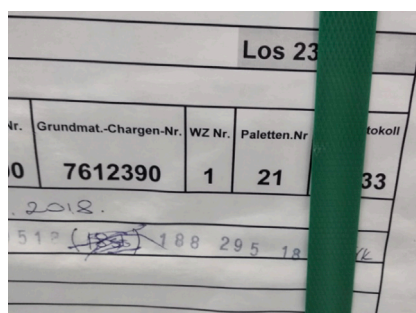
To cut precise, clean-edges, a guillotine-style cutter can be useful.

Attention must be paid to the fact that Colorex Plus – as a high density, mineral filled plastic tile – is abrasive. For reasons of service life, the use of carbide cutting devices with appropriate cutting geometries is recommended.

Special attention must be paid to the chip shape and chip drain. With appropriate cutting geometries, the chip drain (even hot chips) will not cause any problem and soiling of the tools will be avoided.

Another great advantage is that Colorex Plus allows dust-free processing (no sawdust, but chips), which can be of enormous importance in dust-sensitive working environments.

Tiles do not require shuffling prior to installation, it's advisable to lay tiles following the progressive (Palette Nr.) crate number as in the picture:

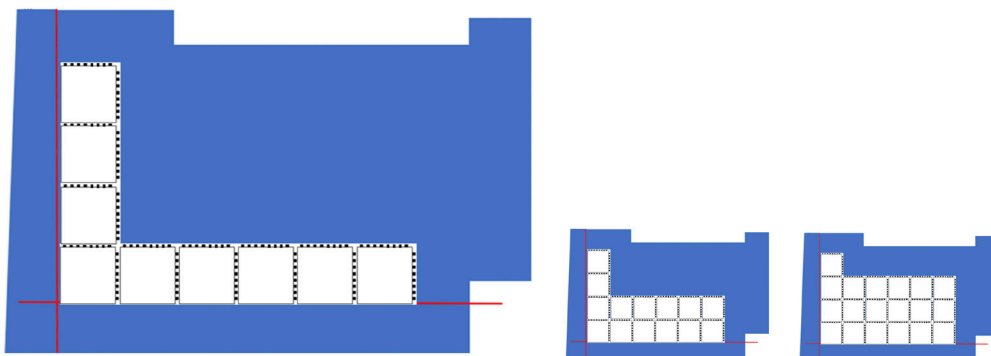


Colorex plus products are installed using following tile installation techniques. To achieve an optimal visual result, the edge tiles, where possible, should be the same size all around.

Angular deviations in the building structure can lead to considerable additional work and material losses if they are not recognized and accounted for before the installation begins.

Draw a straight line at one corner of the room at a maximum distance of 600 mm from the wall, ensuring that at least a 100 mm cut remains on the opposite side. Then another in the opposite direction perpendicular to the first, at the same distance from the wall. This allows maximum use of the material and at the same time avoids having small tile cuts along the perimeter.

Start laying colorex plus from this corner, keeping the sides with female dovetails along the lines, as in the picture using a white rubber mallet; then continue laying in parallel rows paying attention not to scratch or mark the surface of the tiles already installed with connection dovetails.



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If heavy directional forklift traffic is expected, resistance to longitudinal displacement can be increased by laying with staggered joints. In this case, the application of the welding rod will be more complex.

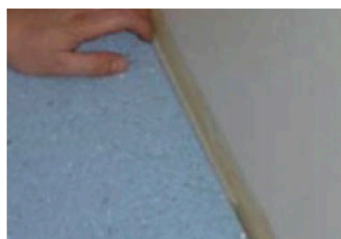


Setting out the gap to the wall

In normally air-conditioned rooms with minimal temperature fluctuations (work rooms with heating, air conditioning, etc.), a distance to the wall (movement joint) of 5 mm is sufficient for expansion.

Silicone or a flexible sealant can be used to seal the edges – the use of a foam filler cord should first be inserted to reduce sealant use.

Note: For temperature fluctuations greater than 10°C, regardless of whether for short or long periods (e.g. day/night, winter/summer), a greater distance from the wall or an expansion joint should be considered.



Foam filler cord

Trafficability during installation

The work areas can be accessed with care during the laying.

Caution: if the installed tile areas are to be used intensively during the laying work, make sure that as little dirt or debris as possible gets under the tiles.

Note: If the tiles are to be driven on during installation, the tile edge dovetails should be protected (e.g. from damage by pallet trucks). For this purpose, a strip of material fashioned to form a ramp, with the appropriate length of access point, must be attached for protection. Alternatively, a Colorex Plus access ramp is available.



Welding the joints

Colorex Plus can be hot welded with vinyl welding rods if a closed/sealed surface of the covering is required. For example, in hygiene facilities and for some heavily frequented cleanroom type areas. Cold welding with solvent welding agents is not recommended.

To get the best results when welding, it is recommended to groove Colorex Plus tiles with a deep of approximately 1.8 – 2.0 mm. It's possible to use a 5 mm thickness welding rod, in this case groove up to 2.5 mm deep.

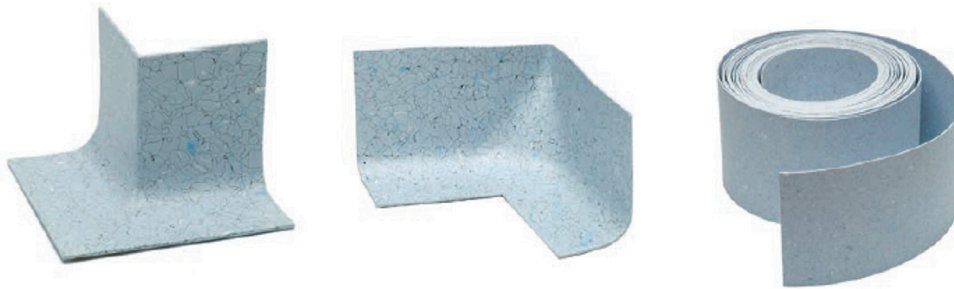
Wall connection solutions

Colorex Plus weldable cove skirting system

Colorex Plus cove skirting and tailor-made corners are made of the same surface material as Colorex tiles.

It is possible to create watertight and hygienic cove plinths with welded inside and outside corners using the pre-formed special Colorex tile cove former.

This wall connection variant is specially designed for hygienic areas.



Cove former



Welded cove former and tile

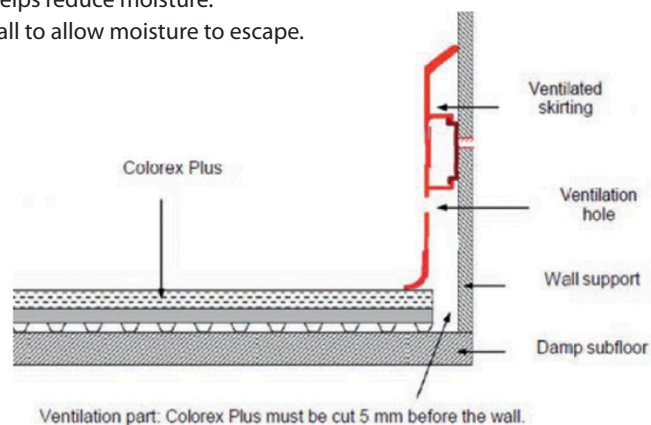
Ventilated plinth system

A special ventilated skirting is available for areas in which Colorex Plus is used to bridge residual moisture on problematic substrates.

The ventilated skirting ensures air circulation and helps reduce moisture.

Colorex Plus must be a minimum 5 mm from the wall to allow moisture to escape.

Inside and outside corners are not available.



Electrical resistance testing after installation

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

First random control measurements can be made after 48 hours.

The electrical connection of the copper strips to the grounding point(s) must always be made by a qualified electrician.

Electrical resistance readings may be higher than specified on floor covering coated with wax, acrylic emulsions etc.

Upon completion of the installation

First impressions may have more impact on the client than hours of skilled fitting.



The completed installation should be cleared of scrap material and debris, the floor swept or vacuumed, and any traces of adhesive residues removed from the floor and skirtings.

If the floor covering is to be protected from other trades or site traffic prior to project completion, a protection product should be chosen that is appropriate for the type and level of traffic likely to be experienced and the potential for impact, scratching or indentation damage.

The use of the wrong type of cleaning products and /or abrasive cleaning pads can damage the flooring.

If the optimum performance of any new floor covering is to be achieved, it is important that the correct cleaning and maintenance procedures are used from day one. Cleaning and maintenance guides for all Forbo Flooring products are available for download at: **www.forbo-flooring.com/downloads**

Important note for conductive installations: Do NOT apply any wax or emulsion floor finishes in ESD protected areas as these will adversely affect the conductive properties of the floor.

Cleaning and maintenance guides should be passed onto the main contractor, client, or end user as appropriate on completion of the installation, and before any hand over clean is started.

If in any doubt, contact us:

question@forbo.com