

Installation Guidance Note: Colorex Plus SD and EC

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.

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 fitment, 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.

Any subfloor preparation, if required, should be carried out in accordance with BS8203:2017 Code of Practice for the installation of resilient floor coverings. As required (see note below), subfloors should be clean and free of contaminants, smooth, sound and permanently dry.

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 - 5mm under a 2m straightedge (BS8203:2017 Annex C).*
- *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.*



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).

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

It is essential that the laying area is at a steady temperature of 18 to 27°C for 48 hours prior to, during, and for 24 hours after installation. The material should be conditioned in the same environment for at least 24 hours prior to the installation.

Note: *Where the floorcoverings have been stored or transported immediately prior to delivery in temperatures below 10°C the acclimatisation period should be extended to 48 hours.*

Ensure that all recommendations for substrate and site conditions are met, prior to beginning the installation.

Note: *Starting the installation is an implied acceptance of site conditions by the parties involved and liability for any failure directly related to inadequate site conditions may become the responsibility of the installation company.*



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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 roll 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 be trafficked immediately.

Underfloor heating

Colorex Plus can be used in conjunction with under-floor 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 off 48 hours prior to the floor covering installation commencing and remains off for at least 48 hours after the installation is complete.

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°C – 27°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 the industry agreed maximum of 27°C at the underside of the floor covering (the adhesive line). Failure to follow these guidelines can result in the joints opening, and on some occasions discolouring, all of which can occur within a long or short period of time.

Further information on the requirements for underfloor heated subfloors can be found in BS8203:2017.

Electrical grounding – layout and installation

Colorex EC Plus and Colorex SD Plus are designed as conductive tiles which are electrically connected to one another by their conductive back via the dovetail connection system. This means that to earth a conductive Colorex Plus floor it is only necessary to connect one tile within the installation to earth at distances appropriate to the installation and as agreed with the installer and client. As a guide, an earthing point placed every 40 lineal metres is suggested.



The connection to the tile can be made with a self-adhesive copper tape (or conventional grounding cable).

General recommendations:

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

- Location of earthing points
- Position of the copper strips

Copper strip(s) for electrical grounding must be installed first (self-adhesive copper strips are recommended). Copper tape on the subfloor should be no less than 5 metres into the area to be laid.

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



Another method of earthing is to use crimped copper tape under the tiles to ensure a good connection to the underside of the Colorex Plus tiles.



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Cutting and fitting

Tiles do not require shuffling prior to installation, but dry laying will identify best use of design.

Forbo tile products are installed using conventional tile installation techniques.

The correct starting point for setting out a tiled floor is traditionally the centre of the area - although this may not be the final starting point when tile laying begins. Some adjustment of the starting point may be required to avoid small perimeter cuts.

In order to achieve an optimal visual result, the edge tiles, where possible, should be the same size all around. For this, the first row of tiles is measured from the center of the room and marked with a chalk line. 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.

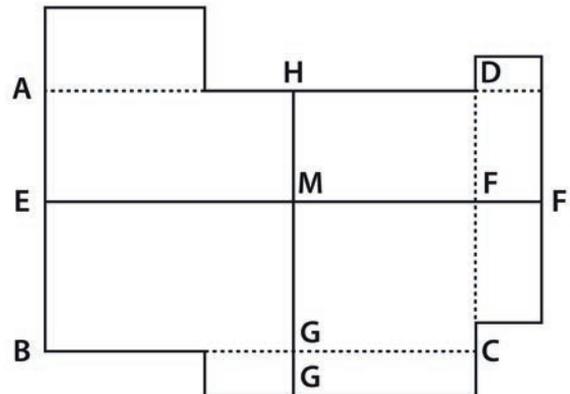
In some cases, it may be simpler to work lengthwise from one end, using the centre line as a guide.

Setting out

The centre line (for the main area) is drawn as follows:

- A chalk line is snapped from centre of wall A.
- The centre of line E-F is found (M).
- Draw a perpendicular line through M using the 3:4:5 method to establish G-H.

Starting at centre point M, measure out lengthwise and width wise to the walls. Wherever possible, cuts of less than 60mm or so should be avoided as these are more likely to come loose at some stage in the life of the installation. Adjust the position of lines E-F and G-H if necessary.



(Drawing not to scale)

Laying tiles

Begin laying tiles at the starting point, ensuring that the tile is laid exactly along the layout lines. If the first few tiles are not installed accurately, the entire installation will be affected.

The connections between the tiles are secured using a dead blow (non-rebound) hammer along the line of the connectors.

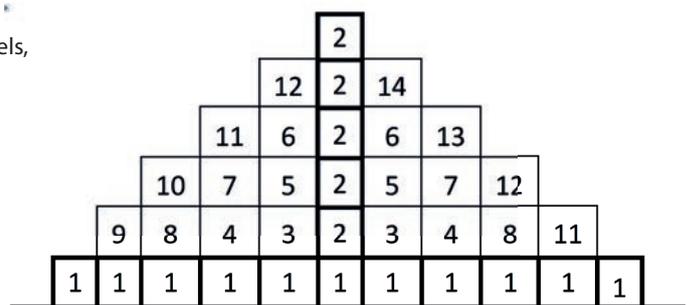
Note: In a large area, two or more fitters may be placing tiles at the same time. As pressure in placing the tiles together or variations in subfloor levelness may be slightly different, we suggest starting from a common point and work away from it to avoid tiles going out of bond.

The laying is carried out from the centre cross joint with the laying* direction should accounting for future traffic (weight, type of wheels, speed, direction of travel).

Colorex Plus can be installed using common woodworking tools (circular saw, plane, jigsaw, router with a cutting length of at least 70 cm).

Lay subsequent tiles outward from either side of the centre start line forming a pyramid as per the diagram above. Locate the corner connectors of each tile and secure the connectors using a dead blow (non-rebound) hammer. Finish the by hammering the remaining connectors on each side of the tile.

The connectors should effectively lock the tiles with reasonable force. Excessive force could adversely affect the base onto which they are being installed, which in turn could affect the long-term integrity and performance of the installed floor.





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 3-5 mm is sufficient for expansion.

Silicone or, preferably, a polyurethane 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 extruded edge is available.



Welding the joints

Colorex Plus can be hot welded if a closed/sealed surface of the covering is required. For example, in hygiene facilities and for some heavily frequented cleanroom type areas.

Note: Cold welding with solvent welding agents is not recommended.

In order to get the best results when welding, it is recommended to groove Colorex Plus tiles at a width of 4mm and approx. 2.6 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

Please refer to the separate document on cove skirting system installation.



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Cove former



Welded cove former and tile

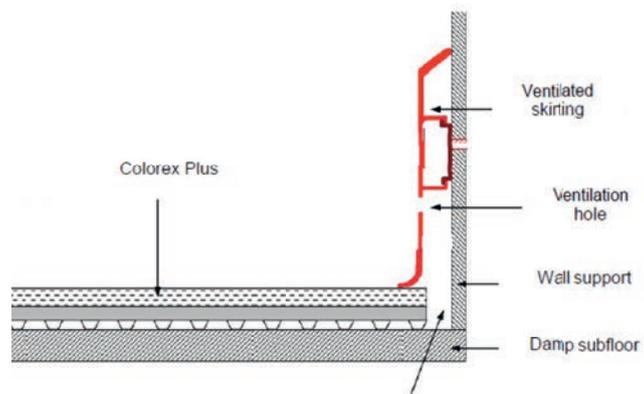
Ventilated plinth system

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 5mm from the wall to allow moisture to escape

Inside and outside corners are not available.



Ventilation part: Colorex Plus must be cut 5 mm before the wall.



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Electrical resistance testing after installation

Point-to-ground electrical resistance tests according to approved relevant standards should not be carried out earlier than 14 days after installation. First random control measurements can be made after 24 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.



On 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.

In many cases it is customary for the initial floor preparation to be left, or subcontracted, to a professional cleaning and maintenance contractor who will have the staff and equipment to do the job thoroughly.

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 products and procedures are used from day one.

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

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 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.

Cleaning and maintenance guides for all Forbo Flooring products are available for download at:
www.forbo-flooring.co.uk/downloads

If in any doubt contact us:

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Additional Reference documents and information:

- Forbo Floor Coverings Installation Guide: **www.forbo-flooring.co.uk**
- BS8203:2017
- The CFA Guide to Contract Flooring (Tel: 01159 411126)



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