Installation Guidance Note: Step safety sheet vinyl

General Advice

The appearance, performance and durability of the installed floor covering will be determined to a large extent by the quality of the prepared subfloor and the conditions in which they are laid. As with any resilient floor covering irregularities in the subfloor will be apparent in the finished flooring.

It is important to ensure that all recommendations for substrate and site 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.

Subfloor preparation should be carried out in accordance with BS8203:2017 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.

Always conduct moisture tests on ***all*** substrates. All ground-based level floors should have an effective moisture barrier.

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

Surface regularity should be within the SR1 surface regularity standard – less than 3mm under a 2m straightedge (BS8203:2017 section 6.2.3 and 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.

Contaminants can affect the adhesion of the new floor covering and/or cause migrating stains. It is therefore important that contaminants such as cleaning chemical residues, old adhesive residues and remains of old floor coverings such as residues of carpet tile backings are removed or, where permissible, isolated with an appropriate subfloor treatment.

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 and adhesive should be conditioned in the same environment for at least 24 hours prior to the installation. Where the floor coverings have been stored or transported immediately prior to delivery in temperatures below 10°C the acclimatisation period should be extended to 48 hours.

Prior to installation rolls 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.

Note: *For areas requiring a sustainable slip resistance product please visit our wetroom range –* ***Wetroom Solutions.***

Existing floors and substrates

Concrete and screeds bases:

It is important that the base is clean, dry, smooth, even and free from loose gritty particles.
It is recommended to apply a 3mm application of smoothing compound.

All ground-based level floors should have an effective damp proof membrane.

If any doubt exists a proprietary surface applied damp proof membrane (DPM) or other appropriate moisture protection system should be used (CFA Guide to Contract Flooring).

Note: *Floor slabs circa 1965 or earlier are unlikely to contain an effective integral damp-proof membrane. Old floor slabs without a DPM may provide a moisture reading below 75% if they have previously been covered with a permeable floor covering such as vinyl composition tile or carpet. Potential ground water problems may not, therefore, come to light until the base is covered with an impermeable floor covering..*

Asphalt floors:

Should be clean, sound and free from any cracks. The base should be primed (if required by the smoothing compound manufacturer) and covered with a minimum 3mm thickness of smoothing compound suitable for this type of base.

Quarry tiles or ceramic tiles:

Should be checked to ensure that there are no loose or cracked tiles, thoroughly cleaned and degreased, primed and levelled with a 3mm thickness of a suitable smoothing compound.

Note: *Old quarry tiles were often laid on subfloors without a suitable Damp-proof membrane. This should be checked prior to installation of the floor. If there is no integral DPM, or if any doubt exists, then a surface DPM must be installed.*

Expansion joints:

Floor coverings should never bridge these joints, the joints need to be brought through to the final floor finish, floor coverings should stop either side of the expansion joint.

If required a suitable expansion joint cover strip can be used to cover the joint (see expansion joint cover strips).

Existing vinyl and cork flooring:

Should be taken up and any remaining adhesive cleaned off the floor. If the old adhesive residues cannot be completely removed or if the floor covering is to be fully adhered a minimum 3mm thickness of a suitable smoothing compound should be applied in accordance with the manufacturer's recommendations.

In older properties some tiles (and adhesives) may contain asbestos. Where it is difficult to establish whether or not these materials contain asbestos, specialist advice should be sought before attempting to remove.

Note: *Attention is drawn to Asbestos and man-made mineral fibres in buildings: practical guidance, published by DETR [7], which gives advice on the precautions to be taken when removing existing flooring containing asbestos." (BS8203:2017).*

Wooden floors:

Existing Floorboards:

Loose or uneven floorboards should be secured, all protruding nail heads should be hammered flush and damaged boards replaced. Where required high spots should be sanded flush and uneven or hollow areas levelled with an appropriate smoothing compound prior to covering with plywood.

Chipboard, hardboard, Particle Board:

Forbo Step should not be directly adhered to the above substrates. Particle board subfloors and all wood panel based floating subfloors should be overlaid with Plywood.

Wood Blocks:

It is impossible to ensure that wood block floors are not loose or contain latent defects through aging.
It is therefore strongly recommended that these are removed and that the subfloor is correctly prepared and, if necessary, a surface damp proof membrane applied.

Underfloor heating

Forbo Flooring products may be installed over underfloor heated floors providing the maximum surface temperature of the substrate does not exceed 27°C under any condition of use.

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.

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.

Where embedded electric underfloor heating systems are being used their compatibility should be checked with the supplier before installing Step.

Surface applied mesh type electric underfloor heating systems should be covered with a layer of smoothing/levelling compound. The manufacturer of the smoothing compound should be consulted for advice on suitable products and recommendations for the minimum application thickness.

Note: *These systems should never be placed directly under the finished floor covering.*

If necessary, an alternate heating source should be used to maintain the room temperature at a minimum of 18°C prior to, during, and for 72 hours after installation.

The temperature of the underfloor heating system can be increased 72 hours following the installation. When raising the floor temperature, do so gradually so the substrate and flooring material can adapt to the temperature change together.

Note: *Care should be taken when placing rugs or items of furniture (that do not allow hot air circulation) onto underfloor heated floors. Placing these item types onto the underfloor heated floor can create hot spots and thermal blocks, resulting in damage to your Step floor.*

Adhesive recommendations

The recommend adhesive is Eurocol 640 Eurostar Special a low emission EC1 Adhesive. Use a 1.5mm x 5mm V notched trowel to apply the adhesive.

Note: *Trowels will wear during use, check the trowel both before and during use to ensure that the proper, specified trowel notch is used and maintained.*

The open time of the adhesive will depend on site conditions and porosity of the base. It is best practice to conduct an adhesive bond test before starting the installation. Bond testing will assist in identifying both the working characteristics of the adhesive (waiting and working time) for the site conditions, and any potential bonding problems. For a more porous subfloor the use of a primer may be needed, such as our Eurocol 044 Europrimer Multi.

Note: *The adhesive must be spread evenly over the entire floor area with particular attention to edges – this will ensure that the sheet is fully bonded at the perimeters.*

If alternative supplier adhesives and primers are to be used consult with the supplier for usage information, guidance and warranty.

Installation

Direction of laying

The following installation advice should be followed in relation to direction of sheet laying.

All over/Uni designs; Surestep - Original, Star, Steel, Material, Laguna,
Safestep – R11, R12, Aqua

Reverse installation of alternate sheet lengths is required.

Directional designs: Surestep – Wood

Sheet lengths should be installed in the same direction. A separate guidance document is available for seaming of Forbo Surestep and Eternal wood design commercial vinyl.

The recommended installation direction for each design is also confirmed in the product brochures and packaging and printed on the underside of each roll.

Coved Skirtings

Step can be used in conjunction with standard PVC set in coved skirtings or site formed using standard techniques with a 20mm or 35mm radius cove former.

If site formed coving is being used with Surestep Wood designs, the optimum visual effect will be achieved by laying with a border cove either in the same design with the plank lengths running parallel to the wall around the perimeter of the room or with a contrasting uni colour/all over design.

Installation

Always check the recommend direction of laying before cutting sheet length (see "Direction of laying above).

Cut the sheet material to the required lengths and then back roll each cut length before cutting to fit in order to release any roll tension from the winding of the sheet (see below).

Back rolling

Sheet vinyl products are tightly rolled in the factory. The tension caused by this process will mean that the goods will shrink a little in the length when unrolled. It is recommended to reduce the effect of shrinkage by re-rolling the cut lengths of sheet back on themselves and allowing to stand in this state for 15 minutes prior to unrolling again and commencing fitting.

It is recommended that the roll lengths are rolled out and laid out flat in the installation area to acclimatise for 24 hours at a minimum temperature of 18˚C prior to commencing fitting the sheet.

Cutting and fitting

Each sheet be should be scribed to fit and the factory edge removed before cutting the seam. Seams should be overlapped and under-scribed or cut with a seam cutter to form a close butt joint. See below.

Scribe the long side of the sheet to the wall first. Place the sheet back against the wall. With the sheet fitted correctly in position along the length, and the ends riding up the end walls, trim the factory edge on the opposite side of the sheet using a seam cutter or by striking a chalk line and cutting through the sheet following this line with a straight and utility knife.

Trace the line of the trimmed edge onto the subfloor with a pencil. This line acts as a guide line.

Place a ruler or straight edge, at right angles to the sheet. Across the edge of the sheet draw a cross check on both material and subfloor (Fig. 1). Fold one end of the sheet back on itself, pull the other end clear by about 25mm from the wall (fig.2). Position the sheet to lie flat on the floor, with the edge true to the guide line (B). Set the bar scriber at the distance that the cross check has opened up (fig. 3).

Tip: As an alternative to pulling the sheet length back, the roll core may be placed under the sheet to create the necessary gap between the sheet end and the wall. This will also help to prevent creasing the sheet during when pulled back.

Keep the scriber parallel to the guide line and scribe the end of the sheet (fig.4). Cut the material along the scribe line. Check fit to the wall, with the aid of the cross checks and the guide line.

Scribe and cut the other end of the sheet using the same method.

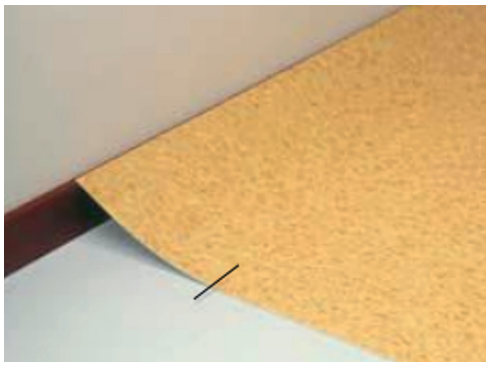


Fig. 1

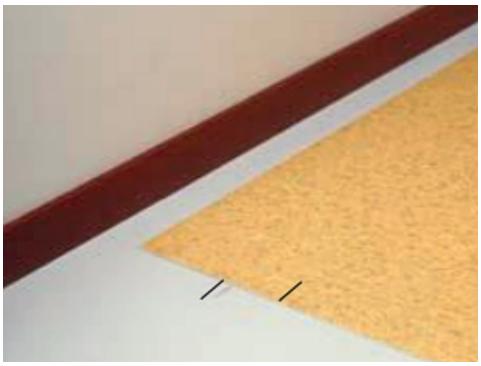


Fig. 2

Fig. 3

Fig. 4

Fitting long lengths

During the manufacture of sheet vinyls the material is stretched slightly in the length. Often the first opportunity it has to relax fully is when it is unrolled, scribed and folded back for the spreading of the adhesive.

If the length being fitted is a long one, this relaxation can be significant enough for slight shrinkage to occur, leaving the fitted end a little short of the wall once folded down again into the adhesive.

To avoid this, scribe and fit one end of the sheet and then stick all but the last 1½ to 2 metres at the other end before scribing and fitting this end. Any relaxation during the folding back of such a short length will not be significant. The full length must be stuck and rolled while the adhesive is still active.

Lay the next sheet alongside the first fitted sheet with the sheet ends lapping up the wall and the edge of the sheet overlapping the previously fitted sheet by approximately 2cm. Trim the factory edge of the opposite side of this sheet as above and trace the line of the trimmed edge onto the subfloor with a pencil.

Scribe and cut each end of this length as for the first sheet.

Cut the seam using a seam cutter or under scriber to form a close butted seam.

Repeat this process for each subsequent sheet length. The final length which abuts the opposite wall should be cut and fitted using the method described for the first length.

Note: *factory edges should always be trimmed to form a true edge for seaming .*

Always clean away excess adhesive with a damp cloth before it is allowed to dry.

Pull back the sheet length to approximately half way.

Placing the roll core on the sheet at the point of the fold to support the material whilst folded back will help to prevent creasing the sheet whilst spreading the adhesive.

Spread the adhesive using the appropriate notched trowel ensuring that the correct trowel notch in maintained throughout the installation – see adhesive guidance above.

Lay the sheet into the adhesive after the appropriate waiting time and roll afterwards with a 68kg roller, rolling in all directions to ensure a firm bond. It is important to only spread sufficient adhesive that can be covered within the open time of the adhesive.

Areas that cannot be rolled with the large roller e.g. abutments such as door frames or skirting boards should be rolled with a hand roller or pressed into the adhesive with a rubbing hammer.

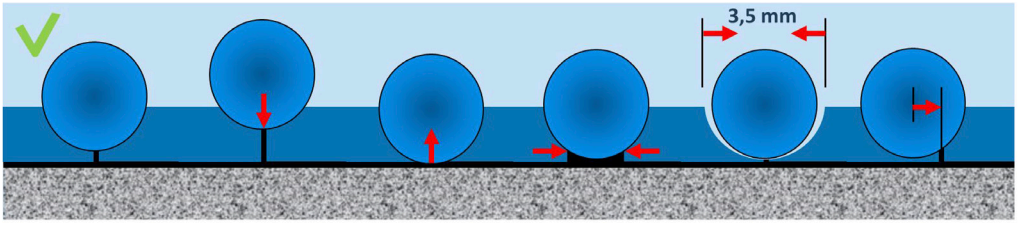
Note: *Ensure that the sheet does not move during this process and that the close butt seams are maintained when placing the vinyl sheet into the adhesive.*

Always clean away excess adhesive with a damp cloth before it is allowed to dry.

Note: *All seams should be hot welded with matching weld cable.*

Seam forming and grooving

Seams should be grooved to a depth of approximately 2/3rds of the material thickness. A diamond groover is recommended for manual grooving of seams, however, automatic or power groovers may be more productive on larger installations.



proper depth groove centered	groove too shallow	groove too deep	seam gapped too wide	seam grooved too wide	groove not centered
Optimum strength weld	May "blow out" Weak weld	Hard to weld Weak weld	Hard to weld Weak weld	Hard to weld Weak weld	Weak weld

Welding

Switch on the hot air gun and allow 5 to 7 minutes for it to reach the selected temperature. Step should be welded at a temperature of approximately 450°C. (see weld gun manual for setting details). Fit the welding nozzle before switching on the hot air gun.

If the gun is resting on the floor ensure that the nozzle is not directed at the floor or anywhere dangerous.

Weld guns will vary, so it is always advisable to practice weld techniques first on a piece of waste material to match the correct air gun temperature with welding speed. Step should be welded with a 5mm Speedweld nozzle.

Make sure the groove is thoroughly cleaned before beginning to heat weld. Make sure that all electrical cables are laid out without tangles and that there are no obstructions along the seam to be welded.

Cut the welding cable to a consistent and generous length or unwind sufficient weld rod from the reel and put the reel in a position where you are working towards it. Have the power cable ahead of you if possible.

Start at a wall. Thread the cable through and weld moving backwards, away from the wall, maintaining a slight downward pressure so that the weld nozzle will force the weld cable into the groove. Do not let the cable melt in the nozzle.

A good weld is obtained by the correct combination of temperature, speed and downward pressure. The weld cable should be allowed to melt enough so that the melted rod reaches the bottom of the groove.

Trimming

Note: *To avoid unintended damage to the floor covering Forbo recommends to use the Mozart knife for trimming the weld cable. If a sharp spatula is being used special care should be given to avoid damaging the sides of the seams.*

While the cable is still warm trim off most of the top half of the cable down to approximately 0.5mm using a Mozart knife which fits over the cable or a sharp spatula and slide. This enables the cable to cool more quickly and enables a quick first cut to be made without risk of gouging the material.

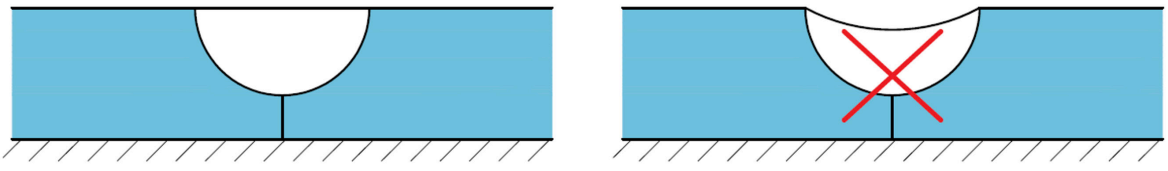
The welding cable will dish slightly (concave downwards) as it cools. Wait until the material is completely cool before trimming flush with the surface of the sheet with a Mozart knife or sharp spatula angled slightly across the line of cut.

Motzart knife

Spatula

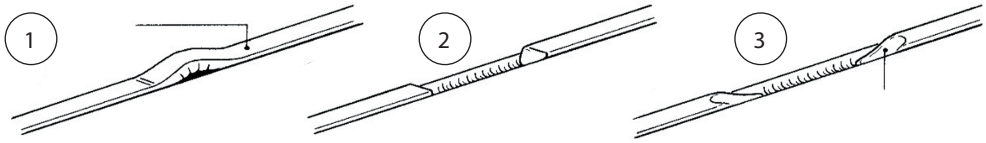
Slide

Note: *Making the final trim while the welding rod and material is still warm can result in the weld cable dishing of the weld cable. This may result in subsequent seam soiling problems or cause permanent damage to the surface of the flooring.*



Joining up a weld

To join a weld in the middle of a seam trim off the loose ends and chamfer down the section to be overlapped with a hand groover. Ensure hot air gets into the groove and heats the cable. As the gun travels over the un-welded section apply pressure and carry the weld on over the section to be joined. Allow to cool and trim as normal.



Perimeter sealing

In areas subject to wet spillages or cleaning methods the following advice should be followed:

Where the floor covering is flat laid without coved skirtings the perimeter edges should be sealed with a suitable waterproof and mould resistant flexible sealant. This should also be applied at abutments such as architraves together with any areas where pipes, etc. come up through the floor covering.

Wet rooms

An additional guidance document is available for the installation of Step products in wet rooms. = **Wetroom Solutions**

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 if fully adhered, any traces of adhesive residues removed from the floor and skirtings.

If the floor covering is to be protected from other trades or 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.

Gliders suitable for hard floors should be fitted to moveable furniture. Office chairs and other items of rolling furniture should be fitted with Type W castors.

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 on the website. **www.forbo-flooring.co.uk/downloads**

Cleaning and maintenance guides should be passed onto the 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:

Forbo Flooring UK Ltd
Tel: **0800 121 4780**
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Info.flooring.uk@forbo.com
www.forbo-flooring.co.uk

Additional Reference documents and information:

- Forbo Floor Coverings Installation Guide: **www.forbo-flooring.co.uk**
- BS8203:2017
- The CFA Guide to Contract Flooring **www.cfa.org.uk**

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