

Installation Guidance Note: Modul'up compact and decibel adhesive free sheet vinyl

General Advice

Modul'up is a loose lay PVC sheet floor covering that does not require an adhesive. A double-sided plasticiser resistant contact adhesive should be used to support all seams/joints/transitions between sheets, and cross joints (see general installation guidance below).

As with any floor covering, 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.

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, smooth and sound, further information of acceptable substrate below.

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.

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.

Note: *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.

Underfloor heating

Modul'up sheet 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. Failure to follow these guidelines can result in the floor 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.



Acceptable substrates

Modul'up may be installed on the following substrates:

- New or existing concrete or cement screed substrate (up to 92% rH)
- New or existing wood panel or particle board substrates
- Old ceramics tiles
- Old in-situ floor finishes (resin) at least 2mm thick- old floor paint
- Old compact resilient floor coverings (semi-flexible tiles, vinyl asbestos tiles, sheet vinyl flooring and linoleum). - Existing wood block floors (on upper floors only).
- Raised Access floors (subject to the conditions below).

For any subfloor not listed above or if any doubt exists, contact Forbo Flooring Technical Services.

Note: Where previously installed floor coverings have been stripped from an existing substrate, the substrate must be prepared to receive new Modul'up in accordance with BS8203:2017.

Concrete slabs or cementitious screeds: New and existing ground floor slabs must be cast on a damp-proof membrane in accordance with the requirements of BS8204. If an effective damp proof membrane is not present or any doubt exists, a surface damp proof membrane should be applied.

The maximum tolerance in terms of flatness and evenness of the substrate is a 5mm deviation under a 2m Straight edge (measured by moving the straight edge in all directions across the substrate) and 1mm under a 20cm straight edge.

Modul'up can be laid on substrates with cracks less than 1mm wide, provided that the difference in level is not more than 1mm. For cracks that do not meet these criteria contact Forbo flooring for further guidance.

Structural movement joints should not be bridged by any part of the installed flooring system and suitable proprietary movement joints should be used.

Where required, smoothing and levelling compounds rated for heavy traffic areas (if necessary) should be applied to the screeds and slabs. Smoothing compounds are not required for clean, sound and smooth concrete surfaces, provided that they satisfy flatness tolerances stated above.

If a smoothing compound is not being applied, the surface of the slab/screed a suitable primer should be applied to keep the subfloor dust free.

Wood panel substrates (tongue-and-groove boards) – plywood or particle board floors should be prepared in accordance with BS8203:2017.

Old ceramics tiles: laid on a concrete or cement screed substrate in sound condition, soundly adhered to the bedding screed (sealed ceramics tiles) or substrate (adhesive-bonded ceramics tiles) require no further treatment where differences in level are less than 1mm and/or grout width is less than 4mm. Small localised differences in level between 1mm and 2mm between tiles may be repaired with a suitable smoothing/levelling compound.

Where there is a difference in level greater than 1mm or where grouting is wider than 4mm, a general heavy duty-rated self-smooth/levelling compound suitable for the room's intended purpose should be applied across the entire surface area.

Existing in-situ resin floor finish: the old finish must be sound and fully bonded and at least 2 mm thick. If flatness, cleanliness and bond requirements are not satisfied, the old in-situ floor finish must be removed, and the subfloor prepared in accordance with BS8203:2017.

Floor paint: The substrate should be clean and sound. Sanding is not necessary if the paint is sound.

Old flexible floor coverings: semi-flexible asbestos free or compact vinyl tiles or compact linoleum. Before installation check the condition of the existing floor covering to ensure that it is well bonded to the base. Ensure that any loose or damaged sections of the floor coverings are removed and repaired. If an underfloor heating system has been installed, old flexible floor coverings must always be removed.



FLOORING SYSTEMS

Semi-flexible tiles containing asbestos: before installation, check the condition of the existing floor covering to ensure that it is well bonded to the base and any loose or damaged sections of the floor coverings are removed and repaired. If any tiles are removed this should be carried out in accordance with HSE regulations and guidance and any waste materials disposed of in accordance with current applicable legislation.

As a precautionary measure, care must be taken to not cut into the old asbestos products (floor or wall) when cutting and trimming the new floor covering. Best practice is therefore to make all cuts with a hooked blade.

Note: Modul'up can only be laid on a substrate that has previously received only a single layer of floor covering. The rating of the old floor covering must satisfy the new rating required, particularly if the room is to be used for a different purpose.

Existing wood block floors: Modul'up may be installed on existing wood block floors except for wood blocks laid at ground floor level. Blocks should be securely bonded to the base, smooth, even and free of any oil or wax based finishes. If necessary, the blocks should be sanded to remove any contaminants and/or unevenness between the blocks. If any doubt exists, contact Forbo Flooring Technical Services for advice.

Raised access floors: Floor panels must be securely fixed with a maximum height difference between adjacent panels of 1mm. Gaps between panel edges should not exceed 3mm. (there is a potential of grin through of the RAF on a compact sheet material)

Installation

Direction of laying

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



All over/Uni designs:

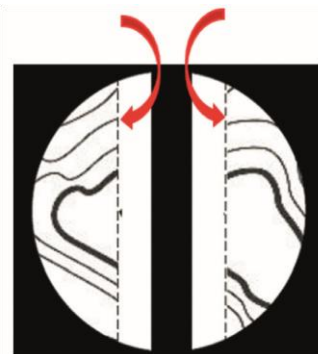
Reverse installation of alternate sheet lengths is required.

Directional designs:

Sheet lengths should be installed in the same direction.

The recommended installation direction for each design is also confirmed in the product brochures and packaging.

Wood and patterned designs incorporate a selvedge on each side of the roll to allow for trimming and pattern matching. Factory edges should **never** be laid together as the width of the planks on each side of the sheet will be larger than the rest of the design. The welded seam in plank designs should form the joint line of the plank.



General Installation guidance

Modul'up is installed loose laid using standard installation techniques. Seams are supported with a double sided plasticiser resistant contact adhesive tape for welding**.

Note: ** "F377 supertac contact tape" is the recommended tape. This tape can be purchased directly from Forbo along with the Modul'up material.

Note: *It is also acceptable to use a double sided plasticiser resistant contact adhesive tape 85mm minimum wide tape to support seams for welding.*

Always check the recommended direction of laying before cutting sheet length (see above).

Cut the sheet material to the required lengths allowing an overlap of 1 to 2cm for cutting of seams.

It is recommended that the roll lengths are rolled out and laid out flat in the installation area the day before installation to allow the product to settle.

There is no maximum limit for the floor area that can be laid but structural movement joints should not be covered with any part of the Modul'up system and a proprietary movement joint should be used.

Cross seams should be formed and cut in the same manner as for side seams.

A suitable cover strip should be used at door thresholds.

NOTE: For heritage installations it is recommended to use Modul'up single sided tape for these types of installations. Please contact UK Technical services for further information.

Cutting and fitting

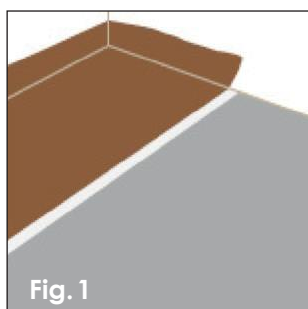
Each sheet should be carefully scribed to fit, and the factory edge removed before cutting the seam. Seams should be overlapped and cut or under-scribed or cut with a seam cutter to form a close butt joint.

Note: *Do not cut the sheet too tightly to the walls. The sheet should be cut leaving a gap of 1mm at the perimeter of the room or any items of fixed furniture.*

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 (1 to 2cm) using a seam cutter or by striking a chalk line and cutting through the sheet following this line with a straight edge and utility knife. Scribe the sheet end to the walls.

Lay a strip of a double sided plasticiser resistant contact adhesive 85mm minimum wide tape facing the subfloor so that it lies equally either side of the seam (see fig.1).



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 1 - 2cm. Trim the factory edge of the opposite side of this sheet as above and apply a strip of a double sided plasticiser resistant contact adhesive 85mm minimum wide tape under the line of the seam.

Scribe and cut each end of this length as for the first sheet. Cut the seam to form a close butted seam as above.

Note: *Use a hook blade when making the final cut for seams to avoid damaging the adhesive tape, or when making any cut over vinyl asbestos tiles.*

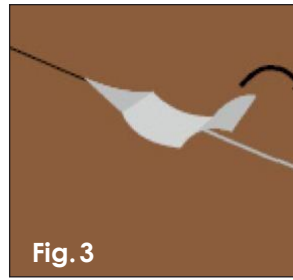
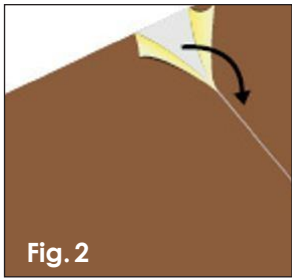
Repeat this process for each subsequent sheet length. The final length which abuts the opposite wall should be cut and fitted using the method described for the first length.

Note: *it is best practice that factory edges are always be trimmed to form a true edge for seaming.*

Once all the sheets have been cut ready for welding, lift the sheet ends at each seam to reveal the adhesive tape. Peel away the protective film, keeping the protective tape as close to the floor as possible (see figs. 2 and 3). Allow the floor covering to fall back into place along the seams and smooth out by hand along the seam as the protective tape is removed. Once completed press the sheet into the adhesive tape with a rubbing board to ensure optimum adherence of the floor covering to the tape.

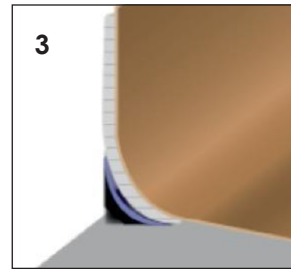
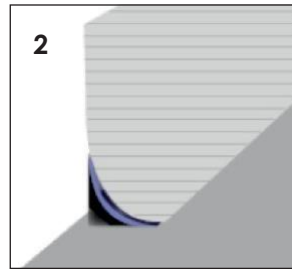
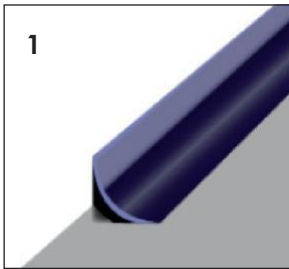


FLOORING SYSTEMS



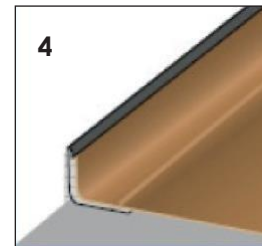
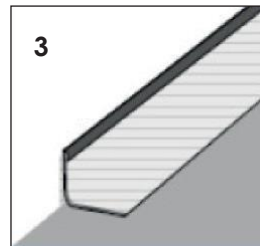
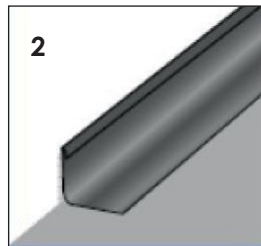
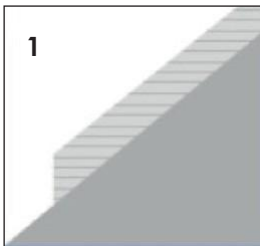
Coved Skirtings

Modul'up can be used in conjunction site formed coved using standard techniques with a cove former (see below).



The cove former should be adhered using a suitable plasticiser resistant double sided tape system. The Modul'up sheet should adhere to the wall and the cover former using the same double sided tape system.

As an alternative to the above a cap and cove skirting may be used. This system is particularly recommended where Modul'up is being installed over vinyl asbestos tiles (see below).

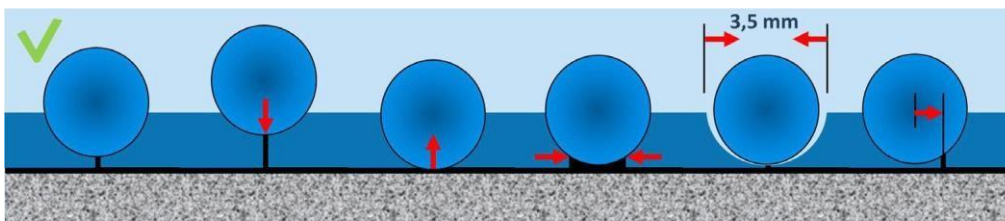


When Modul'up is being coved, the skirting should be adhered to the wall only using a suitable plasticiser resistant double sided tape system.

Note: If site formed coving is being used with 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 using a contrasting uni colour /all over design.

Seam forming and grooving

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



**proper depth
groove centered**
Optimum
strength weld

**groove
too shallow**
May "blow out"
Weak weld

**groove
too deep**
Hard to weld
Weak weld

**seam gapped
too wide**
Hard to weld
Weak weld

**seam grooved
too wide**
Hard to weld
Weak weld

**groove
not centered**
Weak weld



FLOORING SYSTEMS

Welding

Switch on the hot air gun and allow 5 to 7 minutes for it to reach the selected temperature. Modul'up should be welded at a temperature of approximately 450C. (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. Sphera 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.

NOTE: On detailed pattern and wood designs, for a seamless visual cold welding is possible with Modul'up adhesive free sheet using Forbo Cold weld.

Trimming

While the cable is still warm trim off most of the top half of the cable down to approximately 0.5mm using a sharp spatula and slide or Mozart knife which fits over the cable. 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 sharp spatula angled slightly across the line of cut or Mozart knife.



Spatula



Slide

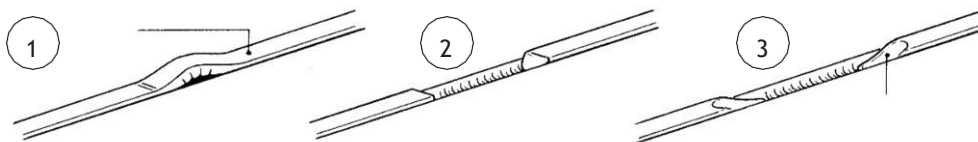


Mozart knife

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

NOTE: It is not recommended to seal when installing over a damp subfloor or installation that don't have an effective damp proof membrane.

NOTE: Do not install the sheet with tape to all four sides of the room, tape is only required on joins, doorways and transitions



FLOORING SYSTEMS

Skirtings when the substrate does not contain a DPM

Modul'up with ventilated skirtings is a complete and sustainable solution to prevent subfloor moisture accumulating at the periphery of the room and transmitted into the wall.

Note: a 5 to 10mm gap should be maintained between the edge of the floor covering and the wall.

As an alternative to the above, ventilated wooden skirtings may be fabricated from marine grade plywood (or similar) and grooved on the back. The thickness should be 10 mm with routed channels 10 to 15 mm wide at a spacing of 1 or 2 every 50 cm.



Note: Make sure there is no adhesive in the skirting channels that can prevent ventilation.

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.

Modul'up is occupancy ready immediately after installation.

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.

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 Step products are available for download at: www.forbo-flooring.co.uk/vinyldownloads.

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:

Forbo Flooring UK Ltd

Tel: 0800 0282 162

Fax: 01772 646912

Samples: 0800 731 2369 Info.flooring.uk@forbo.com

www.forbo-flooring.co.uk

Additional Reference documents/Information

Forbo Floor Coverings Installation Guide. (Tel: 0800 731 2369)

BS8203:2017

The CFA Guide to Contract Flooring

(Tel: 01159 411126)