

Installation Guidance Note: Modul'up

General Advice

Modul'up is a loose lay pvc sheet floor covering that does not require an adhesive. Modul'up single sided adhesive tape should be used to support all seams and joints between sheets, and cross joints (see Cutting and Fitting guidance below).

As with any floor covering, 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 Modul'up should be carried out in accordance with the National 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, even 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.

It is essential that the laying area is at a steady temperature of minimum 18°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 floorcoverings 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.

Acceptable substrates

Modul'up may be installed on the following substrates (subject to the conditions in this guide):

- New or existing concrete or cement screed substrate
- New or existing wood panel or particle board substrates
- Old ceramics tiles : laid on a sound concrete or cement screed substrate, 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 1 mm and/or grout width is less than 3 mm. Small localised differences in level between 1 mm and 2 mm between tiles may be repaired with a suitable smoothing/levelling compound.
- Old in-situ floor finishes (resin) at least 2 mm thick : 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 the national code of practice.
- Old floor paint : The substrate should be clean and sound. Sanding is not necessary if the paint is sound.
- Old compact resilient floor coverings (semi-flexible tiles, VCT, sheet vinyl flooring and 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 floorcoverings are removed and repaired. If an underfloor heating system has been installed, old flexible floor coverings must always be removed.



- Existing wood block floors (on upper floors only) : 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.

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

Unacceptable substrates

- Acoustic floor coverings in general, including cushioned PVC and acoustic linoleum floor finishes must be removed, and the subfloor prepared in accordance with the National code of Practice.
- Raised access floors: Uneven panels and joints between panels will telegraph through to the finished floor covering so installation over raised access floors is not recommended.
- Textile floor finishes: textile floor finishes must be removed, and the subfloor prepared in accordance with the National code of Practice.

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

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 1 mm wide, provided that the difference in level is not more than 1 mm. For cracks that do not meet these criteria contact Forbo flooring for further guidance.

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

Where required, smoothing and levelling compounds rated for heavy traffic areas should be applied to 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 to the surface of the slab/screed a suitable primer should be applied to keep the subfloor dust free.

Where there is a difference in level greater than 1 mm or where grouting is wider than 3mm, a general heavy duty self-smoothing/levelling compound suitable for the room's intended purpose should be applied across the entire surface area.

Underfloor heating

Modul'up can be used in conjunction with under-floor heating systems. It is imperative that the underfloor heating systems have been commissioned and found to be functioning correctly prior to the floor finish being installed.

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. To enable a secure bond of the adhesive to the substrate, the underfloor heating system should be turned off, or set to the lowest temperature, for a minimum of 48 hours prior to installation of the Forbo flooring material. The temperature of the substrate must not exceed 18 °C during the installation of the flooring material. 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. A rapid temperature change could result in bonding problems.

Rolling Loads

In areas subject to rolling loads, for example hospital beds, heavy trolleys or pallet trucks the compact version is recommended.

Resistance to rolling loads will be higher with the acoustic floor coverings and as such Modul'up 19dB is not recommended for areas with heavy rolling loads.



Installation

Direction of laying

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



All over/Uni designs: Linea, Cement, Terra, Concrete/Resin
Reverse installation of alternate sheet lengths is required.



Directional designs: Wood – Oak and Rustic Oak
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 and printed on the underside of each roll.

General

Modul'up is installed loose laid using standard installation techniques. Seams are supported with Modul'up 100mm wide single sided adhesive (Forbo ref 792) tape for welding.

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

Cut the sheet material to the required lengths with an allowance of approximately 10cm for fitting at each end.

It is recommended that the cut lengths are 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 with Modul'up tape used under the seams.

A suitable cover strip should be used at door thresholds.

All seams should be welded. Hot welding is recommended in commercial installations although cold (solvent) welding may be used in some cases, see further advice on cold welding options later in this guide.

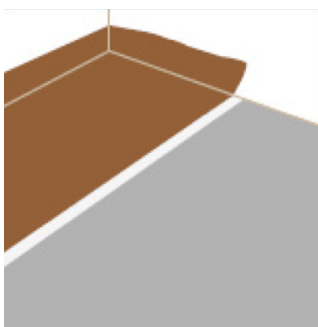
Cutting and fitting

Regardless of the welding system being used it is best practice that factory edges are always be trimmed to form a true edge for seaming. Modul'up is manufactured with up to 2cm selvedge on each side of the roll to allow for trimming.

It is recommended that each sheet should be scribed to fit and the factory edges removed when cutting the seam. Seams should be overlapped and cut, under-scribed or cut with a seam cutter to form a close butt joint.

Note: The factory edges on each side of wood designs should be cut as above to ensure that the planks on each side of the seam are the same width.

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 (approx. 10cm), 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 ends to the walls.



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 including all abutments such as architraves and any items of fixed furniture.

Lay a strip of Modul'up single side adhesive tape with the non-slip side (without the protective film) facing the subfloor so that it lies equally either side of the seam (see fig.1).

Fig.1



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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.

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

Note: use a hook blade when making the final cut for seams to avoid damaging the Modul'up adhesive tape, and when making any cut over vinyl asbestos tiles.

Repeat this process for each subsequent sheet length using Modul'up tape equally spaced under each seam.

The final length which abuts the opposite wall should be cut and fitted using the method described for the first length.

Once all the sheets have been cut ready for welding, lift the sheet ends at each seam to reveal the Modul'up 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.

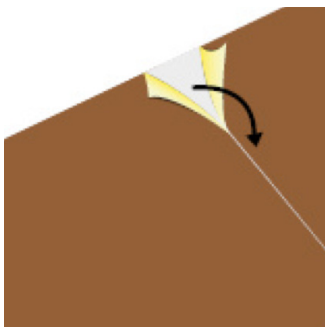


Fig.2

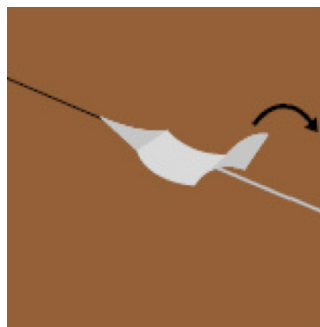
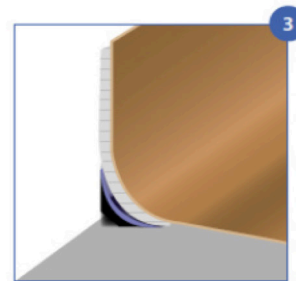
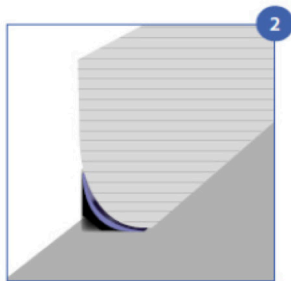
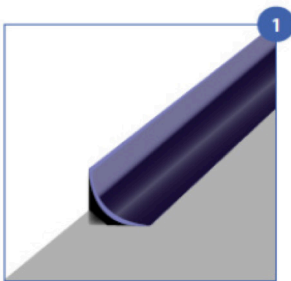


Fig.3

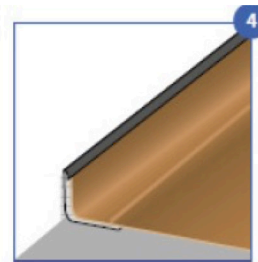
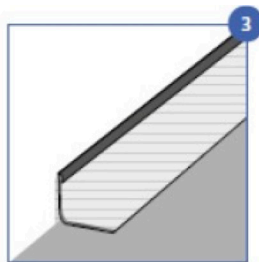
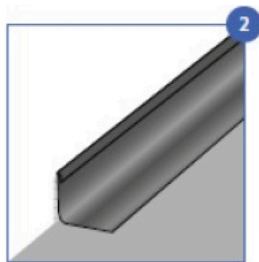
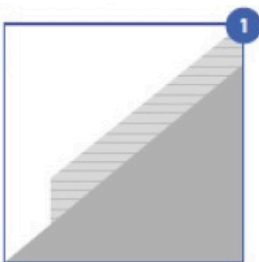
Coved Skirtings

Modul'up can be installed with site formed coved skirting using standard techniques with a 35mm radius cove former (see below).



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

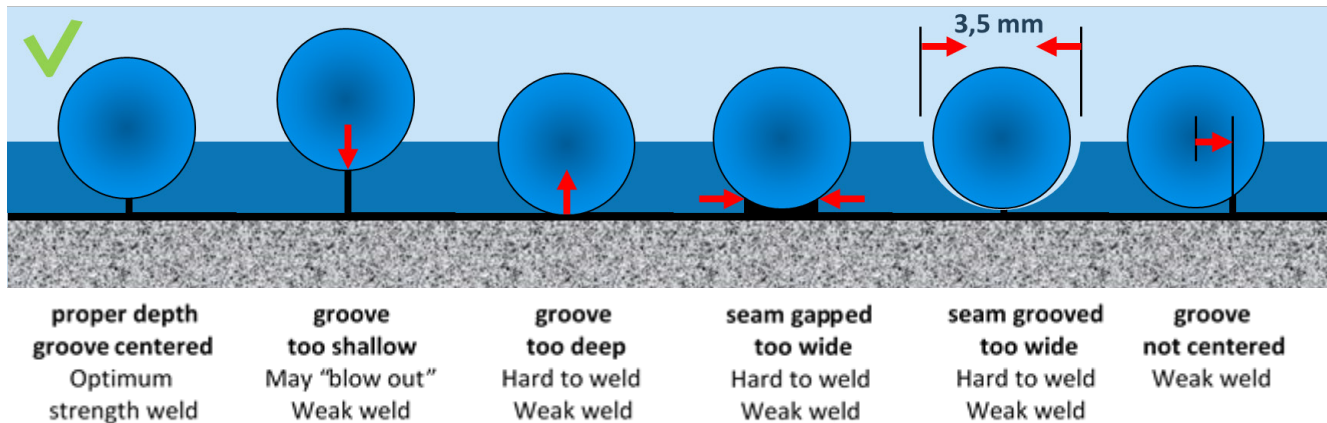
The Modul'up complete skirting should be adhered to the wall only using a suitable plasticiser resistant double-sided tape system. The Modul'up sheet should be adhered to the skirting using the same double-sided tape system (see below).



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. The border should be at least 10cm wide at floor level with the welded seam supported with Modul'up tape.

Seam forming and grooving

Seams should be grooved to a depth of approximately 2/3rds of the material thickness but no more than 2mm for 19dB products. A 'P' Type groover is recommended for manual grooving of seams, however, automatic or power groovers may be more productive on larger installations.



Hot 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 450°C. (see weld gun manual for setting details). Fit the welding nozzle before switching on the hot air gun.

Modul'up should be welded with a 5mm Speedweld nozzle.

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.

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 a sharp spatula angled slightly across the line of cut.



Slide

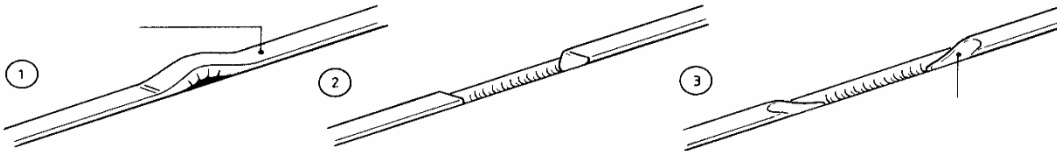


Mozart knife

Note: Making the final trim while the welding rod and material is still warm can result in 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.



Cold welding

Modul'up Compact Cement, Terra, Concrete/Resin may be cold welded using Forbo Noviweld 671 as an alternative to hot welding in smaller installations with few seams and moderate commercial use. Heavy commercial usage areas such as schools and hospitals and wet areas should always be hot welded.

Note: Modul'up wood (Compact and 19dB) and all other 19dB acoustic designs should always be hot welded.

A separate guidance note on the use and application of Noviweld 671 can be found on the Modul'up downloads page at:

Perimeter sealing

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 floorcovering.

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 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 products are available for download at:

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:



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