



INSTALLATION GUIDES FOR RAIL

creating better environments



FLOORING SYSTEMS

INSTALLATION GUIDES FOR RAIL

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coral® FR ENTRANCE FLOORING SYSTEMS & BROADLOOM CARPET

(Classic FR/Brush FR/Duo FR/Welcome FR/
Coral Move FR/Coral Move Vision FR)

Here you'll find guidelines for the:

- A. Fully adhered installation method
- B. Pro-Fit installation method

A. FULLY ADHERED INSTALLATION METHOD

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.

Sub-floor Preparation

Subfloors should be flat, tear free, permanently dry, clean and free of grease, glue residues, dust and dirt. Any unevenness in the subfloor will be visible once the product is installed.

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

General installation instructions:

The minimum temperature of the subfloor, the environment and the installation products must be at a minimum of 15 degrees Celsius.

Floor covering products should be conditioned in the same environment as the installation for at least 24 hours prior to the installation.

Note: adhesive coverage rates will be reduced on very porous subfloors such as plywood.

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.

Rolls should be checked to ensure that the correct, colour/design and quantity have been received and are in good condition. No claim will be accepted for incorrect colour, pattern or obvious damage if the product has been installed.

Coral FR products have a pile lean, this means that all rolls must be laid in the same direction for a good result. The arrow on the back indicates this direction.

Avoid seams in the walkway, rather a seam to the left and right of the walkway than in the middle.

Once installed, the floorcovering should be left to settle for 24hrs prior to moving seats/tables around on top of it etc.

Underfloor Heating

Coral FR products are suitable for use with underfloor heating systems.

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.

When used with underfloor heating systems the temperature at the surface of the subfloor must not exceed 27°C.

Installation

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.

Avoid direct sunlight, drafts and radiation from heat-emitting devices during installation.

The recommended adhesive for use with Coral FR is Eurocol 640 Eurostar Special (EC1 – low VOC – acrylic dispersion adhesive). Use a B2 trowel to apply the adhesive.

If alternative products are to be used consult with the adhesive supplier for more information, guidance, certification and warranty.

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 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.

Place the material into wet adhesive, after the appropriate waiting time, and roll or press afterwards with a 50-70 kg roller or carpet glider, rolling or pressing 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, should be rolled with a hand roller or pressed into the adhesive with a rubbing hammer.

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

Always consult with the manufacturer of the adhesive for full current information, instructions, guidance and warranty.

There is an arrow indicating pile direction on the reverse of every backed sheet product. Install sheets with arrows running in the same direction.

Fitting to stair treads and risers

Appropriate stair nosing must be used for every tread. Coral FR sheet must be bonded securely to the stair tread using a permanent bond adhesive (Forbo Eurocol 640 Eurostar Special). It is important that the sheet is fit to treads with the pile direction (arrows) facing inwards towards the riser and fitted to risers with the pile direction (arrows) facing downwards towards the tread.

On completion of the installation

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. The floor covering should then be left to settle for 24hrs prior to moving seats/tables on top of it.

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.

Note: some protective sheet products with a tacky film in contact with textile floor coverings can leave an adhesive residue when removed. This can be difficult to remove and attract dirt when the floor covering is put into use. The potential for this effect should be checked with the protection product manufacturer before use and advice on suitability confirmed. Forbo will not accept any claims for soiling problems associated with the use of such products.

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 ranges are available for download at: www.forbo-flooring.com/transport

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.

B. PRO-FIT INSTALLATION METHOD: CORAL FR PRO-FIT

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.



Sub-floor Preparation

Subfloors should be flat, tear free, permanently dry, clean and free of grease, glue residues, dust and dirt. Any unevenness in the subfloor will be visible once the product is installed.

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

General installation instructions:

The minimum temperature of the subfloor, the environment and the installation products (e.g. tackifier and Pro-Fit hook tape) must be minimum 15 degrees Celsius.

Floor covering products should be fully rolled out and conditioned in the same environment as the installation for at least 8 hours prior to the installation.

Note: adhesive coverage rates will be reduced on very porous subfloors such as plywood.

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.

Rolls should be checked to ensure that the correct, colour/design and quantity have been received and are in good condition. No claim will be accepted for incorrect colour, pattern or obvious damage if the product has been installed.

Coral FR products have a pile lean, this means that all rolls must be laid in the same direction for a good result. The arrow on the back indicates this direction.

Avoid seams in the walkway, rather a seam to the left and right of the walkway than in the middle.

Underfloor Heating

All Coral FR products are suitable for use with underfloor heating systems.

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.

When used with underfloor heating systems the temperature at the surface of the subfloor must not exceed 27°C.

Installation

Pro-Fit is the next generation hook & loop system. Unlike other hook & loop systems, the Forbo Pro-Fit system is an integral part of the product, as it is applied during production. During the production a velour backing is applied. It is combined with a special fire-retardant hook tape for the subfloor. Customers who use this system now suddenly face far shorter first installation time (normal adhesive installations require 24 hours drying time).

The Pro-fit method

An installation of Coral FR Pro-Fit is always a combination of the velour backed product and a hook tape adhered to the subfloor. The preparation of the subfloor can be done in different ways and depends on the area of use.

For vestibule/entrance areas (Coral Classic FR/Brush FR/Welcome FR)

Method 1. Applying 100% hook tape to the subfloor is mandatory

For saloon areas (Coral Move FR/ Coral Move Vision FR)

Method 1. Applying 100% hook tape to the subfloor

Method 2. Applying a minimum of 20% hook tape to the subfloor

Method 3. Applying hook tape and tackifier to the subfloor

For methods 2 and 3 each piece of carpet needs to have a minimum of 5cm hook tape to adhere to. The width of the hook tape can be customized to your needs, please contact your Forbo representative for further information.

Pro-Fit consists of two components:

- I. The velour backing attached during production.
- II. The Pro-Fit hook tape. This comes either automatically with your order or can be ordered on its own.

Method 1: 100% Pro-Fit hook tape



- To install the Pro-Fit hook tape, cut the 1400mm wide Pro-Fit hook tape sheets in the shape of the subfloor which needs to be covered.
- Cover the subfloor with the Pro-Fit hook tape and release a small part of the protective cover from the self-adhesive side.
- Adhere the open part carefully in the right place.
- Pull the Pro-Fit hook tape sheet back and pull the protective cover back while giving the sheet the opportunity to adhere to the subfloor. Do not throw away the protective cover, as this will help when installing the floor covering.
- Make sure that no air is enclosed underneath the Pro-Fit hook tape.
- Cover the Pro-Fit hook tape with the protective cover and unroll the Pro-Fit floor covering on the protective cover.
- Remove the protective cover by pulling it out at one end for approx 15cm. Secure the Pro-Fit material by pushing the material by hand on the Pro-Fit hook tape.
- Pull out the whole protective cover at the other end and make sure the Pro-Fit material stays straight and in place and make sure no wrinkles or waves are formed.
- Use a carpet roller of 20-30 kg to secure the Pro-Fit floor covering on the Pro-Fit hook tape and make sure the whole area has been pressed. If due to work conditions or other circumstances a carpet roller cannot be deployed a hand roller, rubbing board or glider can be used to secure the Pro-Fit floor covering on the Pro-Fit hook tape.



Method 2:

>20% Pro-Fit hook tape



For this installation method we recommend to use a minimum of 20% Pro-Fit hook tape in relation to the square meter dimensions of the material fitted, including all around the edges.

- The Pro-Fit hook tape can be adhered directly to the subfloor in straight lines. At both ends of the Pro-Fit roll of material, there must be a perpendicular line of Pro-Fit hook tape installed to keep both ends straight to the floor.
- If applied to a wooden subfloor: It is advisable to secure the Pro-Fit hook tape with staples.
- Install strips of Pro-Fit hook tape evenly spread in such way that the area is uniformly covered.
- Install the Pro-Fit floor covering on Pro-Fit hook tape. Secure the Pro-Fit material by pushing the material by hand on the Pro-Fit hook tape.
- Use a carpet roller of 20-30 kg to secure the Pro-Fit floor covering on the Pro-Fit hook tape and make sure the whole area has been pressed. If due to work conditions or other circumstances a carpet roller cannot be deployed a hand roller, rubbing board or glider can be used to secure the Pro-Fit floor covering on the Pro-Fit hook tape.

If alternative fixing arrangements (strips, chairs, tables...) are applied please contact your Forbo representative for minimal hook tape coverage and warranty.

Method 3:

Tackifier plus Pro-Fit hook tape on the perimeters



With this type of installation Pro-Fit hook tape is only needed on the outer edges of each piece of floor covering.

Coral FR Pro-Fit must be adhered using a high grab, all-over tackifier adhesive system; Forbo Eurocol 542 Eurofix Tack Plus is recommended.

If alternative products are to be used consult with the adhesive supplier for more information, guidance, certification and warranty.

Tackifiers must be applied according to the manufacturer's instructions and it is essential that tackifier adhesives are allowed to dry to a clear, tacky finish before laying the carpet. Failure to do so could result in a permanent non-release bond.

Note: the tackifier must be applied with a suitable short pile roller to ensure full contact of the backing with the adhesive.

- For the best result, apply the tackifier on the subfloor. For ease of installation it may be better to apply in sections, so that there is no need to stand on the applied layer of tackifier.
- Allow the tackifier to dry. Always consult with the manufacturer of the tackifier for full information, instructions (e.g. drying time and use of a carpet roller), guidance and warranty.
- Install the strips of Pro-Fit hook tape in the dry tackifier.
- Install the Pro-Fit floor covering on the Pro-Fit hook tape. Secure the Pro-Fit material by pushing the material by hand on the Pro-Fit hook tape.
- Use a carpet roller of 20-30 kg to secure the Pro-Fit floor covering on the Pro-Fit hook tape and make sure the whole area has been pressed. If due to work conditions or other circumstances a carpet roller cannot be deployed a hand roller, rubbing board or glider can be used to secure the Pro-Fit floor covering on the Pro-Fit hook tape.

Fitting to stair treads and risers

For use on stairs Coral FR Pro-Fit shall only be applied with 100% hook tape. Appropriate stair nosing must be used for every tread. It is important that the sheet is fit to treads with the pile direction (arrows) facing inwards towards the riser and fitted to risers with the pile direction (arrows) facing downwards towards the tread.

On completion of the installation

The completed installation should be cleared of scrap material and debris, the floor vacuumed and any traces of tackifier 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.

Note: some protective sheet products with a tacky film in contact with textile floor coverings can leave an adhesive residue when removed. This can be difficult to remove and attract dirt when the floor covering is put into use. The potential for this effect should be checked with the protection product manufacturer before use and advice on suitability confirmed. Forbo will not accept any claims for soiling problems associated with the use of such products.

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 rail products are available for download at: **www.forbo-flooring.com/transport**

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.

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marmoleum® FR LINOLEUM FLOOR COVERING

(Marmoleum FR² & Striato FR)

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 Marmoleum FR²/Striato FR sheet should be carried out in accordance with the national code of practice for the installation of resilient floor coverings if applicable.

Areas to receive flooring should be clean, free from other trades, fully enclosed and weather tight. Subfloors should be clean, smooth, sound and permanently dry.

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.

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, 48 hours before, during and 48 hours after installation. The material and adhesive should be conditioned in the same environment for at least 48 hours prior to the installation. Where national codes of practice exist, they take precedence over these guidelines.

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.

Take the Marmoleum FR²/Striato FR rolls off the pallets.

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 installed.

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.

Marmoleum sheets should be laid in the same direction for seaming.

Note: As with all newly installed floor coverings Marmoleum FR²/Striato FR should be protected from heavy traffic, particularly high point load wheeled traffic, for 72 hours and must not be washed for 48 hours after installation.

Underfloor heating

Marmoleum FR²/Striato FR sheet 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.

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.

When used with underfloor heating systems the temperature at the surface of the subfloor must not exceed 27°C.

Adhesive Recommendations and application

When installing Marmoleum FR²/Striato FR sheet, Forbo Eurocol 614 Eurostar Lino Plus, a low emission EC1 adhesive is recommended. If alternative products are to be used please consult with the supplier for more information, guidance and warranty.

Use a 2mm x 6mm V notched or B1 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.

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.

Install one length of sheet at a time, making sure to place the material into wet adhesive and roll afterwards with a 50-70 kg 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. such as door frames or skirting boards should be rolled with a hand roller or pressed into the adhesive with a rubbing hammer.

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

Installation

Forbo recommends that Marmoleum FR²/Striato FR sheet flooring be installed one sheet at a time. Always install all Marmoleum FR²/Striato FR sheets in the same direction. It is recommended that each sheet be scribed to fit and that the factory edge be properly removed before adhering (see below). Seams should always be under-scribed after the material has been placed into the adhesive and rolled. Following these recommendations will give the installer the best opportunity to manage the open and working time of the adhesive and ensure that the flooring material is placed into wet adhesive.

Cut the sheet material to the required lengths and then back roll each cut length before scribing to the long wall and length ends in order to release any roll tension from the winding of the sheet linoleum. Once the sheet has been back rolled stand the cut lengths upright in this state for approximately 15 minutes before unrolling for fitting.

Note: Whether seams are to be welded or not, they should be cut to leave a nett fit (closed) seam. However, when cutting seams in linoleum sheet, allowance must be made for a fractional expansion in the width of the hessian backed material as it picks up moisture from the adhesive. This expansion is minute and will be halted by the curing of the special linoleum adhesive, but unless allowed for in cutting, tightly cut seams will peak and fail (this is not a product defect).

Fitting the first sheet

Once scribed to the walls cut a true edge along the factory edge of the sheet, a Forbo 'strip and seam cutter' is designed to carry out this operation in one cut (Fig.1). Alternatively, the factory edge can be trimmed using a straight edge and utility knives with straight and hooked blades. Place the straight edge approximately 2cm in from the factory edge and score the Marmoleum FR²/Striato FR using a utility knife and a straight blade.

After scoring the material cut through the sheet using a utility knife and a hooked blade holding the knife at an angle to give a slight undercut along the seam (Fig. 2). After trimming the factory edge trace the line of the seam edge onto the subfloor with a pencil, this will serve as a guide line for spreading the adhesive.



Fig. 1



Fig. 2



Fig. 3

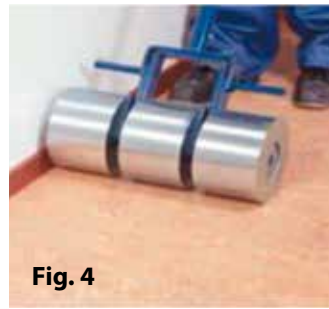


Fig. 4

Pull the sheet back to approximately half of its length and spread the adhesive ensuring that the adhesive is spread right up to all perimeter edges and the marked pencil line Fig.3. Feed the sheet back into the adhesive and roll immediately first across the width of the sheet and then along the length to ensure that complete wet adhesive transfer is achieved. Again, pay particular attention to the perimeters Fig.4. A seam roller or rubbing hammer can be used to ensure the sheet is pressed into the adhesive around harder to reach areas such as door frames and overhangs from furniture or fittings.

Pull the other half of the sheet back and repeat the above process.

As with bight marks (see below), to ensure the end of the linoleum sheet beds well into the adhesive, fold the end of the sheet back diagonally and feed the hessian backing down into the adhesive with a 'bouncing action' as in the illustration below (Fig.5).



Fig. 5

Do not make this so severe as to risk cracking the linoleum. This will ease the tension across the end of the length and the linoleum will have good contact with the adhesive. Roll thoroughly.

Fitting the second (and subsequent) sheet(s)

Unroll the next sheet and lay it on the floor overlapping the trimmed edge of the first installed sheet by approximately 2cm. Trim the factory edge on the opposite side of this sheet as above and mark this edge of the sheet on the subfloor with a pencil. Scribe the ends of the sheet. Pull the sheet back halfway and adhere and roll the sheet as above.

FORMING SEAMS

Net fit seams

A correctly cut seam with a slight undercut will close during the curing of the adhesive and will not open up during the life of the linoleum. Nett fit seams are often considered to be aesthetically better than welded seams, so if the installer possesses the skills to achieve a good seam and if the application allows, welding of Marmoleum FR²/Striato FR is not always obligatory.

This is particularly relevant in the case of plain colour Linoleums. Forbo recommends that plain coloured Marmoleum FR²/Striato FR references are fit with nett fit seams unless the application determines that welded seams are required.

Cutting the seam

Immediately after rolling the sheet trace the seam with recess scribes (Fig.6) along the trimmed edge of the first sheet and cut through with a utility knife and hooked blade, again with a slight undercut.



Fig. 6

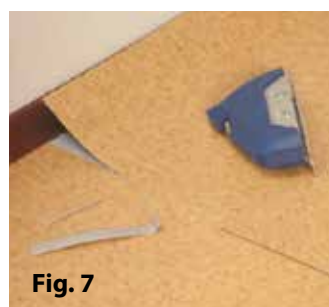
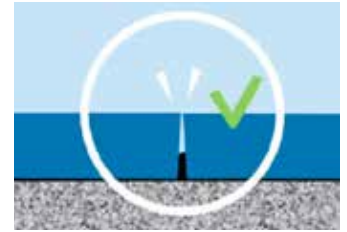
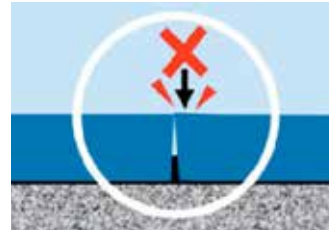


Fig. 7

Once the seam is cut, the cut edge should just fall into place alongside the edge of the first sheet (if the sheet needs to be pushed against the previously stuck sheet the seam is too tight and will peak.



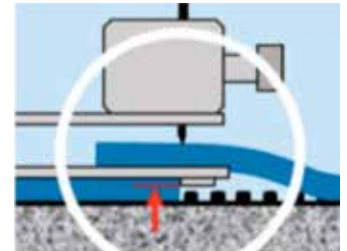
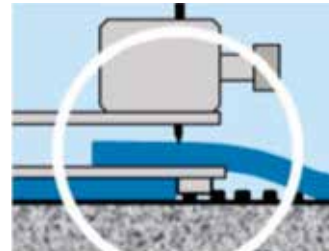
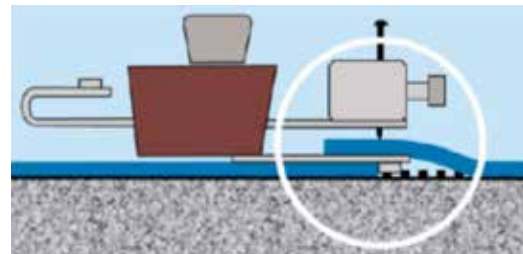
The Forbo Trimmer (Fig.7) or Wolff Linocut can be used to cut the seam in one operation.

Roll the seam with a seam roller to ensure full contact with the adhesive. Remove any excess adhesive with a damp cloth.

Repeat the process for the second half of the sheet length.

Note: it is important to cut and roll the seam whilst the adhesive is still wet (to avoid peaking seams). Remove any adhesive residues at the seam straight away with a damp cloth.

Tip: If the guide on your recess scribes is too thick (fig. a) it could remove adhesive from the subfloor when scribing the seam. Sanding the bottom of the guide on the recess scribe to reduce its thickness (fig. b) will prevent this and will also help to keep the guide clean and free of adhesive contamination.



Tip: check the quality of the seam on completion. If there are any small, isolated, gaps in the length of the finished seam these may be filled using the following technique:

1. Clean the area of the repair paying attention to the removal of any loose linoleum fragments or dust.
2. Make up a paste by mixing fine shavings, ground or sanded to make a fine dust, from a piece of the original colour linoleum with a waterproof PVA adhesive.
3. Fill the area to be repaired with the paste using an appropriate tool such as a spatula, leaving the filler flush with the surface of the Marmoleum FR. Remove any excess with a damp cloth.
4. Smooth the finished repair with a spatula and allow to dry.
5. When the filler is completely dry, buff the surface to an even finish, applying a thin coat of diluted floor maintainer if required.

Tip: If applying floor maintainer use a small brush or similar to the filler only, thereby avoiding gloss variations in the flooring adjacent to the filler.

Note: The procedures and actions described above are suggested to assist in resolution of minor installation related problems. They do not form part of any official Forbo Flooring installation recommendation, and Forbo cannot take responsibility for the long-term effectiveness of any such repairs or warrant the repaired areas.

As with any repair, the quality and effectiveness of the work, which includes visual acceptability, will depend on the skill of the operator. The final acceptance of any repair is at the sole discretion of the client/end user.

WELDED SEAMS

General advice

Welding and trimming techniques for linoleum are the same as those used for vinyl products; however, the composition of linoleum weld cable requires a different welding temperature and speed. Problems encountered with welding are usually due to either welding at the wrong temperature and/or speed of application or use of incorrect trimming techniques.

Seam forming and grooving

Seams for welding should be formed in the same manner as above. A net fit seam is still required.

Seams should be grooved out to just above the hessian backing for 2.5mm Marmoleum FR (Fig.10). A 'P' Type groover (Fig.11) is recommended for manual grooving of seams, however, automatic or power groovers (Fig.12) may be more productive on larger installations. Fig 13 shows the Forbo Groover which uses a hot air to soften the surface of the sheet and built in grooving blades to cut the groove in one operation. If a grooving tool such as an electric grooving machine is being used a small, consistent, gap (<0.5mm) may be left to accommodate the guide wheels of the grooving machine.

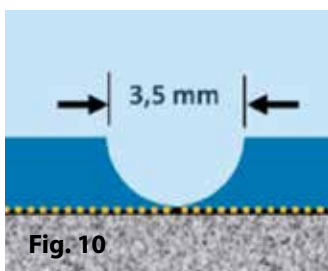


Fig. 10



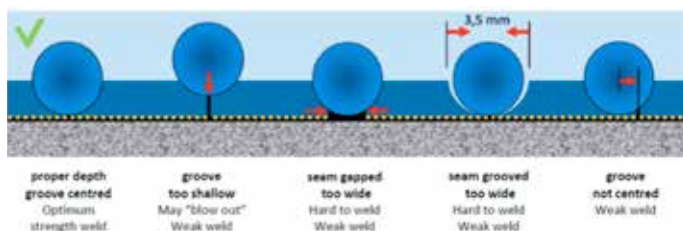
Fig. 11



Fig. 12



Fig. 13 Forbo groover



Welding

Switch on the hot air gun and allow 5 to 7 minutes for it to reach the selected temperature. Linoleum should be welded at a temperature of approximately 350°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. Marmoleum FR2/Striato FR should be welded with a 5mm Speedweld nozzle.

Make sure the groove is thoroughly clean 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. The top of the welding rod should flatten slightly, and a small bead should form on either side of the welding tip (Fig. 10 and 14). After the first 30cm check the weld adhesion is good by gently pressing the cable in the welded section from side to side.

If the speed/heat/pressure combination is incorrect the weld will either come out or the cable will have melted over the sides of the groove, possibly with charred material either side of the groove. Fig 15 below is an example of a weld application that is too hot.

Trimming

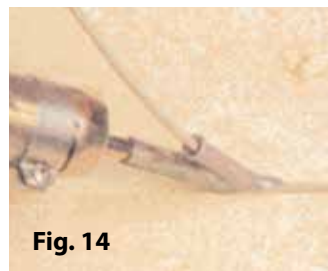


Fig. 14



Fig. 15

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. Alternatively, trim flush with a flat profile 'X-acto' router blade. This blade is slightly concave, so blunt the corners to avoid scratches on either side of the weld. If trimming pulls out the weld this shows it is unsuccessfully adhered and the seam should be re-done with fresh welding cable.



Spatula



Slide plate



Mozart knife

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

When Marmoleum FR2/Striato FR products are installed adjacent to a vinyl flooring product, Marmoweld welding rod must be used to heat weld the seam if heat welding is specified. A vinyl welding rod will NOT bond to linoleum products, but Marmoweld will achieve an adhesive bond to most vinyl flooring products.

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 unwelded section apply pressure and carry the weld on over the section to be joined. Allow to cool and trim as normal (Fig.16).



Fig. 16

Bight marks in Linoleum

During the manufacture of linoleum, it is hung in large stoves in continuous festoons up to 16 metres high to mature. At the top, the linoleum passes over a pole, face inwards, and at the bottom forms a loop, or bight, face outwards. During the 2-3 week curing process the weight of the material causes the linoleum to mould a little to the pole causing a mark across the width (a pole mark) which is always cut out at the factory.

The fold or bight at the bottom is however gentler, though sometimes detectable as a slight ridge across the sheet, about 15cm wide (known as a bight mark).

With modern flexible linoleum formulations, this can usually be stuck down in 2.5mm or 2.0mm linoleum using normal adhesive spreading techniques provided the site is warm and the bight mark area is well rolled, firstly across the sheet and then along it.

If site conditions are unfavourable it may be necessary to adapt the installation technique. Some floor layers prefer instead to cut bight marks out.

When site conditions are good, bight marks should present no problems using Forbo Eurocol 614 adhesives correctly spread with the specified 2mm x 6mm serrated trowel – a little extra attention is all that is required.

Pull back the sheet approximately half its length and spread the adhesive. As the sheet is fed into the wet adhesive and the bight mark is reached lean gently on the bight mark to reduce the radius and rock in and out of the adhesive looking to make sure that complete wet transfer of adhesive is achieved on the hessian backing over the whole width of the bight mark. Once the remainder of linoleum still to be fed into adhesive clears the area of the bight mark roll immediately with a 68 kg roller as above, dealing with any bubbles or trapped air before moving on. Repeat the rolling of the bight mark at 15 minute intervals until fully bonded to subfloor.

An alternative method is to mark the subfloor where the bight mark falls (Fig.17), pull back the sheet and spread the adhesive on the subfloor stopping just short of the start of the bight mark. Feed the linoleum into the wet adhesive up to this point and roll in both directions as above. Next spread the adhesive over the area of subfloor to be covered by the bight mark (Fig.18). Lean gently on the bight mark to reduce the radius and rock in and out of the adhesive looking to make sure complete wet transfer of adhesive is achieved on the hessian backing over the whole width of the bight mark. Roll the bight mark first across the width of the sheet and then lengthways. Spread the adhesive to the remaining area of the subfloor and roll the sheet as above, starting by re-rolling the area of the bight mark.



Fig. 17



Fig. 18

Perimeter sealing

If the purpose of specifying welded seams is to prevent the risk of moisture getting under the floorcovering then logically the specification must ensure that perimeters are also sealed, together with any areas where pipes, etc. come up through the floorcovering. This is usually done with a silicone sealer.

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.

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. Refer to the Cleaning and maintenance guide for Marmoleum FR2/ Striato FR on our website.

Cleaning and maintenance guides should also 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.

These guides are also available online at www.forbo-flooring.com/transport

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flotex® FR FLOCKED FLOORING

Flotex FR sheet (Flotex FR/Flotex Vision FR)

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 Flotex FR Sheet should be carried out in accordance with the national code of practice for the installation of textile floor coverings if applicable. 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.

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

Prior to installation, the Flotex FR rolls must be allowed to acclimatize, stored upright in the laying area at a steady temperature of 18 to 27°C for at least 24 hours. This is particularly important if the rolls have been stored or delivered in conditions of extreme temperature and/or humidity. It is essential that the laying area is at a steady temperature of 18°C for 48 hours prior to, during, and for 48 hours after installation. The material and adhesive should be conditioned in the same environment for at least 48 hours prior to the installation. Where national codes of practice exist, they take precedence over these guidelines.

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.

Rolls should always be stored standing upright. Storing the rolls laying down will result in pile crush.

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 installed.

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.

Direction of laying

Always pay attention to the direction and planning of the sheets to avoid cross seams that coincide with areas of heavy use or doorways.

Install sheets in the same direction for seaming. Install with arrows all pointing in the same direction, the arrows on the back of the sheet indicate the pile direction.

As with all newly installed floor coverings Flotex FR sheet should be protected from heavy traffic, particularly high point load wheeled traffic, for 24 hours and must not be washed for 48 hours after installation.

Underfloor heating

Flotex FR 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.

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.

When used with underfloor heating systems the temperature at the surface of the subfloor must not exceed 27°C.

Adhesive Recommendations and application

When installing Flotex FR sheet, the Forbo Eurocol 640 low emission EC1 adhesive is recommended. If alternative products are to be used then you must consult with the adhesive supplier for more information, guidance and warranty.

Use a B2 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.

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.

Lay the sheet lengths into the adhesive after the required waiting time and within the open time applicable to the adhesive being used and roll afterwards with a 50-70kg roller or pressed with a rubbing board or glider within the open time of the adhesive (or after the appropriate waiting time specified by the adhesive manufacture if applicable), rolling in all directions to ensure a firm bond. It is important to only spread sufficient adhesive that can be covered and rolled/pressed within the open time of the adhesive.

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

Do **NOT** use bleaching agents or strong solvents as they can be harmful to both people and to your floor.

Installation

The following instructions are intended to draw the fitter's attention to current 'Best Practice' and must be followed for the relevant product guarantees to be valid. Installation must be carried out in accordance with the requirements of this guidance along with local codes of practice where applicable.

Measure the area to be installed and determine the direction in which the material will be installed and seam placement. Seams must be a minimum of 15cm away from any subfloor joints such as day joints/saw cuts, etc.

Cut the rolls to the required lengths, remembering to allow for the pattern repeat. Allow at least 5cm trim at ends.

Dry lay the pieces, butting the factory edges for seaming. Make sure that the seam edges come together with a net fit with no fullness or gaps and check the pattern match.

Trim off surplus. Roll the sheets back onto themselves to approximately half their length. Take care that the sheets do not shift during handling. Mark the position of the outside edge of the first sheet in pencil on the floor. Apply the adhesive to the line marking the edge of the first sheet. Feed the first sheet into the wet adhesive (after the appropriate waiting time specified by the adhesive manufacture if applicable) following the pencil mark on the floor.



Roll the sheet or press into the adhesive with a rubbing board or glider within the open time of the adhesive. Using a 50-70kg roller or rubbing board or glider, press the Flotex FR sheet material firmly into the adhesive from the centre, towards the edges, to eliminate air bubbles and ensure good adhesion to the sub-floor. Areas that cannot be rolled with the large roller e.g. such as door frames or skirting boards should be rolled with a hand roller or pressed into the adhesive with a rubbing board. Trim off excess floor covering along the walls and skirting boards. If necessary, roll or press the flooring into the adhesive after trimming.

Remove fresh adhesive residue immediately with a clean white damp cloth.

Follow the above procedure to lay the opposite half of the first sheet and continue to lay the remaining sheets in the same way, edge to edge with close joints. Finish off with a rubbing board or glider over the entire floor.



Laying Flotex FR on a Staircase

Flotex FR sheet is suitable for use on stairs, following these guidelines:

- Nosings should always be used
- A separate piece of Flotex FR must be used for each tread and riser
- Use contact adhesive only for the risers
- On the tread, the pile should lay (arrows) towards the nose of the step
- For the riser, the pile should lay (arrows) downwards towards the tread

On completion of the installation

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.

Note: Upright vacuum cleaners with an electrically powered rotating brush should be used on Flotex FR sheet.

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.

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 Systems ranges are available for download at: **www.forbo-flooring.com/transport**

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.

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tessera® FR BROADLOOM CARPET

(Tessera Alignment FR/Tessera Helix FR/Tessera Nexus FR)

Here you'll find guidelines for the:

A. Fully adhered installation method

B. Pro-Fit installation method

A. FULLY ADHERED INSTALLATION METHOD

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.

Sub-floor preparation

Subfloors should be flat, tear free, permanently dry, clean and free of grease, glue residues, dust and dirt. Any unevenness in the subfloor will be visible once the product is installed.

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

General installation instructions:

The minimum temperature of the subfloor, the environment and the installation products must be at a minimum of 15 degrees Celsius.

Floor covering products should be conditioned in the same environment as the installation for at least 24 hours prior to the installation.

Note: adhesive coverage rates will be reduced on very porous subfloors such as plywood.

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.

Rolls should be checked to ensure that the correct, colour/design and quantity have been received and are in good condition. No claim will be accepted for incorrect colour, pattern or obvious damage if the product has been installed.

Tessera FR products have a pile lean, this means that all rolls must be laid in the same direction for a good result. The arrow on the back indicates this direction.

Avoid seams in the walkway, rather a seam to the left and right of the walkway than in the middle.

Once installed, the floorcovering should be left to settle for 24hrs prior to moving seats/tables around on top of it etc.

Underfloor Heating

Tessera FR products are suitable for use with underfloor heating systems.

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.

When used with underfloor heating systems the temperature at the surface of the subfloor must not exceed 27°C.

Installation

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.

Avoid direct sunlight, drafts and radiation from heat-emitting devices during installation.

The recommended adhesive for use with Tessera FR is Eurocol 640 Eurostar Special (EC1 – low VOC – acrylic dispersion adhesive). Use a B2 trowel to apply the adhesive.

If alternative products are to be used consult with the adhesive supplier for more information, guidance, certification and warranty.

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 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.

Place the material into wet adhesive, after the appropriate waiting time, and roll or press afterwards with a 50-70 kg roller or carpet glider, rolling or pressing 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, should be rolled with a hand roller or pressed into the adhesive with a rubbing hammer.

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

Always consult with the manufacturer of the adhesive for full current information, instructions, guidance and warranty.

There is an arrow indicating pile direction on the reverse of every backed sheet product. Install sheets with arrows running in the same direction.

Fitting to stair treads and risers

Appropriate stair nosing must be used for every tread. Tessera FR sheet must be bonded securely to the stair tread using a permanent bond adhesive (Forbo Eurocol 640 Eurostar Special). It is important that the sheet is fit to treads with the pile direction (arrows) facing inwards towards the riser and fitted to risers with the pile direction (arrows) facing downwards towards the tread.

On completion of the installation

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. The floor covering should then be left to settle for 24hrs prior to moving seats/tables on top of it.

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.

Note: some protective sheet products with a tacky film in contact with textile floor coverings can leave an adhesive residue when removed. This can be difficult to remove and attract dirt when the floor covering is put into use. The potential for this effect should be checked with the protection product manufacturer before use and advice on suitability confirmed. Forbo will not accept any claims for soiling problems associated with the use of such products.

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 ranges are available for download at: www.forbo-flooring.com/transport.

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.

B. PRO-FIT INSTALLATION METHOD: TESSERA FR PRO-FIT

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.



Sub-floor Preparation

Subfloors should be flat, tear free, permanently dry, clean and free of grease, glue residues, dust and dirt. Any unevenness in the subfloor will be visible once the product is installed.

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

General installation instructions:

The minimum temperature of the subfloor, the environment and the installation products (e.g. tackifier and Pro-Fit hook tape) must be minimum 15 degrees Celsius.

Floor covering products should be fully rolled out and conditioned in the same environment as the installation for at least 8 hours prior to the installation.

Note: adhesive coverage rates will be reduced on very porous subfloors such as plywood.

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.

Rolls should be checked to ensure that the correct, colour/design and quantity have been received and are in good condition. No claim will be accepted for incorrect colour, pattern or obvious damage if the product has been installed.

Tessera FR products have a pile lean, this means that all rolls must be laid in the same direction for a good result. The arrow on the back indicates this direction.

Avoid seams in the walkway, rather a seam to the left and right of the walkway than in the middle.

Underfloor Heating

All Tessera FR products are suitable for use with underfloor heating systems.

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.

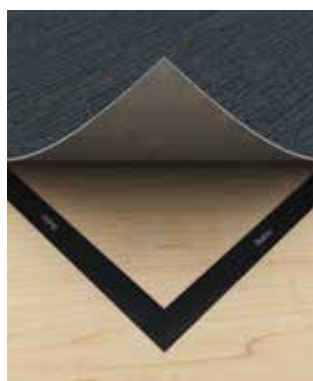
When used with underfloor heating systems the temperature at the surface of the subfloor must not exceed 27°C.

Installation

Pro-Fit is the next generation hook & loop system. Unlike other hook & loop systems, the Forbo Pro-Fit system is an integral part of the product, as it is applied during production. During the production a velour backing is applied. It is combined with a special fire-retardant hook tape for the subfloor. Customers who use this system now suddenly face far shorter first installation time (normal adhesive installations require 24 hours drying time).

The Pro-fit method

An installation of Tessera FR Pro-Fit is always a combination of the velour backed product and a hook tape adhered to the subfloor. The preparation of the subfloor can be done in different ways and depends on the area of use.



For saloon areas

Method 1. Applying 100% hook tape to the subfloor

Method 2. Applying a minimum of 20% hook tape to the subfloor

Method 3. Applying hook tape and tackifier to the subfloor

For methods 2 and 3 each piece of carpet needs to have a minimum of 5cm hook tape to adhere to.

The width of the hook tape can be customized to your needs, please contact your Forbo representative for further information.

Pro-Fit consists of two components:

I. The velour backing attached during production.

II. The Pro-Fit hook tape. This comes either automatically with your order or can be ordered on its own.

Method 1: 100% Pro-Fit hook tape

- To install the Pro-Fit hook tape, cut the 1400mm wide Pro-Fit hook tape sheets in the shape of the subfloor which needs to be covered.
- Cover the subfloor with the Pro-Fit hook tape and release a small part of the protective cover from the self-adhesive side.
- Adhere the open part carefully in the right place.
- Pull the Pro-Fit hook tape sheet back and pull the protective cover back while giving the sheet the opportunity to adhere to the subfloor. Do not throw away the protective cover, as this will help when installing the floor covering.
- Make sure that no air is enclosed underneath the Pro-Fit hook tape.
- Cover the Pro-Fit hook tape with the protective cover and unroll the Pro-Fit floor covering on the protective cover.
- Remove the protective cover by pulling it out at one end for approx 15 cm. Secure the Pro-Fit material by pushing the material by hand on the Pro-Fit hook tape.
- Pull out the whole protective cover at the other end and make sure the Pro-Fit material stays straight and in place and make sure no wrinkles or waves are formed.
- Use a carpet roller of 20-30 kg to secure the Pro-Fit floor covering on the Pro-Fit hook tape and make sure the whole area has been pressed. If due to work conditions or other circumstances a carpet roller cannot be deployed a hand roller, rubbing board or glider can be used to secure the Pro-Fit floor covering on the Pro-Fit hook tape.



Method 2: >20% Pro-Fit hook tape

For this installation method of Tessera FR Pro-Fit we recommend to use a minimum of 20% Pro-Fit hook tape in relation to the square meter dimensions of the material fitted, including all around the edges.

- The Pro-Fit hook tape can be adhered directly to the subfloor in straight lines. At both ends of the Pro-Fit roll of material, there must be a perpendicular line of Pro-Fit hook tape installed to keep both ends straight to the floor.
- If applied to a wooden subfloor: It is advisable to secure the Pro-Fit hook tape with staples.



- Install strips of Pro-Fit hook tape evenly spread in such way that the area is uniformly covered.
- Install the Pro-Fit floor covering on Pro-Fit hook tape. Secure the Pro-Fit material by pushing the material by hand on the Pro-Fit hook tape.
- Use a carpet roller of 20-30 kg to secure the Pro-Fit floor covering on the Pro-Fit hook tape and make sure the whole area has been pressed. If due to work conditions or other circumstances a carpet roller cannot be deployed a hand roller, rubbing board or glider can be used to secure the Pro-Fit floor covering on the Pro-Fit hook tape.

If alternative fixing arrangements (strips, chairs, tables...) are applied please contact your Forbo representative for minimal hook tape coverage and warranty.

Method 3: Tackifier plus Pro-Fit hook tape on the perimeters

With this type of installation Pro-Fit hook tape is only needed on the outer edges of each piece of floor covering.

Tessera FR Pro-Fit must be adhered using a high grab, all-over tackifier adhesive system; Forbo Eurocol 542 Eurofix Tack Plus is recommended.

If alternative products are to be used consult with the adhesive supplier for more information, guidance, certification and warranty.



Tackifiers must be applied according to the manufacturer's instructions and it is essential that tackifier adhesives are allowed to dry to a clear, tacky finish before laying the carpet. Failure to do so could result in a permanent non-release bond.

Note: the tackifier must be applied with a suitable short pile roller to ensure full contact of the backing with the adhesive.

- For the best result, apply the tackifier on the subfloor. For ease of installation it may be better to apply in sections, so that there is no need to stand on the applied layer of tackifier.
- Allow the tackifier to dry. Always consult with the manufacturer of the tackifier for full information, instructions (e.g. drying time and use of a carpet roller), guidance and warranty.
- Install the strips of Pro-Fit hook tape in the dry tackifier.
- Install the Pro-Fit floor covering on the Pro-Fit hook tape. Secure the Pro-Fit material by pushing the material by hand on the Pro-Fit hook tape.
- Use a carpet roller of 20-30 kg to secure the Pro-Fit floor covering on the Pro-Fit hook tape and make sure the whole area has been pressed. If due to work conditions or other circumstances a carpet roller cannot be deployed a hand roller, rubbing board or glider can be used to secure the Pro-Fit floor covering on the Pro-Fit hook tape.

Fitting to stair treads and risers

For use on stairs Tessera FR Pro-Fit shall only be applied with 100% hook tape. Appropriate stair nosing must be used for every tread. It is important that the sheet is fit to treads with the pile direction (arrows) facing inwards towards the riser and fitted to risers with the pile direction (arrows) facing downwards towards the tread.

On completion of the installation

The completed installation should be cleared of scrap material and debris, the floor vacuumed and any traces of tackifier 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.

Note: some protective sheet products with a tacky film in contact with textile floor coverings can leave an adhesive residue when removed. This can be difficult to remove and attract dirt when the floor covering is put into use. The potential for this effect should be checked with the protection product manufacturer before use and advice on suitability confirmed. Forbo will not accept any claims for soiling problems associated with the use of such products.

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 rail products are available for download at: **www.forbo-flooring.com/transport**

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.

Contact us:

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fleet® FR WALL & CEILING COVERING

(on aluminium panels)

1. RECEIPT AND PREPARATION OF THE ALUMINIUM SUBSTRATE

The panels can be flat or with a bended shape (substrate for ceilings).

The panels should be cleaned thoroughly as shown on below pictures. Thorough cleaning is necessary for all surfaces to be covered with the Fleet FR material (including the panel edges and also the back of the panels where the borders are folded back) in order to avoid any negative interaction between the substrate and the adhesive, which may adversely affect the adherence performance.

Any adhesive residues remaining after the sanding (e.g. in the rivet holes) should be removed with a diluent such as Swift®clean 9695 from HB Fuller or a similar one.

The substrate should be scoured mechanically with a portable electric orbital sander with sanding discs or pads in two steps.

1. Sanding disc 80 to remove imperfections on the surface
2. Sanding disc 120 to smooth the surface

The areas that cannot be reached with the machine should be sanded manually using the equivalent sanding paper.



The dust should be removed with an industrial vacuum cleaner provided with a soft brush.

If the panels are not to be covered immediately, they should be stored in a dry and ventilated area, free from dust.

The appropriate protection equipment should be used by the operators.

2. PREPARATION OF THE FLEET FR

Conditions of use:

The product with a self-adhesive backing should be used within 2 years from production as recommended by Forbo Flooring Systems.

Conditions of storage:

It should be stored vertically in a closed area without humidity, where the temperature should be above or equal to +10°C and below +30°C.

Storage of the rolls before installation

The needlefelt should be stored vertically in a closed area without humidity 48 hours before installation at a temperature above or equal to +15°C and below +25°C

Requirement for the Fleet FR installation:

- During installation, the room temperature as well as the temperature of the product and substrate should be at least +15°C
- The installers should always be protected in order to avoid any risk of electrostatic discharge
- To make sure that the smoothing of the Fleet FR is done properly, the panels should be firmly fastened to the working surface with counter-supports, clamps etc.

Cutting:

The sheet should be cut leaving enough margin in both directions to cover the complete panel and to fold back and cut off the borders.

Cuttings should always be achieved making sure the Fleet FR sheet is aligned in the same direction in order to prevent any inappropriate visual effect between the panels in the length of the coach.

Installation of the Fleet FR on the aluminium panels:

- The Fleet FR is to be positioned on the panel with the protective foil to the substrate and the edges parallel along the sides of the panel in the length. The Fleet FR should be aligned on the various panels which will be installed on a row in the coach. If not aligned properly, it will create an adverse visual effect.
- Fold back the Fleet FR along the sides of the panel, over the flat or bended sides.

In case of bent panels: it will be more convenient to start folding back the Fleet FR over the bent edges of the panel to avoid the product slipping during installation.



- The protective foil on the back of the Fleet FR should be cut along the edges in the length of the panel (a knife with concave blades should be used such as a Luna ref. 262039500 from Janser which will prevent damage to the back of the needlefelt when cutting).
- Pull off the protective foil over 10 to 15cm along the full length of the panel.

- Stick the Fleet FR to the panel without creating any creases and unroll progressively the sheet, always making sure it remains aligned. Continue to apply the product to the first half of the panel by removing the protective foil gradually while laying down the Fleet FR sheet.
- Press firmly the adhered Fleet FR with an LVT smoothing roller in both directions (Ref 188 from the Forbo accessories catalogue).
(if the flat surface allows it).

Other smoothing methods may generate heavy friction or rubbing on the surface of the material (e.g. cork block) likely to cause pilling. Using a LVT smoothing roller will prevent any fibres from pilling.

Important: putting heavy pressure while smoothing is necessary to activate the adhesive (pressure-sensitive).

- Follow the same steps for the second half of the panel.
- Pull off 10 to 15cm of protective foil along the full length of the panel and apply the Fleet FR by removing gradually the foil and press firmly the adhered material with the LVT smoothing roller in both directions (if the surface of the substrate is flat) while you continue to apply the rest of the sheet.
- On the four sides of the panel, cut the surplus leaving enough material for the flaps on the back of the panel (at least 3cm).

On all edges:

- Turn down the Fleet FR by pressing from the upper side of the panel around the edges to fold it back tightly against the back of the panel.
- Press with the LVT smoothing roller on the front side, then on the edge and finally on the flaps underneath the panel.

Remark: One of the panel edges in the length has a grooved profile not allowing the flap on the back side to be pressed with the LVT smoothing roller. A regular smoothing hammer should therefore be used on this panel edge (ref. 204 from the Forbo accessories catalogue).

- In the corners on the back of the panel the overlapping material should be cut carefully to achieve a flat flap (do not cut further than the back angle). After double cutting the Fleet FR, it should be smoothed properly in all the corners.
- Smooth the Fleet FR again over the total adhered surface with the LVT smoothing roller, except on the edge where the smoothing hammer must be used.

3. STORAGE OF THE FLEET FR FACED PANELS

Until they will be installed in the coaches, the Fleet FR faced panels should be stored in a flat position in a clean room. The storage area should be closed and not exposed to any dust nor humidity with a temperature above or equal to +15°C.

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