

## SAFETRED UNIVERSAL SHEET, TILE & ACOUSTIC SAFETRED SPECTRUM SHEET & TILE SAFETRED UNIVERSAL PLUS SAFETRED UNIVERSAL R12 Heterogeneous Safety Flooring

The preparation/dryness of the subfloor, and installation procedures, should be according to BS 8203: 2001. i.e.: The relative humidity of a solid subfloor should be below 75%RH when tested with a hygrometer as described in the standard.

Prior to selecting a smoothing compound, it will be necessary to establish the type of traffic the floorcovering will be subjected to, once it is installed. Latex smoothing compounds are not suitable for areas that will receive heavy traffic, especially heavy, wheeled traffic with narrow wheels. Never subject a newly installed floorcovering to heavy wheeled traffic at an early stage, as this will disperse trowel-applied adhesive from below the floorcovering which may result in future problems. Wheels should be >30mm width and preferably made of neoprene. If it is necessary to traffic the floorcovering at an early stage, protect the installation with hardboard or plywood.

For specific subfloor types and preparation, please refer to our 'Specifications Subfloor Types' information sheet.

Although Tarkett may on occasion list a choice of adhesives, levelling compounds and surface damp-proof membrane types and manufacturers, we do not however guarantee the products listed or suggest that the list of products or manufacturers, are complete or current. Tarkett will not accept any liability for any of these products failing to perform when used with any of its products. It is the responsibility of the adhesive, levelling compound and surface damp proof membrane manufacturer and flooring contractor to ensure the products being used are appropriate for use and applied in accordance with the manufacturer's recommendations.

**Recent studies have shown that micro-organisms can colonise, under certain conditions, the area between the subfloor (wooden or cement) and the installed flooring. These micro-organisms can thrive in warm, damp conditions where there is sufficient 'food' available – for example, certain types of levelling compound used prior to the flooring installation. During their normal life-cycle, these micro-organisms produce a colorant, usually pink, purple, red or black (but can be other colours), which can 'bleed' through to the surface of the PVC flooring product over a period of several months or longer.**

**Advice should always be sought from the manufacturers of subfloor preparations and adhesives prior to installation, to ensure that their products are suitable for the environment in which the PVC flooring is to be laid – this advice may include using products that contain biocides or of specific resin types.**

**For wooden fabricated underlay e.g. plywood, care must be taken to store the material in an area where it will not become damp or contaminated.**

**The 'bleed' through of colorant created by micro-biological activity below PVC floorcovering products is not attributable to a product/manufacturing fault.**

It is imperative that underfloor heating systems have been previously commissioned and found to be functioning correctly prior to the floor finish being installed. Ensure that the underfloor heating system is switched off 48 hours prior to the floorcovering installation commencing and remains off for at least 48 hours after the installation is complete. During the period of decommissioning of the underfloor heating system, an alternative heating source should be provided, if required, to ensure that the area of installation is kept at a constant temperature of 18°C – 27°C. Gradually increase the temperature over a number of days by only a few degrees per day until the desired room temperature is reached. The temperature should never exceed the floorcovering industry agreed maximum of 27°C at the underside of the floorcovering (the adhesive line). Failure to follow these guidelines can result in the floorcovering de-bonding, joints opening, and on some occasions discolouring, all which can occur within a long or short period of time.

### **CONDITIONING - SHEET**

It is important that the material (rolls) is stored in an upright position. 24 hours prior to use, the material should be cut to the desired lengths and acclimatised within the area to be installed by laying flat on a prepared, clean subfloor at a temperature of 18°C--27°C. This temperature should be maintained throughout the duration of the installation and thereafter. The minimum temperature of the subfloor should be 15°C. Care should be taken when handling all types of floorcoverings to ensure that safety procedures are followed and damage does not occur to the material.

### **CONDITIONING - TILES**

It is important that tiles, when stored are stacked no higher than 80cm high. At least 24 hours prior to use, the material should be removed from their cartons and placed in small neat vertical bundles no higher than 20cm high and acclimatise within the area to be installed at a temperature of 18 - 27°C. This temperature should be maintained throughout the duration of the installation and thereafter. The minimum temperature of the subfloor should be 15°C. Care should be taken when handling all types of floorcoverings to ensure that safety procedures are followed and damage does not occur to the material.

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### INSTALLATION PROCEDURES – SHEET

1. Prepare the subfloor as necessary and remove all trace of debris.
  2. Ensure that material with identical batch numbers are allocated within each separate area to be installed. Whenever possible, consecutive roll numbers should be installed in sequence.
  3. Plan the sheet direction of the area to be installed to ensure whenever possible that joins do not coincide with doorways or main traffic lanes. Identify the approx location of each sheet.
  4. Cut off the lengths of the material 10cm longer than the net size measured.
  5. Scribe the first sheet down the length of the room with the two ends lapped up the wall. Cut down the scribe mark using utility knives with straight and hook blades removing the scrap material and place into position.
  6. Place the sheet tightly against the wall and draw a pencil line down the edge of the Safetred on the subfloor lengthways opposite the scribed wall.
  7. When in position draw a pencil line at 90° to the edge of the sheet from the Safetred onto the subfloor using a ruler. This cross mark should be approximately 20cm away from one of the ends still lapped up the wall.
  8. Slide back the sheet along the first pencil line until the end of the sheet lies flat on the subfloor and slightly short of the wall. The two cross lines will now have moved apart.
  9. Set the long scribes to the distance between the two lines and scribe this size from the wall onto the Safetred at the same time keeping the scribes parallel with the sheet edge. Cut and remove the surplus as before.
  10. Slide the Safetred back into its previous position with the material now fitted to the long wall and end wall. Repeat the last procedure for the end still lapped up the opposite wall.
  11. All consecutive sheets should be installed in the opposite direction to the previous sheet installed (reverse sheets).
  12. Overlap the next sheet by 2.5cm with one end already 2 - 3cm short of one wall. Adjust the scribes to scribe a small amount off this end of the sheet and cut to size. Slide this end of the sheet into position against the wall. Now repeat the procedure adopted for fitting the previous sheet where the Safetred was still lapped up the remaining wall. Adjust the scribes to scribe a small amount off this end of the sheet and cut to size.
  13. This entire procedure should be copied for all consecutive sheets apart from the last sheet, which should be installed in the same manner as the first.
  14. Only install the amount of floorcovering that can be adhered to a subfloor in one day.
  15. Just prior to bonding the Safetred, all joins should be re-cut. Strike a chalk-line 1cm in from the overlapped edge of the top sheet and re-cut using a knife and straightedge by cutting through 2/3 of the thickness of the sheet prior to cutting with a hook knife. Use this newly cut edge to guide a pin-vice along onto the sheet below. Deepen this cut with a utility knife and finally undercut with a hook knife.
- Or
16. Cut a good edge on the material and then overlap uncut edge on top. Scribe bottom edge of the Safetred top sheet by using a short scribe. (over & unders).
  17. Carefully pull the sheets back half their length and re-sweep the back of the Safetred and the subfloor to ensure that no debris is present that may visually impair the installation and cause premature wear.
  18. In areas that will be subjected to high levels of water abuse from the surface and has open edges e.g. sluices rooms, it is then essential that the material is adhered with epoxy adhesive or a polyurethane adhesive. In other standard areas such as domestic areas including i.e. kitchens, bathrooms, general circulation areas and commercial situations that do not have high water/liquid spillage, the material can be adhered with an acrylic/acrylic pressure sensitive adhesive.
  19. For smaller applications Tarkett Tarkospray adhesive can be utilised following the instructions clearly labelled upon the can, which may provide a simpler installation procedure for smaller areas.
- Or
20. Apply Embond 170 acrylic pressure sensitive adhesive from Tarkett. **Pressure sensitive adhesives should be trowel applied using a euro A2 or a 1.5mm x 5mm "V" notched trowel and then immediately rolled with a lambs wool roller (removes the risk of a trowel applied adhesive mirroring), which should be continually re-saturated in adhesive directly from the adhesive tub to prevent the original trowel applied adhesive from being poorly dispersed over the subfloor. Allow the adhesive to become opaque and tacky, prior to placing the material into the adhesive and roll with a 68Kg roller. Do not roll the last 25cm section of the vinyl, as this will ensure that the second half of the sheet is easily pulled back to expose the edge of adhesive.**

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21. Repeat procedure for second half of the sheets as soon as the first half has been adhered.
22. Repeat rolling at 15 minute intervals until fully bonded to the subfloor, paying close attention to sheet joins, cross-joins and ends of sheets. Inaccessible areas should be rolled with a hand roller. Remove any excess of adhesive with a cloth moistened with water or if dry, use nothing stronger than white spirit.
23. After a lapse of at least 24 hours, hot weld with matching Safetred weld rod at a temperature of between 250-300°C when the welding equipment is fitted with a speed-weld nozzle.
9. Re-sweep the back of the cushioned flooring and the subfloor to ensure that no debris is present that may visually impair the installation and cause premature wear.
10. For smaller applications Tarkett Tarkospray adhesive can be utilised following the instructions clearly labelled upon the can, which may provide a simpler installation procedure for smaller areas.
11. For larger situations apply an acrylic adhesive from the current adhesive range of Tarkett Embond 170.

### **INSTALLATION PROCEDURES - SAFETRED UNIVERSAL ACOUSTIC (FULLY ADHERED)**

1. Prepare the subfloor as necessary and remove all traces of debris.
  2. Ensure that material with the same batch number is allocated to each area to be installed. Consecutive roll numbers should also be used.
  3. Plan the sheet direction of the area to be installed to ensure whenever possible that joins do not coincide with doorways or main traffic lanes.
  4. Cut the lengths of the material 10cm longer than the size of the measured length of the room.
  5. Place first sheet against the longest wall with the surplus material riding up either end of the room/area being installed and scribe down this wall using a long scribe.
  6. All consecutive sheets should be installed in the opposite direction to the previous sheet installed. (reverse sheets) i.e.: 1<sup>st</sup> sheet facing north, 2<sup>nd</sup> sheet facing south, etc. Arrows on the reverse of the material can identify the direction of the sheets. Overlap each sheet by approximately 2.5cm onto the previous sheet and allow the cushioned flooring to ride up the wall at either end of the room as before.
  7. Prior to adhering the cushioned flooring, all the overlapped joins should be cut in by placing a straightedge on top of the overlapped material 10mm in from the edge of the sheet. Cut through both top and bottom sheets by guiding the knife down the edge of the straightedge.
  8. Carefully pull the sheets of cushioned flooring halfway back across the size of the room, one sheet at a time, until all the sheets are pulled back to expose the subfloor.
  12. The adhesive should be applied using an appropriate 'V' notched trowel (pressure sensitive adhesives should be trowel applied and then flattened with a lamb's wool roller – please seek adhesive manufacturers advice). It is important that the notches on this trowel remain the correct size throughout the duration of the installation. Place the cushioned flooring into the adhesive whilst wet (pressure sensitive – seek manufacturers advice) and roll with a 68kg roller in both directions. Do not roll the last 25cm section of the Acoustic vinyl, as this will ensure that the second half of the sheet is easily pulled back to expose the edge of adhesive.
  13. Whilst the adhesive is still wet, trim the cushioned flooring flush with the skirting. This can be achieved by using an adjustable trimming tool, which are readily available from floorcovering distributors, or if preferred, 'free-handing' the material to the skirting using a hook knife. Once the cushioned flooring has been trimmed flush with the skirting, roll with a 68kg roller until fully bonded to the subfloor.
  14. Now repeat sections 8-11 for the other half of the sheets prior to the adhesive setting on the first half.
  15. After a lapse of at least 24 hours, hot weld the cushioned flooring using vinyl flooring weld rod at a temperature of between 250-300°C when fitted with a Tarkett speed-weld nozzle. Although cushioned flooring can be solvent welded, the preferred solution is to hot weld.
- Cushioned flooring can also be installed using the conventional method of scribing with long scribes, but as the product is so flexible, it is not as easy to trim as some cushioned vinyl. If in doubt use conventional installation fitting techniques.

### **INSTALLATION PROCEDURE – (SAFETRED UNIVERSAL AND SPECTRUM TILES)**

1. Prepare the subfloor as necessary and remove all traces of debris.

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2. Ensure that material with the same batch number is allocated to each area to be installed. Consecutive box numbers should also be used whenever possible.
  3. Plan the area to be installed to ensure whenever possible that small cuts (-10cm) of tiles are not used, especially near doorways.
  4. Choose one of the longest walls in the area to be installed.
  5. Measure out from this wall at either end, across to the other side of the room.
  6. If there is a significant difference in both of these sizes, choose the larger of the sizes.
  7. Again measure out from the same wall at both ends. This time measure only half the size previously chosen. Mark this size on the subfloor in pencil.
  8. Strike a chalk line between both pencil marks. This chalk line now indicates the centre of the width of the room.
  9. Repeat procedures 2-6 on the shortest walls at the top and bottom of the area to be installed. This now indicates the centre of the length of the room.
  10. Although the centre point of the area to be installed has now been identified, this procedure does not calculate the size of the part tiles that will have to be inserted at the edge of the walls. They may be too small to be acceptable, (-10cm)
  11. To adjust the size of the perimeter tiles, move the centre chalk-line half the size of the tile e.g.: - tile size 50cm, move the chalk-line 25cm, from its present location. By doing this, the tile size at the perimeter of the walls will increase or decrease in size whilst still achieving a balance tile size on either side of the area being installed.
  12. When the chalk-line is in its final position, butt a straightedge up against them and draw a pencil down the edge of the straightedge onto the subfloor. Apply the adhesive up to the edge of the pencil mark, which represents the chalk-line.
  13. **In areas that will be subjected to high levels of water abuse from the surface and has open edges e.g. sluices rooms, it is then essential that the material is adhered with epoxy adhesive or a polyurethane adhesive.** In other standard areas such as domestic areas including i.e. kitchens, bathrooms, general circulation areas and commercial situations that do not have high water/liquid spillage, the material can be adhered with an acrylic/acrylic pressure sensitive adhesive.
  14. For smaller applications Tarkett Tarkospray adhesive can be utilised following the instructions clearly labelled upon the can, which may provide a simpler installation procedure for smaller areas.
- Or
15. Apply Embond 170, pressure sensitive acrylic adhesive from Tarkett. Pressure sensitive adhesives should be trowel applied using a euro A2 or a 1.5mm x 5mm "V" notched trowel (It is important that the notches on this trowel remain this size throughout the duration of the installation) and then immediately rolled with a lambs wool roller (removes the risk of a trowel applied adhesive mirroring), which should be continually re-saturated in adhesive directly from the adhesive tub to prevent the original trowel applied adhesive from being poorly dispersed over the subfloor. Allow the adhesive to become opaque and tacky, prior to placing the material into the adhesive, then roll with a 68Kg roller. The tiles are marked with direction arrows on the reverse and should always be installed in the same direction. Place the Tiles into the adhesive (butting them firmly together) at a late but wet placement and roll with a 68Kg roller in both directions.
  16. When applying adhesive to the subfloor, it is important that only the area that can be comfortably installed within the open time of the adhesive, should be applied.
- Failures of tile installations are almost always due to late placing of the tiles into the adhesive. In other words the adhesive was too dry when the tiles were placed on the floor. Perimeter tiles are notorious failure areas.**
17. When installing tiles, try to leave the perimeter area dry of adhesive, especially in large areas. Fit the tiles dry, then remove and apply the adhesive or apply the adhesive just prior to cutting to size.
  18. Use a 68Kg roller to ensure that the tiles are firmly bonded into the adhesive as the installation is progressing.
  19. After 24 hours weld the tiles if requested, if the tiles are installed in very wet area or being used in a heavy use **area**.

### WALL INSTALLATION PROCEDURES

If the walls are also to be covered with Tarkett Aquarelle, Wallgard or another type of PVC covering, this should take place after the installation of the floor covering.

### DRAINAGE

1. Only drainage systems with specifically designed drainage covers are suitable for using with a vinyl floorcovering in this type of application, e.g.: Tarkett supplied floor drains, flanges and clamp covers.
2. **IMPORTANT:** to allow perfect water drainage, the subfloor should be foreseen with a slope of 1 cm per metre towards the drain.

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### WELDING SAFETRED

#### SHEET

1. Allow at least 24 hours to lapse prior to hot welding with the Safetred welding cable.
2. Groove seams using a Tarkett Seam Groover (1258027) & Blade (1258028), "P" type grooving tool or an automatic seam router.



3. The groove should be down 2/3 into the thickness of the material.
4. Make sure the groove is clear of all debris and excess adhesive prior to commencing welding.
5. The recommended welding temperature is 250-300°C when fitted with a Tarkett (1258012) speed-weld nozzle.



6. Using a Leister hot air welding gun fitted with a speed-weld nozzle, this will require the setting to be approximately number 5 - 6. If unsure consult manufacturer's instructions for correct setting. Set the welding gun at this temperature for several minutes prior to commencing welding to attain the correct temperature.
7. Try out the welding operation on a scrap piece of Safetred prior to welding the main area.
8. Weld at approximately 2 metres a minute.
9. Preferably 2 people welding. One operative welding at least 3 metres ahead of the other prior to the second person trimming the cable 1mm proud of the Safetred with the aid of a spatula knife inserted into a welding slide. The weld should then be allowed to cool down. Finally trim the weld cable flush with the surface of the **Safetred with the spatula knife only.**

#### \*TILES (IF REQUESTED, ARE INSTALLED IN VERY WET AREA OR BEING USED IN A HEAVY USE AREA)

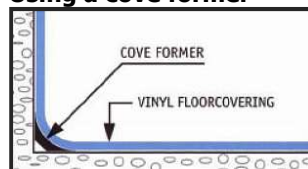
1. Allow at least 24 hours to lapse prior to hot welding with the Safetred welding rod.
2. Groove seams using a Tarkett Seam Groover (1258027) & Blade (1258028), "P" type grooving tool or an automatic seam router.

3. The Safetred should be grooved 2/3 into its thickness.
4. Make sure the groove is clear of all debris and excess adhesive prior to commencing welding.
5. The recommended welding temperature is 250-300°C when fitted with a Tarkett speed-weld nozzle, item - 1258012.
6. Using a Leister hot air welding gun fitted with the speed-weld nozzle, this will require the setting to be approx. 5-6. If unsure consult manufacturer's instructions for correct setting. Set the welding gun at this temperature for several minutes prior to commencing welding to attain the correct temperature.
7. Try out the welding operation on a scrap piece of Safetred prior to welding the floor joins.
8. Weld at approximately 2m a minute. Preferably 2 people welding, one operative welding at least 3m ahead of the other prior to the second person trimming the cable 1mm proud of the Safetred with the aid of a spatula knife inserted into a welding slide. The weld should then be allowed to cool down. Finally trim the weld cable flush to the surface of the Safetred using the spatula knife only.

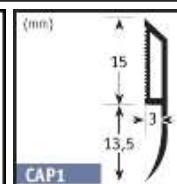
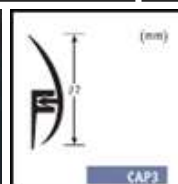
### SELF COVING SHEET

It is also possible to self-cove Safetred without the use of a cove former however in regard to Safetred Universal and Spectrum it is recommended that this is cove formed over a 1.5 to 4 cm radius cove former and up a wall to a desired height where it is normally finished to a PVC capping seal. This can be achieved in one piece with a minimum of joints, however if the product is one that may need a cove former there will have to be internal and external vertical joints. If the product is one that is cove formed without a cove former care must be taken when easing the vinyl into the up-stand angle (see the diagrams, cove former and capping strip examples below). Bond all vertical surfaces and cove detail with a solvent free contact adhesive.

#### Using a cove former



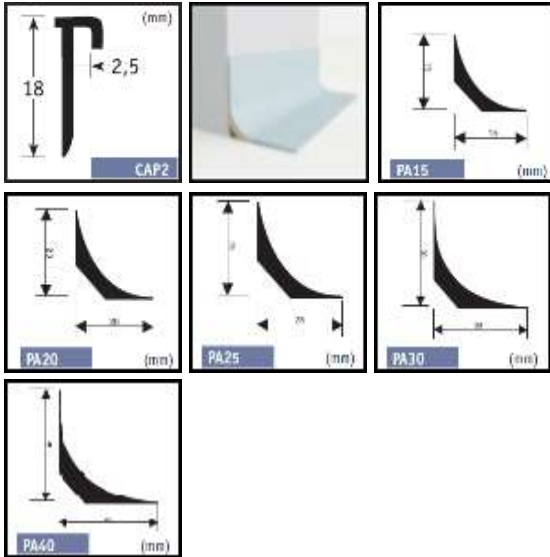
#### Without a cove former



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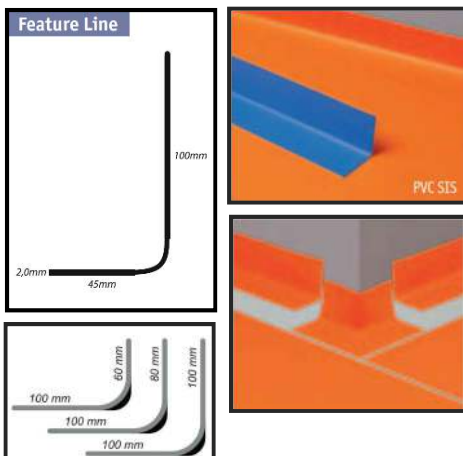
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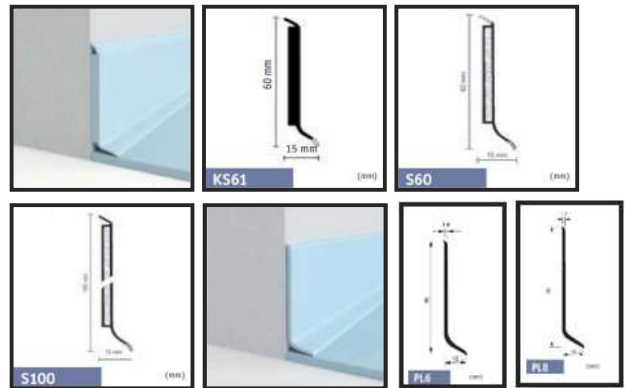
### PVC PRE-FORMED SET-IN COVING

This type of product is available in various lengths or rolls and varies in height and protrusion at the foot of the cove. Fix the coving to a prepared wall and subfloor with a contact adhesive. Measure the area to be installed and cut off the lengths of the vinyl so that they overlap onto the cove by approximately 2cm. Overlap sheets by 2.5cm and re-cut to leave a close butt joint. Adhere the vinyl using the same acrylic adhesive as before for the sheet (whilst still overlapping onto the cove) up to the edge of the set-in cove. Using short scribes, (over & unders) scribe and cut the vinyl to the edge of the set-in cove and roll with a 68Kg roller whilst the adhesive is still wet. After the lapse of at least 24 hours, hot weld all sheet to sheet and sheet to set-in coving joints with the matching Eclipse welding rod.



### PVC SIT-ON COVING (NOT SUITABLE FOR VERY WET AREAS)

This type of coving should not be used when watertight joints are required. It is normally used as an alternative to a wooden skirting in areas that will not be subjected to large amounts of surface applied water. Sit-on PVC coving is available in lengths of 2m as well as in coils of varying lengths and is normally 10cm in height and protrudes 1-1.5cm out at the toe. Install the floorcovering in the normal manner, scribing to a wall instead of a skirting and adhere to the subfloor. Fix the coving to a prepared wall with a contact adhesive. Prior to adhering the sit-on coving to the wall, the scribed edge of the floorcovering to the wall can be sealed with a sealant. This will provide extra protection to the floorcovering from surface moisture attack, but should not be used as a cheaper alternative to a pre-formed coving or self-coving when a watertight joint is required.



If any doubts or clarifications should be needed, please contact the Tarkett Technical Division or your local Tarkett representative for further information.