Installation guidance

Altro safety flooring

October 2023

Key points to consider when installing Altro safety flooring

- **Ensure that the correct product is selected for the area type**
- **Ensure that the correct adhesive is selected for the area type**
- **Always hot weld the flooring joints ensuring that the correct tools are used for grooving, hot welding and trimming**
- **Always leave the floor suitably protected from other trades using a suitable non-staining floor protecting covering**

Storage

Altro safety flooring should be laid in accordance with the Code of Practice BS 8203:2017 which will ensure a better fit. The material should be stored for a minimum of 24 hours at a room temperature of not below 18°C. If the floor covering has been stored or transported immediately prior to delivery at a temperature of less than 10°C, then the acclimatisation period should be extended to 48 hours. When laying, the area should be at a steady temperature of between 18°C and 27°C with a relative air humidity of between of 35% and 65% RH for at least 48 hours prior to, during and for at least 24 hours after completion.

The material should be checked for any possible faults prior to laying and should be cut into lengths and laid loose for conditioning before adhering to the subfloor for a minimum of 2 hours. The surface temperature of the subfloor must not be below +10°C, and for installations over underfloor heating must be between +18°C and +22°C. Prior to installation, all material including adhesives and accessories should be allowed to reach room temperature.

The material should then be back rolled or dressed before scribing in order to take out any tension in the product. Ensure that the material used in any one area is from the same manufacturing batch.

Pattern ranges of Altro safety flooring will require the pattern to be matched from sheet to sheet and will require removal of selvedge (for further information contact Altro).

Claims against guarantee for colour, batch or obvious material defects will only be considered if the flooring has not yet been permanently bonded.

Subfloor

The subfloor must conform to the requirements of BS 8203:2017 and reach a minimum surface regularity of SR2. The subfloor surface must be clean and free from contamination such as debris / dust or loose particles. Absorbent surfaces may need priming using a suitable acrylic primer or diluted acrylic adhesive / pressure sensitive adhesive in accordance with manufacturer's instructions, spray adhesives and PVA used as primers should be avoided. The primed surface must be completely dry before installation starts. Prior to installation, all material including adhesives and primer if using, should be allowed to reach room temperature.

Timber subfloors

For best possible results all wooden floor boards, wood based panel boards, particle boards including orientated strand board (OSB) should be securely fixed and overlaid with a minimum 5.5 mm thickness plywood to provide a smooth and even surface. Wood based floating flooring, such as chipboard, also require overlaying with a minimum 5.5 mm thickness suitable flooring grade plywood. Any bumps, dips or voids may be evident in the finished flooring if not overlaid with a suitable plywood.

Flooring grade plywood such as Hanson SP101 or similar should be used. Refer to BS 8203: 2017 and the Contract Flooring Association for guidance and advice for a suitable plywood specification. All screw and nail head fixings must be below surface of overlayed plywood and any indentations and joints in the plywood filled with an appropriate filler. A further application of primer and a flexible fibre reinforced smoothing compound may be necessary over the plywood.

Suspended timber floors should be adequately ventilated in accordance with BS 8203:2017. Floor boards and similar substrates should be of a grade and thickness of timber appropriate for the construction of the floor, nature of the building, expected design loading and have a moisture content of max 8% (equivalent to 40% RH at +20°C).

Wood block floors

Altro safety flooring can be installed on existing wood block floors EXCEPT for wood blocks laid at ground floor level. If above ground level, and there is no chance of moisture ingress, they should be securely bonded to the base, and be smooth, even and free of any oil or wax based finishes. Wood blocks should be covered with minimum 5.5 mm thickness flooring grade plywood (Hanson SP101 Ply or similar) to provide a smooth an even surface before installation of Altro safety flooring. If any doubt exists, contact Altro Technical Services for advice.

Concrete subfloors

All ground level floors should have a suitable moisture barrier and for glued down floors must not exceed 75% RH. If any doubt exists a surface applied damp proof membrane (DPM) or other appropriate moisture protection system should be used in accordance with BS 8203:2017. If in any doubt please contact Altro Technical Services for more advice.

Expansion Joints

Altro safety flooring should never bridge an expansion joint. The joints need to be brought through to the final floor finish, and the floor coverings should finish either side of the joint. If required a suitable expansion joint cover strip can be used - please contact Altro Technical Services for more advice.

Adhesive

Altro recommends the use of AltroFix 19 Plus in wet areas such as bathrooms and kitchens. For other areas please follow adhesive manufacturers recommendations.

Spread the adhesive, following the adhesive manufacturers instructions including trowel size and coverage rate, ensuring that the correct notch size is maintained throughout the installation. If the notch shows signs of wear the trowel should be renewed immediately. Excess adhesive should be removed with a cloth with a neutral detergent in the case of acrylic adhesive or with alcohol for two component adhesives. Removal of excess adhesive should be done as work progresses and whilst the adhesive is still wet.

Please note: Backing materials may vary. All Altro fleece backed products need to be installed whilst the adhesive is wet, however instructions may differ dependent on subfloor type.

Installation

Altro safety flooring can be straight laid or used in conjunction with “sit on” or “set in” skirtings. The materials can also be self-coved. Altro Illustra should be reverse-laid, i.e. the lengths are laid against each other in opposing directions. Consult the label for the relevant instructions.In areas that are subject to moisture spillage, the complete installation must be sealed ie. the use of conventional clamping or welding type drain gulleys and access covers, sealing of pipes, toilet pans, door frames etc. and the use of appropriate sealing methods between the junction of the Altro flooring and the wall covering or other floor surfaces. Refer to the Altro detail diagram sheet of the appropriate finishes.

Once the material has been laid out and conditioned, all joints should be overlapped by approximately 20mm and cut in to form a tight joint to remove the factory edge, and any damage from storage and handling. The patterned wood ranges will require the pattern to be matched from sheet to sheet and the selvedge should be cut back to the nearest plank (for further information contact Altro). These can either be cut in before or after applying the adhesive and will depend upon the preference of the flooring installer, however, it should be borne in mind that in large installations if the joints and / or the perimeter has been cut in, any movement of the sheet whilst placing it into the adhesive will create a problem. A 2mm gap should be left between the flooring and perimeter edge to be filled later with AltroMastic 100. Turn the material back and apply the adhesive to the subfloor in accordance with the manufacturer’s instructions.

After the specified open time, which can depend upon the subfloor, underlayment and ambient conditions, place the floor covering back into the adhesive pushing out any air bubbles. Remove any excess adhesive immediately and depending upon the adhesive used roll the whole area with a floor roller both width ways and length ways. All joints within the sheet should then be grooved and hot welded.

Grooving

A 3mm wide groove to 2/3 depth of the flooring must be cut evenly along each floor joint using a hand or automatic rotary grooving tool. With acoustic backed products, such as Altro Wood Comfort, care must be taken not to expose the foam backing and will require shallower grooving. Use of the special Altro automatic grooving blades is recommended as standard blades are quickly worn when used on safety flooring. When self coving products with PUR coatings, it is imperative that internal corners are grooved to ensure coatings are removed.

Forming a hot welded joint

After cutting in and adhering the sheet vinyl flooring, and following the initial curing period of the adhesive, all joints must be hot welded with Altro Weldrod™, using a hot air welding gun fitted with a 5mm high speed welding nozzle. We recommend the use of an anti-glaze nozzle when welding Altro Suprema. Internal and external mitres should be hot welded. After a long period of use,the filter of the welding gun may become clogged with debris. This must be kept clear to reach the optimum weld temperature.
Where possible, allow 24 hours between laying and welding, to ensure the adhesive is fully cured. However, when installing Altro adhesive-free flooring welding can be carried out immediately after installation as no wet adhesive is used with this system.

Welding

The internal and external mitres on the coved sections should be welded first. Turn the speed nozzle at the end of the welding gun to the up position, for easier starting, or use an Altro coving speed nozzle. Once the mitres are finished, turn the nozzle to the down position to hot weld the grooved floor joints.

Finishing

Once the weld has cooled, trim the weld with the most appropriate tool such as a spatula fitted with a spatula guide or sledge. Then once fully cooled, using the spatula only, trim the weld flush with the surface of the flooring material. For external mitres use the square router blade and for internal mitres the round router blade. For Altro Marine™ 20 safety flooring the Altro T20 chisel has been specifically designed for removal of surplus weldrod.

For details on equipment and tools, refer to Altro's Recommended Equipment and Tools data sheet.

Underfloor heating

Underfloor heating must be fully commissioned and taken through two complete cycles of heating up and cooling down prior to the floor covering being installed. The temperature at the underside of the floor covering, i.e. the subfloor / adhesive bond line, should never exceed 27°C. The relative humidity of the subfloor must be 75% RH / 2 CM% or less.

Glued down Altro safety flooring must be installed while the underfloor heating is switched off. It should be switched off 48 hours prior to the floor covering installation and should remain off for the duration of the installation and at least 48 hours after completion. After the 48 hours have elapsed the temperature of the heating system should be increased gradually over several days, by a maximum of 5°C per day, until the desired room temperature is reached. The temperature at the underside of the floor covering, i.e. the subfloor / adhesive bond line, should never exceed 27°C.

Adhesive-free flooring can be installed whilst the underfloor heating is on, only if the floor covering has been acclimatised and laid out in the room for at least 2 hours before installation. Issues will arise if the underfloor heating system is not commissioned and/or the floor covering is not acclimatised beforehand, and the temperature of the underfloor heating is increased from cold quickly instead of incremental.

Please contact Altro Technical Services for more advice on installing Altro safety flooring over underfloor heating.

Laying Altro Static Dissipative safety flooring

Altro Walkway™ 20SD should be installed following the same procedure as standard sheet. But the recommended conductive adhesives must be used and laid into wet to ensure adequate transfer to the product. Double dropping the product can be beneficial when using copper strips (refer to the Altro adhesives guide).

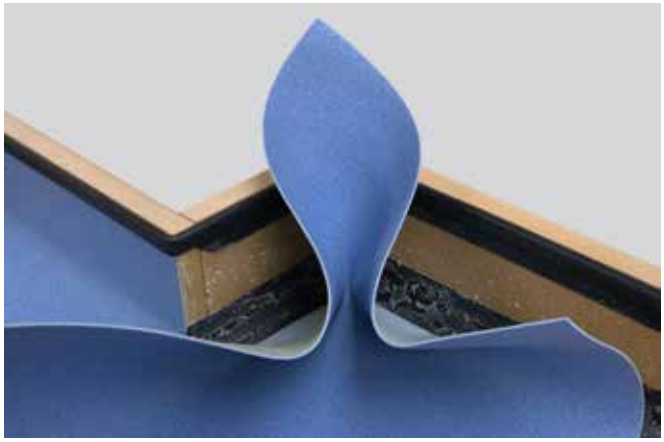
The use of copper strips, etc, will depend upon the requirements and standards that the client needs to achieve (for further information contact Altro Technical Services).

Protection and maintenance

Altro safety flooring must be covered and protected from all other trades with a suitable non-staining protective covering. Self adhesive protection should never be used directly on the floor surface. The use of temporary protection is particularly pertinent when relocating heavy furniture or equipment. Claims against damage due to incorrect protection will not be accepted.

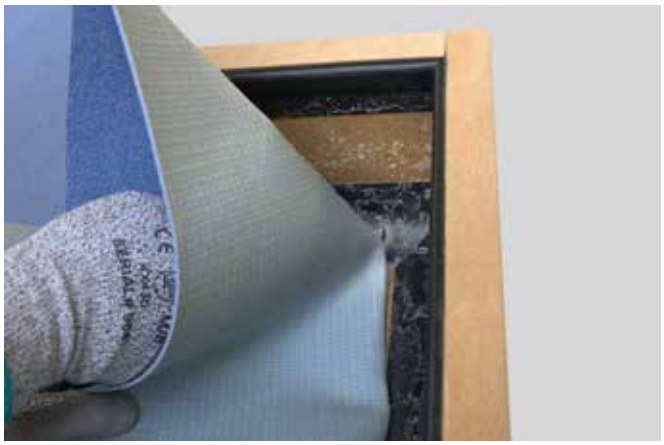
For maintenance of Altro safety flooring refer to Altro's cleaning and maintenance recommendations.

Forming an internal mitre



1. Once the main flooring is laid and adhered, push the flooring into the internal corner as far as possible, ensuring that the bottom edge of the flooring is touching the lower edge of the cove former where it meets the subfloor.

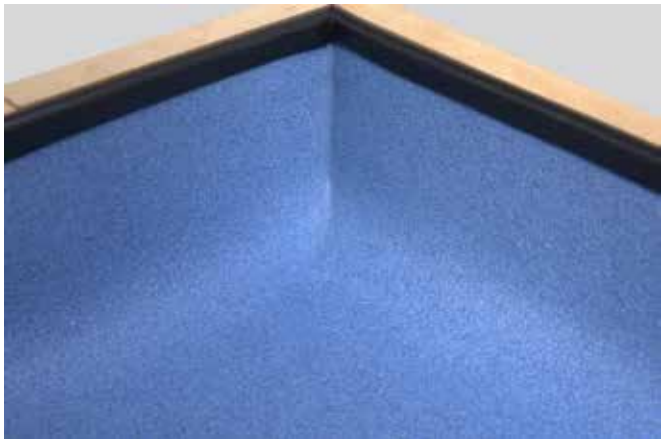
2. Pinch the two sides of the flooring together so that the top edges are parallel/in line with each other.



3. Make a cut from the base out to the top of the flooring along the pinched line.

4. Fold in one side of the mitre and carefully cut off the surplus material.

5. Fold in the second side and carefully cut in to complete the joint.



6. Adhere and hot-weld the joint.

Forming of an infill section on an external corner

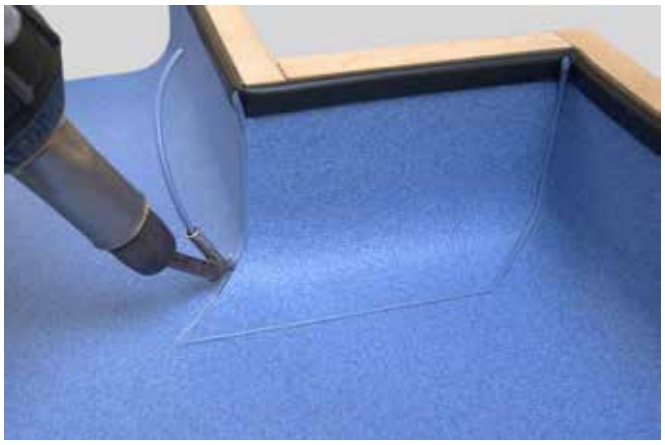
1. Fit the flooring to the closest/front wall. Cut down the external mitre, ensuring you have left sufficient excess to drop back into the internal mitre.

2. Fit the flooring to the back wall. Trim off the excess height and cut in the internal mitre. Bring this cut down the corner until it reaches a minimum of 20mm from the bottom edge of the cove former. Continue the cut parallel to the cove former until it has joined up with the external mitre.

3. Using a pre-adhered section of flooring roughly cut to the size of the infill section, fit tightly into the internal mitre before adhering the section to the wall and cove former.

4. Carefully trim off all excess flooring, leaving a tightly fitted infill section.

5. Groove all joints.



6. Hot weld all joints starting from the top.

7. Allow the weldrod to cool completely, and trim off excess weld using sledge and spatula.

Welding an internal mitre

1. Groove both the lower section and upper sections of the joint.

2. Thread the weldrod through the nozzle and weld the joint starting from the top.

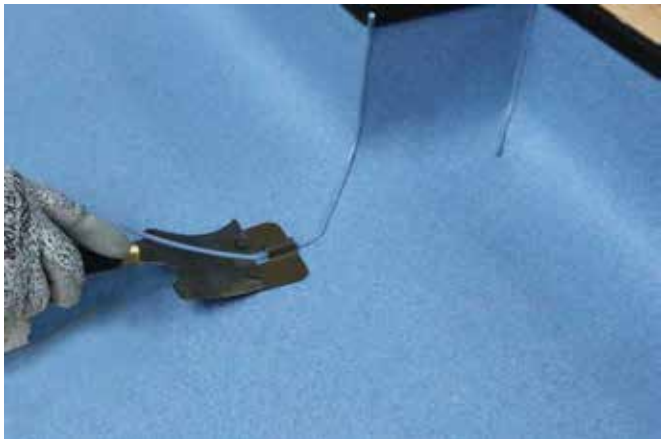
3. Trim the weldrod with the round router blade.

Welding an external mitre

1. Use a concave blade to prepare the upstand and cove former sections, creating a ‘V’ section in preparation for hot welding.

2. Groove the join on the flat section of the floor.

3. Weld the external mitre from top to bottom, being careful not to press the weldrod too firmly on the upstand section as this can cause damage to the flooring.



4. Allow the weldrod to cool completely, and trim off excess weld using sledge and spatula on the lower section.

5. Chamfer off the external mitre with the square router blade.

For further information or technical advice
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