Chapter 8

Heat welding

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8.1 Welding seams

After all seams have been grooved, heat welding can begin. All seams and corners must be grooved heat welded with weldrod. When welding traditional safety flooring use a 4mm speed tip. For all of our non safety flooring a 4mm narrow flow tip should be used. Weldrod is supplied in colors to suit the floor covering being used. Wait overnight for adhesive to set before welding.

This wait period is not required for our adhesive free products.

Preparation

- Ensure the heat welding nozzle is free of debris by cleaning the inside of the barrel with a wire brush before each weld.
- Make certain the heat welding gun is between 482°F (250°C) and 662°F (350°C). Test on scrap pieces of material to ensure complete melting and fusing of the heat-weld rod and floor material and to ensure that a smooth and uniform heat-weld can be achieved without burning (the final speed of heat-welding and temperature setting will need to be determined through practice). Ensure the weldrod is cut to the correct length for the seam to be welded and that it will not catch on any objects in the area.

Welding

- Move the welding gun along the grooved seam with the weldrod feeding through the nozzle at the predetermined speed and temperature.
- Do not lean the gun to the right or left. Keep the foot of the nozzle parallel to the floor surface.

8.2 Trimming seams

Horizontal areas

In flat areas, trimming of the weldrod should be carried out in two stages:

- Place a trim plate over the weldrod and trim off the top layer of the weldrod with the spatula knife. This can be done while the weldrod is still warm.
- When the remaining weldrod has cooled, trim the excess weld flush with the flooring surface using a spatula knife (without the trim plate).

Corners and vertical coved areas

Use X-ACTO blades to trim cooled weldrod in corners and coved areas.

Altro Marine 20 safety flooring

After heat welding Altro Marine 20, use a Slim Trim Chisel, with a straightedge as a guide, to trim the excess weldrod. For questions please contact Technical Services.

8.3 Welding corners

To weld internal and external corners, turn the nozzle at the end of the welding gun to the “up” position which allows for an easier starting point and proceed as shown. Once all the welding on the coved sections is completed, turn the high speed nozzle to the “down” position and heat weld the grooved floor seams.

A feed roller may be used in lieu of a welding tip when heat-welding corners and certain other hard to access areas of heat-welding.

Welding an internal corner

1. All internal corners must be grooved before heat welding.

2. The X-ACTO small round router blade should be used for trimming the cooled weldrod on internal corners.
Welding a butterfly external corner

1. The seams must be grooved before the seams are welded. The use of a diamond shaped X-ACTO blade inserted into the end of the reduction nozzle can be very helpful when grooving vertical seams. Make sure to turn the heat down on the welder. Remember to always try this method on a scrap of material first to dial in the heat correctly and not burn the flooring or capping.

2. Feed the weldrod through the nozzle and weld down the seam, or use a feed roller for better control. Avoid contact with the vinyl cap.

3. Allow the weldrod to cool down before cutting off the surplus with a spatula. The X-ACTO large round router blade should be used for trimming the weldrod where the two seams meet at the corner.

Welding a boot external corner

1. The bottom section and floor seams must be grooved before the seams are welded. The top section normally does not need to be grooved as a “V” shape will be formed when cutting in the corner.

2. Adhesive must be properly set. To make it easy to weld the corner, turn the nozzle around and feed the weldrod through the nozzle and weld down the corner.

3. Allow the weldrod to cool down before cutting off the surplus with a spatula on the level floor seams.

4. The external corner should be trimmed off using the X-ACTO square router blade.
8.4 Optional non-warrantied chemical seam sealing

While Altro floor coverings are designed for heat-welding, in certain residential or light use commercial installations they may be seamed by a chemical (cold) welding process. This installation technique is not to be used in wet environment installations or with the following products: Altro Stronghold 30, Altro Atlas 40, Altro Aquarius, and Altro Marine 20. Please consult Altro technical services for authorization and further information.

For chemical welding to offer the best possible performance, the installation, and in particular the seaming process, needs to be of the best workmanship quality.

Suitability and performance of chemical seam sealing of Altro flooring is the sole responsibility of the specifier, flooring contractor, and installer; any installation performance shortcomings should not be considered an Altro product defect. Altro recommends the heat-welding of all seams.

Chemical/cold weld seam sealing procedure

- Wait overnight before welding.
- Areas to be chemically welded must fit net. Do not cut in or fit areas too tight as it will be difficult to chemically weld properly.
- It’s imperative to keep the flooring adhesive from touching and contaminating the seam edges.
- Roll area that is to be chemically welded with a hand roller and insure that the area is well adhered and permanently bonded.
- Clean the area that is to be chemically welded with damp soapy cloth, using a neutral detergent and water and allow to completely dry.
- Take the chemical/cold weld单元 and lightly squeeze the unit expelling a small amount of air. While slightly releasing the squeezing pressure on the unit, invert the unit and insert the needle-tip firmly down and into the full depth of the seam. *Chemical/cold weld is not manufactured or supplied by Altro.
- Reapply a light squeezing of the unit to allow the chemical from within the unit to flow down into the full depth of the seam.
- Pull the unit slowly toward yourself continuing to deposit a bead of chemical weld down into the full depth of the seam and depositing approximately 1/8” to 1/4” wide on the flooring surface.
- When finished chemically welding stop squeezing the chemical weld unit and remove from the seam area.
- Ensure that the chemical weld has penetrated the full depth of the seam as this provides the full strength of the chemical weld throughout the seam thickness.
- No traffic is recommended on the areas for approximately two hours after chemically welding.
- Chemical cold weld cannot be cleaned or removed from the flooring, utmost caution must be used in applying a clean, neat, and uniform bead of the chemical.