Chapter 6

Heat welding

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6.1 Welding horizontal seams

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

Preparation

• Ensure the heat welding nozzle is free of debris by cleaning with a wire brush.
• Make certain the heat welding gun is between 482°F (250°C) and 662°F (350°C). Test on scrap pieces of material.
• Ensure the Altro 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 thread feeding through the nozzle at a 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.

6.2 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. Remove tip and reduce heat setting to approximately 250°F (120°C).

6.3 Trimming horizontal seams

Horizontal areas

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

• Place a trim plate over the Altro Weldrod and trim off the top layer of the Altro Weldrod with the spatula knife. This can be done while the thread is still warm.

Corners and vertical coved areas

Use X-ACTO blades to trim cooled Altro 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 Altro Weldrod. Refer to the Construction tools catalog for more information about tools and equipment.

6.4 Welding an internal corner

1. Internal corners of traditional safety flooring do not need to be grooved. All other sheet floor needs to be slightly grooved to remove the top surface.

2. The X-ACTO small round router blade should be used for trimming the cooled Altro Weldrod on internal corners.
6.5 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 Altro 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.

6.6 Welding a butterfly external corner

1. The seams must be grooved before the seams are welded.

2. Feed the Altro 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 Altro 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 Altro Weldrod where the two seams meet at the corner.
6.7 Chemical seam sealing of Altro floorings

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. 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 unit 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.
- 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.
6.8 AltroMastic™ 100

AltroMastic™ 100 is used for sealing around pipes and other adjacent surfaces. It is not to be used for sealing seams of Altro high performance floor covering, around drains or internal and external corners. AltroMastic 100 is available in a variety of colors similar to standard Altro colors. Please contact your Altro distributor for the closest color match.

- Altro floor covering is to be fitted to pipes and other adjacent surfaces with close-butted seams. Cut a 1/8” (3mm) channel around the object to receive the AltroMastic 100. Ensure the channel is free from foreign matter.

- Cover the surface of the Altro floor covering around the area to receive AltroMastic 100 with double faced tape to ensure it does not come into contact with surfaces where AltroMastic 100 is not required.

- Nozzle on tube must be cut back to allow approximately 1/8” (3mm) bead of AltroMastic 100 to flow from the cartridge.

- Place nozzle and tube in caulking gun. Nozzle can then be moved along channel at sufficient speed to ensure the channel is completely filled.

- Use a wet finger to smooth the AltroMastic 100 before it skins over. Wet finger with water or a soapy liquid before touching the applied AltroMastic 100.

- After application, it is important to remove double faced tape before the AltroMastic 100 skins over.

- One cartridge should cover approximately 130 linear feet (40 linear meters) per 1/8th” (3mm) bead. Skin-over time is approximately 20 minutes.

- AltroMastic 100 completely cures in 1 to 3 days. Do not allow contact with AltroMastic 100 until at least 8 hours after application.

- Store and apply AltroMastic 100 at a minimum temperature of 41°F (5˚C) and a maximum of 77˚F (25˚C) in cool, dry conditions.

- Keep out of the reach of children.

Instructions for use

1. AltroMastic is a specially formulated sealing compound for use where Altro floorings abut edges, skirtings, wall surfaces, etc., or where the flooring is cut around pipes, door frames, etc.

2. AltroMastic is not recommended for use in trafficked areas, as a welded joint will give superior performance. Where flooring abuts drainage channels, access covers, quarry tiles etc, a clamping or welding system should be used.

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity</td>
<td>Thixotropic</td>
</tr>
<tr>
<td>Density</td>
<td>1.01</td>
</tr>
<tr>
<td>Cure time</td>
<td>24-72 hours</td>
</tr>
<tr>
<td>Skin time</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Storage</td>
<td>Store between 40°F (5˚C) to 77°F (25˚C) in cool, dry conditions</td>
</tr>
<tr>
<td>Shelf life</td>
<td>At least 12 months, in an airtight container, from date of manufacture</td>
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<tr>
<td>Coverage</td>
<td>Approximately 130 linear feet (40 linear meters) per 1/8th” (3mm) bead</td>
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<tr>
<td>Working temperature</td>
<td>Between 40°F (5˚C) to 104°F (40°C)</td>
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<tr>
<td>Full bond</td>
<td>4 days</td>
</tr>
<tr>
<td>Contains</td>
<td>9.8oz (290ml)</td>
</tr>
</tbody>
</table>

3. AltroMastic should only be used to seal joints in Altro floorings where obstructions prevent the use of a hot air welding gun.

Procedure

1. Surfaces to be sealed must be dry and free from dirt, oil, or grease.

2. All areas to be sealed should be masked with double faced tape.

Note: Wet spillage of AltroMastic can be removed using adhesive clean-up wipes.

Contains no solvent or isocyanate

Can cause irritation by inhalation, skin contact and ingestion:

- When using do not eat, drink or smoke
- Do not empty into drains
- Keep out of reach of children