

INSTALLATION INSTRUCTIONS
HEAT WELDING GERFLOR VINYL PRODUCTS

These instructions are specifically written for the installation of the following products:

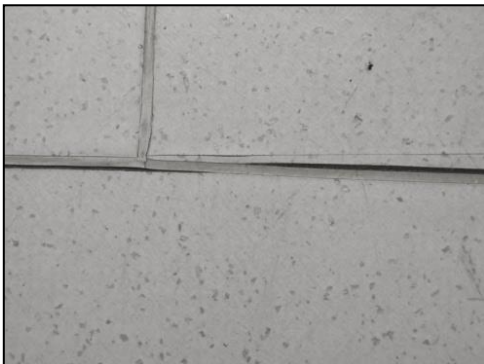
Products	Thickness	Size	Installation direction	Seams treatment
Mipolam	2 mm	Approximately 6' 6"	Same	Heat Welded
Taralay	2 & 3 mm	Approximately 6' 6"	See label	Heat Welded
Tarasafe	2 mm	Approximately 6' 6"	Same	Heat Welded
ESD products	2 mm	See TDS	See Install	Heat Welded
Gerflor Recreation	3 mm	Approximately 6' 6"	Reverse lay	Heat Welded
Gerflor Recreation	4,5 - 6 & 8,5 mm	Approximately 4' 11"	Same	Heat Welded
Taraflex Sport	6.2 – 7 - 9 & 12 mm	Approximately 4' 11"	Same	Heat Welded
Gerflor GTI & Attraction	6 mm	24.5" x 24.5"	Same	Heat Welded

1. This section refers to the following standard:

1.1. ASTM F1516 Standard Practice for Sealing Seams of Resilient Flooring by the Heat Weld Method.

2. The purpose of this document is to guide the installers, owners and contractors through proper heat welded seam procedure. There are other type of equipment and tools on the market; some of them are excellent and other will fail to perform as expected. The tools we refer to, are known to perform well. It is to the installer to ensure that he has the right tools to perform the work as required.

2.1. The goal of this document is to avoid situations as seen on the following pictures:



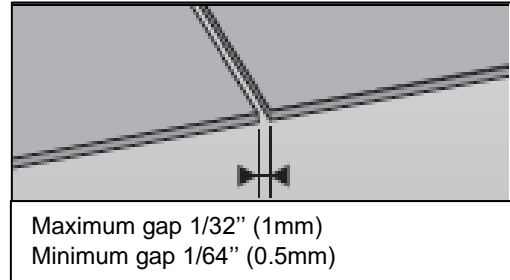
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3. PROPER GROOVING AND WELDING TOOLS:

3.1. SEAMS

3.1.1. The seam must not be gapped more than 1/32" (1mm).

3.1.2. When the gap is too wide, there will not be any groove and the weld will not be solid enough.



3.2. GROOVING THE SEAMS

3.2.1. The following groovers are recommended:

a. The Pico Groover



b. The Turbo Groover



<http://turboheatweldingtools.com/shop/>

c. The Leister Electric Groover

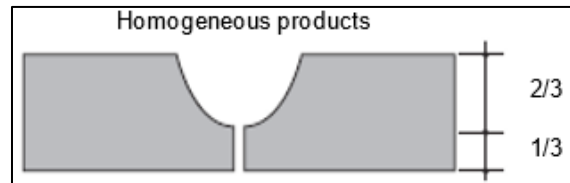


3.2.2. Depth of the groove per type of product:

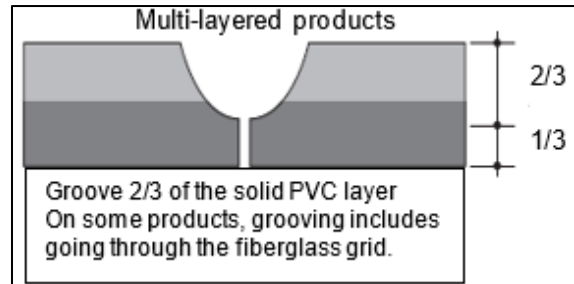
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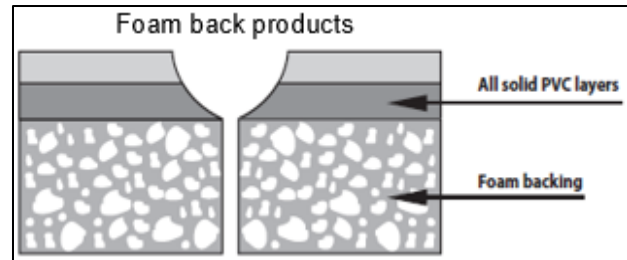
- 3.2.2.1. The depth of the groove must be 2/3 of the total thickness of a homogeneous flooring.



- 3.2.2.2. The depth of the groove must be 2/3 of the total thickness of a compact heterogeneous flooring.



- 3.2.2.3. For a heterogeneous flooring with comfort backing or a sport flooring, the groove should reach the top of the foam but must never groove into the foam.



3.2.2.4. Typical Groove



Maximum width of the groove - commercial flooring - 3.5mm / sport flooring - 4 mm

3.3. MANUAL WELDING

- 3.3.1. Verification of welder temperature and speed must be performed daily. Confirm temperature and speed by practicing on scrap material first before deploying the welder to the finished floor. Doing so will prevent failures.
- 3.3.2. Grooving and welding may proceed after the adhesive has been permitted to cure a minimum of 16 hours.
- 3.3.3. Use a heat welding gun with variable temperature control and a speed weld nozzle by Leister or equal.

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- 3.3.4. Turbo Precision Nozzle # 22-3 <http://turboheatweldingtools.com> or Leister Nozzle 105433 (5mm) is also highly recommended for proper welding.
- 3.3.5. The use of a non-recommended tip may jeopardize proper welding and could damage the flooring.
- 3.3.6. Always remember to keep the nozzle tip clean and free of debris.



- a. There are many different types of nozzle that are not recommended, these are 2 common examples:



3.4. AUTOMATIC WELDERS

- 3.4.1. Automatic welders are highly recommended particularly on large projects.
- 3.4.2. Verification of welder temperature and speed must be performed daily. Confirm temperature and speed by practicing on scrap material first before deploying the welder to the finished floor. Doing so will prevent failures.
- 3.4.3. Do not let the robot operate unattended.
- 3.4.4. **Turbo Welding Gun #25** is the recommended welding robot as it is supplied with the correct welding tip. <http://turboheatweldingtools.com>
- 3.4.5. Should another type of welding robot be used, such as the Leister robot, care must be observed in nozzle selection as it is common for tip openings to be wider than 2mm (see photograph). A wider opening can damage the flooring and lead to a seam failure. If a Leister Robot is used, Gerflor recommends the use of Romus 95253 2mm Unifloor Anti Glaze Nozzle.



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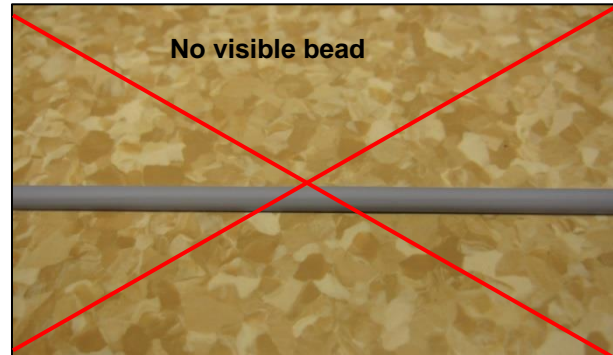
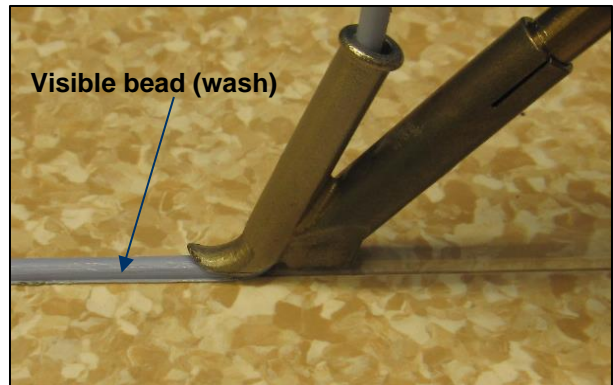
Do not weld the flooring using the Leister automatic welder without the proper tip.

3.5. HEAT WELDING TIPS:

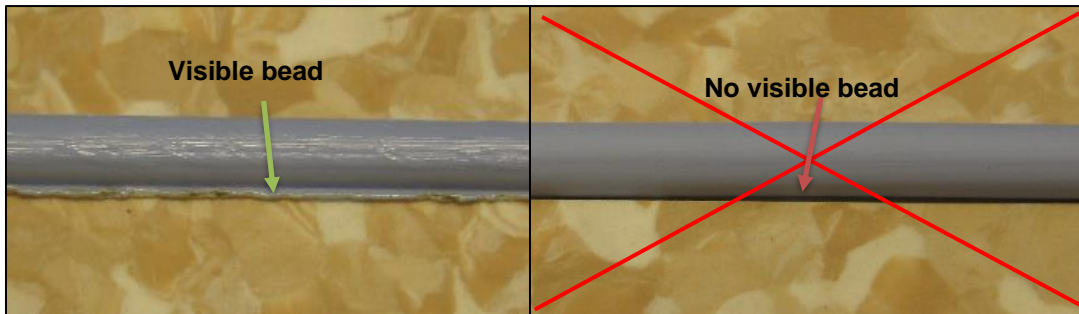
- 3.5.1. Avoid the use of long extension cords as they can lead to voltage drops that could affect the weld integrity.
- 3.5.2. Where possible, have a dedicated electrical source for the welder. Having multiple electrical devices powered off the same outlet could also lead to voltage drop.
- 3.5.3. An electrical outlet used as the same time for other tools can affect welding with regard to the temperature and speed of the welder.
- 3.5.4. Refer to ASTM F1516 "Standard Practice for Sealing Seams of Resilient Flooring by the Heat Weld Method" for additional information.

4. WELDING AND TRIMMING

- 4.1. The temperature of the welding equipment should be verified frequently.
- 4.2. When welding, a bead on the edges of the rod must be visible at all time; this confirms the proper fusion between the rod and the flooring.
- 4.3. Examples of heat welds:



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5. TRIMMING WELDED ROD

5.1. Trimming is done once the welding rod and material have **completely cooled**.

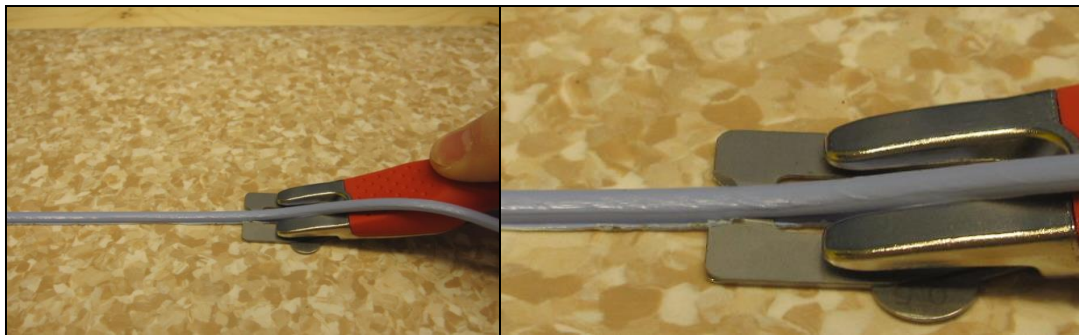
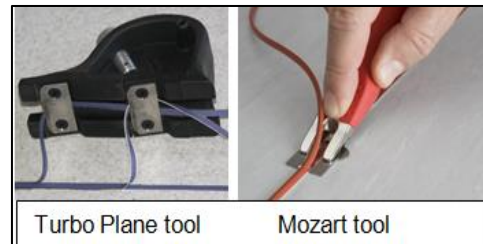
5.2. Trimming is done in two passes with the Mozart tool.

5.3. The Mozart tool utilizes a blade that is sharp only at the center thereby preventing damage to the flooring beyond the weld.

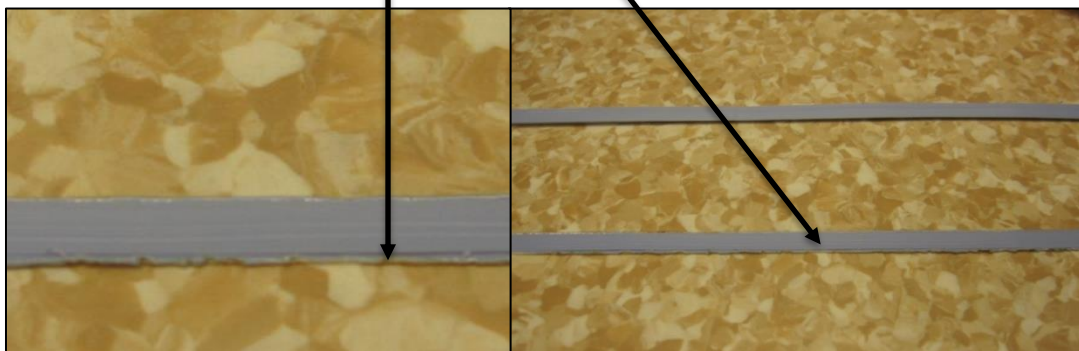
5.4. Using the Mozart tool, make an initial pass with the thickness guide in place.

5.5. A quarter moon skiving tool can also be used to trim the weld.

5.6. After completing the first pass, a final pass must be made after the weld has completely cooled.



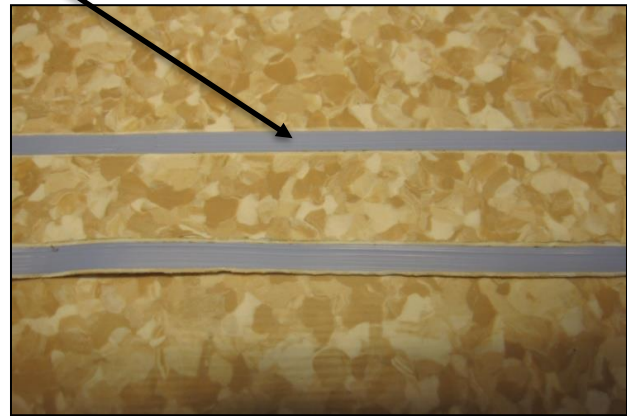
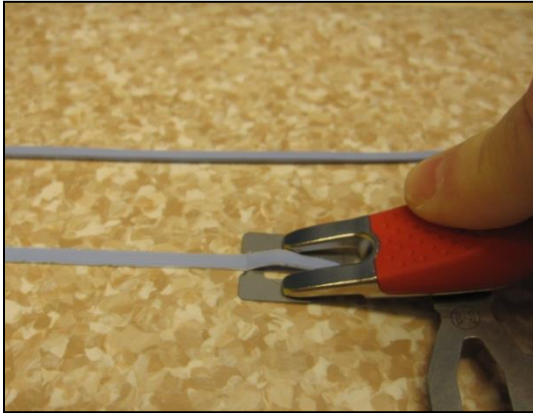
5.7. This is the look the rod should have once the first pass is done.



5.8. The second pass is done without the spacer.

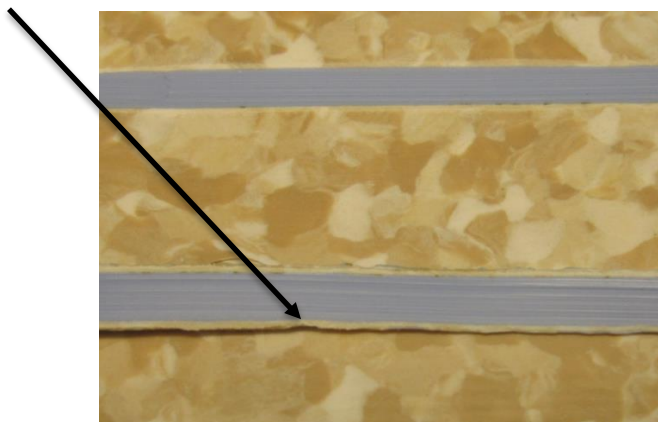
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5.9. The finished weld must be equal to the surface of the flooring.

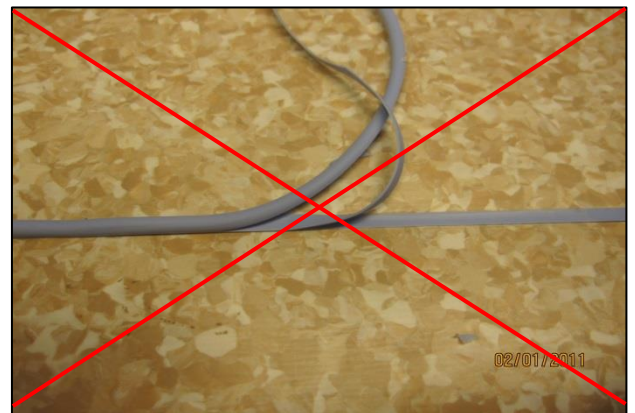
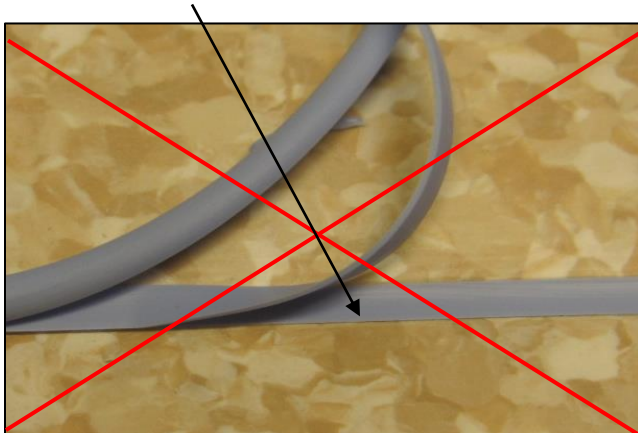


5.10. Weld after the final trim.

5.11. Check for the fusion between the weld and the flooring on the final trim leftover, this will confirm proper fusion.



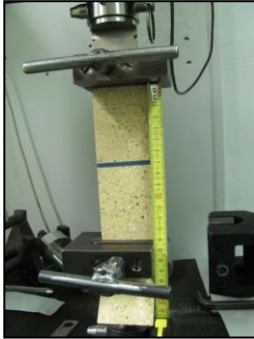
5.12. On the following pictures we can see that the welded seam looks good after being skived but there is no fusion on the leftover of the second pass; therefore, the seams will fail over time.



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6. TRACTION TEST ON HEAT WELDED SEAMS

- 6.1. This test will confirm the compatibility of the welding rod with the flooring and will confirm the quality of the weld where, when properly done it will break within the weld itself and not on the edges.



7. ONCE THE INSTALLATION IS COMPLETED

- 7.1. Perform a visual inspection of the project.
- 7.2. Verify every welded seam.
- 7.3. Repair every imperfection before leaving the project.
- 7.4. Make sure that every vertical obstacle such as doorframes are well trimmed and sealed with an acrylic, silicone, or equivalent sealant product.
- 7.5. To maximize the aesthetic appearance and serviceability of the newly installed flooring, provide your customer with a copy of the **Gerflor USA Maintenance Instructions**.