

# TECHNICAL ADVISORY BULLETIN

To: GAF Commercial Sales, GAF Contractors, GAF Field Services

From: Technical Services Department

**Subject: Seam Probing Thermoplastic Membranes**



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## **What is Seam Probing?**

**Seam probing** is the physical inspection of a hot air weld area by running a suitable blunt probe along the length of a seam with horizontal pressure applied into the bottom edge of the weld.

## **Why Should I Seam Probe?**

Seam probing checks the integrity of the weld to help ensure a water-tight roofing system and is critical to locating small skips in a welded lap. Seam probing is **NOT** a replacement for conducting test welds.

## **Do All Hot Air Welded Seams Have To Be Probed?**

Yes! **All hot air welded seams must be physically probed** with a blunt or dull cotter key puller hand tool (sharp points or edges must be filed down).

- Contractors are responsible for initial probing of their welds. Do **NOT** wait for a GAF Field Service Representative to find issues with the welds during the roof inspection after the roof is already completed. This could lead to more difficult and costly repairs requiring re-inspection by GAF.
- Probing **MUST** be conducted daily.
- Initial probing should be done on hands and knees.
- Subsequent probing may be completed with a cotter key hand tool that can be affixed to standard extension handle, which allows the tool to be used from a standing position.
- Exercise care when handling and walking with the seam probe to avoid injuries from the point end.
- Continuous use of the probe will cause it to become sharper. Ensure that the point is blunted/rounded off at all times.

## **What Is the Seam Probing Procedure?**

- Allow the seam to cool down at least 30 minutes before probing. Premature probing can damage seams because the welds may still be warm.
- Run the probing tool parallel to the edge of the seam, applying ample pressure at the base of the weld. Use caution to avoid damaging the membrane surface with the point of the probing tool (**Fig. 1**).
- When probing, extra attention must be given to all membrane seam intersections, heat-welded seams above insulation joints and areas where the robotic welder stops and starts again.
- Mark all voids, open welds or cold-welds using a water-soluble marker or crayon so repairs can be made (**Fig. 2**).
- Repair all voids, open welds or cold-welds routinely throughout the day but no later than the end of each workday using a hand welder.
- To make a minor repair on a seam, use a T-Joint Cover Patch, UN-55 Detailing Membrane, or the same material type being used for the field sheet.
- If repairs are needed for an entire open seam, use reinforced membrane a minimum of 4" (102 mm) wide. Finish the detail by heat-welding T-Joint Cover Patches at each corner. Any damage caused to the field sheet (not in the seams) must be patched with reinforced membrane.
- All repaired seams should be probed after they have cooled completely to determine if the weld is acceptable. If the repaired seam is not acceptable, repair areas as necessary until corrected.
- Apply GAF EverGuard® Cut-Edge Sealant on all TPO reinforced membrane cut edges after seam probing is completed. EverGuard® Cut-Edge Sealant is not required when using PVC.



**Fig. 1: Seaming Probing**



**Fig. 2: Marking Voids**

***Where Can I Get More Information?***

**GAF Technical Services Can Assist You...** with these and other questions you may have regarding your new roof installation. GAF Technical Services can be contacted at **800-ROOF-411** (800-766-3411). Also, the GAF website is a great resource for just about any question you may have or for additional information you may require. Please visit [www.gaf.com](http://www.gaf.com) to find the latest information on our products and their installation.

**Important:** This document supersedes any prior GAF Technical Advisory Bulletins on this topic. Please always check [www.gaf.com](http://www.gaf.com) to make sure you have the most up to date information.