

TECHNICAL ADVISORY BULLETIN



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To: GAF Commercial Sales, Commercial Contractors, Field Services

From: Technical Services Department

Subject: *Best Practices for EverGuard® TPO Test Welds*

Date: 09/16/2014

No: TAB-C 2014-29

When Should Test Welds Be Performed?	Test welds should be performed at the beginning of every work period. <ul style="list-style-type: none">▪ Just before welding in the morning▪ Upon returning from lunch in the afternoon▪ When there's been a significant change in weather (e.g., air temperature, wind speed, cloud cover, etc.)
How Can I Reduce Call Backs?	Setting up hot air robotic welder properly... is key to having a properly installed roof and performing test welds is one of the most important steps. Making appropriate adjustments <u>before</u> you begin the final welding process assures that the correct combinations are achieved.
Performing Test Welds...	Some simple steps to take when performing test welds on EverGuard® TPO membrane are as follows: <ul style="list-style-type: none">▪ Take 2 pieces of "bag fresh" TPO approximately 18" (457 mm) long▪ Set your automatic welder's speed and heat▪ For full size welders, such as the BAK LarOn, GAF suggests starting at the following settings:<ul style="list-style-type: none">▪ Temperature between 800°F (427°C) and 1,100°F (593°C)▪ Speed 10-16 feet (3.05-4.88 m) per minute <p>Remember, settings required for a good weld will change based on weather conditions and membrane thickness.</p> <ul style="list-style-type: none">▪ Weld the 18" (457 mm) pieces together and then allow the membrane a few minutes to cool.▪ Cut a 1" (25 mm) wide strip across the welded material.▪ The welds are tested by application of pressure causing the seam to peel apart.▪ A satisfactory weld will:<ul style="list-style-type: none">▪ Fail by exposing the scrim reinforcement called a "film tearing bond"▪ Be between 1" (25 mm) and 1.5" (38 mm) wide▪ A deficient weld fails by separating between the two layers of the membrane. <p>Refer to the EverGuard® Specification Manuals and robotic welder manufacturer for further details.</p>
Making Changes To The Hot Air Robotic Welder Settings...	<ul style="list-style-type: none">▪ Only make one change at a time and never change heat and speed together.▪ If you are welding at 1,148°F (620°C) and do not get a good weld, do not automatically adjust the speed because the temperature may be too high. Lowering the temperature or increasing speed may be a necessary adjustment.▪ If the weld is greater than 1.5" (38 mm), you may have the temperature too high and this could lead to a failed weld over time.
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 .