

## TechTip R4 – Spraying Smooth Roof Surfaces

In order to apply spray polyurethane foam (SPF) to form a smooth surface profile and produce specified physical properties, a proper application technique must be used. The spray gun should be held as perpendicular to the substrate as possible. Spraying at a severe angle will cause the SPF to roll and exhibit a 'tree-bark' surface profile. This profile may cause the SPF to exhibit poor physical properties and significantly increases the surface area of the SPF to receive protective coatings.

You should feather your passes at the outside edges. This will leave a taper on the outside edges that will blend in smoothly with the subsequent pass. The application of the SPF should be installed at a consistent rate to allow approximately 80 percent of the spray pattern to overlap the previous lift. This will eliminate any washboard undulation and create a smoother surface profile. The SPF should rise smoothly and uniformly.

Your tie-in to the adjacent pass will vary depending on your natural pass width. The tie-in pass should carry onto the previous pass by 10 to 20 percent of your pass width. Try using the following technique to control your tie-in detail. Spray a full-length pass (30 - 40 linear feet). Start your new pass immediately adjacent to the first pass. After approximately 10 linear feet, stop spraying. Get on your hands and knees and observe the pass line. The elevation of the SPF at the pass line should match the middle of the pass. If there is a ridge between the two passes, take a half of a step away from the first pass and continue spraying. If there is a valley, take a half of a step towards the first pass. If there is a 'tree-bark' surface at the pass line, narrow your pass width. With practice, these techniques become automatic. Your foam application will look much better, require less coating and provide better drainage.

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### **ABOUT THE SPRAY POLYURETHANE FOAM ALLIANCE (SPFA)**

Founded in 1987, the Spray Polyurethane Foam Alliance (SPFA) is the voice, educational and technical resource, for the spray polyurethane foam industry. A 501(c)6 trade association, the alliance is composed of contractors; manufacturers and distributors of polyurethane foam, related equipment and protective coatings; and consultants who provide inspections and other services. The organization supports the best practices and the growth of the industry through several core initiatives, which include educational programs and events, the SPFA Professional Installer Certification Program, technical literature and guidelines, legislative advocacy, research, and networking opportunities. For more information, please use the contact information and links provided in this document. [www.sprayfoam.org](http://www.sprayfoam.org)

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THIS DOCUMENT WAS DEVELOPED TO AID CONTRACTORS AND INSTALLERS IN THE PROPER APPLICATION OF SPRAY-APPLIED POLYURETHANE FOAM SYSTEMS. THE INFORMATION PROVIDED HEREIN, BASED ON CURRENT CUSTOMS AND PRACTICES OF THE TRADE, IS OFFERED IN GOOD FAITH AND BELIEVED TO BE TRUE TO THE BEST OF SPFA'S KNOWLEDGE AND BELIEF.

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