SPFA TechTip R8 – Application of Spray Polyurethane Foam (SPF) Systems Over Sloped Transite (Asbestos Cement) Roofs

OPPORTUNITY

One major use of asbestos over the past 100 years has been transite roofing panels. Asbestos was essentially used as a binder in cement slurry and then formed into corrugated or flat sheets.

Transite roofing panels can still be found across the country; many are still in place after 50, 60 or even 70 years of life. Transite roofing was used for foundries, forges, chemical plants, paper plants, wastewater treatment plants and sewage facilities. The roofing material withstands high heat, chemical emissions, humidity and other elements emitted by these facilities that other building products could not tolerate.

Figure 1- Example of a Sloped Transite Roof at a Manufacturing Facility

With the surge of installation of transite roofs in the 1950s and 60s, the lifespan of many of these roofs' components is coming to an end. A roof project where transite is in good condition with no airborne particles may be a perfect candidate for a retrofit coated SPF or coating-only system.

Figure 2 - View of Transite Roof Panels on a Sloped Roof

ROOF CONDITION

Common factors attributing to roof or structure deterioration may include longitudinal cracks along the panel highs, broken or brittle fasteners or washers, friable panel material, and/or building shifts due to expansion or contraction. Additionally, other renovations on a building may require that old roofs that are still intact be brought up to new codes.

Professionals encountering transite roof jobs may feel confusion about how to handle asbestos-containing materials. Some may

Figure 3 - Check Overall Condition of Transite, Including Fasteners

even avoid transite jobs altogether assuming they will equate to expensive asbestos-removal procedures and red tape. However, asbestos abatement (the process of removing or minimizing asbestos health hazards from a structure) can take many forms, including removal, enclosure, encapsulation or leaving the material undisturbed.

The position of the U.S. Environmental Protection Agency (EPA) is "leave it on if you can," meaning it must be in good condition with no airborne particles. Asbestos-abatement options, like enclosure or encapsulation, are typically best practice. Encapsulation usually entails spraying the asbestos transite roof with a sealant that will ensure fibers are kept in the material. Asbestos removal can be extremely expensive.

The EPA generally prefers to see asbestos roofing materials repaired or covered rather than torn off. Health risks for workers and the public are minimized when asbestos remains intact and in place. Remember that local, state, and federal codes regulate renovations involving asbestos-containing materials. Best practice, safety consideration and the law require that contractors check these codes before beginning renovations, so ensure your asbestos professional is properly certified and ask lots of questions.

FOAM APPLICATION

Standards for SPF and coating applications require a "clean, dry and sound" substrate. Pressure washing is normally used for metal and other sloped roofs prior to application. On transite substrates this may not be allowed since the asbestos could be washed into the ground water. It could be done in some cases where the wash water is captured and filtered prior to discharge.

Many SPF manufacturers, coating manufacturers and warrantors will recommend using a primer over the transite without the pressure washing step. The applicators should always discuss this preparation with the manufacturer. The roof should be inspected, and any loose or missing fasteners replaced. Roof flashings

may need to be repaired or replaced. The SPF roof details will be much the same as the corrugated metal roof details found in SPFA 104[i].

The spray polyurethane foam and coating roofing system will be applied over the primed substrate to provide added insulation, encapsulation of the asbestos and a new roofing system. In coating only applications additional coating will be required to thoroughly cover and seal the transite panels and a treatment for the joints as specified by the warrantor.

Remember to use proper fall protection as older transite roof panels can be brittle and may fail without warning.

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

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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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DOCUMENT HISTORY

Date	Sections Modified	Description of Changes
January 2025	New Document	

[i] SPFA-104 "Spray Polyurethane Foam Systems for New and Remedial Roofing" available for download from www.sprayfoam.org