



Designation: D 6705 – 01

Standard Guide for the Repair and Recoat of Sprayed Polyurethane Foam Roofing Systems¹

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1. Scope

1.1 This specification guide covers the procedures for the repair and recoating of existing sprayed polyurethane roofing systems.

1.2 S.I. units are used throughout the document. Inch/pound units are in parentheses.

1.3 *This standard does not address all of the safety concerns associated with its application or use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- C 1029 Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation²
- D 5469 Guide for the Application of New Spray Applied Polyurethane Foam and Coated Roofing Systems³
- D 6083 Specification for Liquid Applied Acrylic Coating Used In Roofing³

2.2 SPFA Standards:

- AY 102 A Guide for Selection of Elastomeric Protective Coatings Over Sprayed Polyurethane Foam⁴
- AY 107 Spray Polyurethane Foam Blisters, Their Causes, Types, Prevention and Repair⁴

2.3 API Standard:

- Alliance for The Polyurethane Industry (API), Bulletin AX 119, Guide for Safe Handling and Use of Polyurethane and Polyisocyanurate Foam Systems⁵

3. Terminology

3.1 Definitions:

¹ This guide is under the jurisdiction of ASTM Committee D08 on Roofing, Waterproofing, and Bituminous Materials and is the direct responsibility of Subcommittee D08.06 on Spray Polyurethane Foam Roof Systems.

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² *Annual Book of ASTM Standards*, Vol 04.06.

³ *Annual Book of ASTM Standards*, Vol 04.04.

⁴ Available from Spray Polyurethane Foam Alliance, 1300 Wilson Blvd., Suite 800, Arlington, VA 22209.

⁵ Available from The Alliance for the Polyurethane Industry, 1300 Wilson Blvd., Suite 800, Arlington, VA 22209.

3.1.1 *recoat*—to apply a new protective coating over an existing coated SPF (spray polyurethane foam) roof system to extend the performance life of the roofing system.

3.1.2 *scarfing*—to shave or grind an SPF foam surface mechanically to remove a coating, or UV deteriorated SPF, or both, to refoam or recoat the surface.

4. Significance and Use

4.1 This guide outlines general procedures and precautions necessary for correct and safe repair and recoat of SPF roofing systems.

4.2 This guide is not all inclusive; this guide is intended to supplement detailed instructions from manufacturers and safety requirements required by law.

5. Roof Inspection Procedures and Considerations

5.1 General Considerations:

5.1.1 The performance of a sprayed-in-place polyurethane foam roof system can be affected by all the component parts of the roof structure, as well as the atmospheric conditions inside and outside the structure. Structural design, code compliance, specification review, contractor, and material selection should be considered in the repair and recoat of a spray polyurethane foam roof system.

5.1.2 A range of spray polyurethane foam systems exists with various physical properties, exhibiting different temperature limitations, and different combustibility characteristics. Most published data are obtained from testing of laboratory samples. The thickness of the polyurethane foam sprayed, number of passes, temperature of substrate, ambient temperature, and so forth will have an effect on all polyurethane foam properties.

5.1.3 The specifier should consult with the respective material manufacturer of the sprayed-in-place polyurethane foam roof system. This should include, but not be limited to, materials selection, expansion joints, flashing details, and other items.

5.2 Inspection:

5.2.1 The preparation for the repair and recoat of a sprayed-in-place polyurethane foam roof system will vary according to the conditions of the roof and its component parts and the type of existing protective coating used over the polyurethane foam.