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Standard Guide for Repair and Recoat of Spray Polyurethane Foam Roofing Systems[1]

This standard is issued under the fixed designation D6705/D6705M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

ε[1] NOTE—Units information and the referenced CPI document were editorially revised in June 2011.

1. Scope

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

1.2 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its 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:*[2]

C1029 Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation

D5469 Guide for Application of New Spray Applied Polyurethane Foam and Coated Roofing Systems

D6083 Specification for Liquid Applied Acrylic Coating Used in Roofing

2.2 *SPFA Standards:*[3]

AY 102 A Guide for Selection of Elastomeric Protective Coatings Over Sprayed Polyurethane Foam

AY 107 Spray Polyurethane Foam Blisters, Their Causes, Types, Prevention and Repair

2.3 *CPI Standard:*[4]

Center for The Polyurethane Industry (CPI), Bulletin AX 119 Guide for Safe Handling and Use of Polyurethane and Polyisocyanurate Foam Systems

3. Terminology

3.1 *Definitions:*

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,

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] Available from Spray Polyurethane Foam Alliance, 4400 Fair Lakes Ct., Suite 105, Fairfax, VA 22033.

[4] Available from The Center for the Polyurethanes Industry, 1300 Wilson Blvd., Arlington, VA 22209.