



Standard Guide for Application of New Spray Applied Polyurethane Foam and Coated Roofing Systems¹

This standard is issued under the fixed designation D 5469; 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.

1. Scope

1.1 This guide covers the application of new roofing systems consisting of spray applied polyurethane foam insulation, elastomeric protective coatings, and optional mineral granules. This guide does not apply to retrofit or remedial applications.

1.2 Design criteria associated with the installation of spray in place polyurethane foam are beyond the scope of this specification.

1.3 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.4 *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:

C 1029 Specification for Spray-Applied Rigid Cellular Polyurethane Thermal Insulation²

D 451 Test Method for Sieve Analysis of Granular Mineral Surfacing for Asphalt Roofing Products³

D 1079 Terminology Relating to Roofing, Waterproofing, and Bituminous Materials³

D 1621 Test Method of Compressive Properties of Rigid Cellular Plastics⁴

D 1622 Test Method for Apparent Density of Rigid Cellular Plastics⁴

D 2856 Test Method for Open-Cell Content of Rigid Cellular Plastics by the Air Pycnometer⁵

D 4442 Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials⁶

2.2 Other Standard:

SSPC SP-6 Steel Structures Painting Council⁷

2.3 Other Documents:

Underwriters Laboratories, *Roofing Materials and Systems Directory*⁸

Factory Mutual Research Corporation, Loss Prevention Data Sheets 1–28⁹

Alliance for the Polyurethane Industry AX119 *Guide for the Safe Handling and Use of Polyurethane and Polyisocyanurate Foam Systems*¹⁰

Spray Polyurethane Foam Alliance Documents:¹⁰

AY-102 Guide for Selection of Protective Coatings Over Spray Polyurethane Foam Roofing Systems

AY-104 Spray Polyurethane Foam Roofing Systems for New and Remedial Roofing

AY-118 Moisture Vapor Transmission

NRCA Roofing and Waterproofing Manual, Spray Polyurethane Foam-Based Roofing Manual

NRCA/SPFA Quality Control Guidelines for the Application of Spray Polyurethane Foam Roofing

NRCA/SPFA Manual for Inspection and Maintenance of Spray Polyurethane Foam-Based Roof Systems, A Guide for Building Owners

2.4 *Details*—Numerous details are found in the referenced documents, in foam and coating manufacturers literature and from other sources. These details are to be considered general in nature. They should not be used without modification to allow for movement between the building, roofing, roof top equipment, and roof drainage systems.

3. Terminology

3.1 *Definitions*—Definitions are in accordance with Terminology D 1079.

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 *Annual Book of ASTM Standards*, Vol 08.01.

⁵ *Annual Book of ASTM Standards*, Vol 08.02.

⁶ *Annual Book of ASTM Standards*, Vol 04.10.

⁷ Available from Steel Structures Painting Council, 4400 5th Ave., Pittsburgh, PA 15213.

⁸ Available from Underwriters Laboratories Inc., 333 Pfingsten Rd., Northbrook, IL 60062.

⁹ Available from Factory Mutual Research Corporation, 1151 Boston-Providence Tpke., Norwood, MA 02062.

¹⁰ Available from Spray Polyurethane Foam Alliance, 1300 Wilson Boulevard, Suite 800, Arlington, VA 22209.