



Designation: D6694 – 08

Standard Specification for Liquid-Applied Silicone Coating Used in Spray Polyurethane Foam Roofing Systems¹

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1. Scope

1.1 This specification covers a liquid-applied solvent dispersed elastomeric coating used as a roofing membrane for spray polyurethane foam (SPF) insulation whose principal polymer in the dispersion contains more than 95 % silicone.

1.2 This specification does not provide guidance for application.

1.3 The following precautionary caveat pertains only to the test method portions, Sections 5 and 6.

1.4 SI units are used throughout this document. Inch-pound units are in parentheses.

1.5 *This standard may involve hazardous materials, operations, and equipment. 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 requirements prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D16 Terminology for Paint, Related Coatings, Materials, and Applications

D522 Test Methods for Mandrel Bend Test of Attached Organic Coatings

D624 Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers

D903 Test Method for Peel or Stripping Strength of Adhesive Bonds

D1079 Terminology Relating to Roofing and Waterproofing

D1644 Test Methods for Nonvolatile Content of Varnishes

D2196 Test Methods for Rheological Properties of Non-

Newtonian Materials by Rotational (Brookfield type) Viscometer

D2370 Test Method for Tensile Properties of Organic Coatings

D2697 Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings

D4798 Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method)

E96/E96M Test Methods for Water Vapor Transmission of Materials

3. Terminology

3.1 Definitions in Terminologies D16 and D1079 shall apply to this specification.

4. Materials and Manufacture

4.1 *Composition*—The product, as manufactured, shall be in liquid form for application to SPF surfaces by brushing, squeegeeing, rolling, or spraying. The product shall be composed of dispersion containing as the principal polymer more than 95 % silicone polymers to which various pigments and other additives have been added to give the required physical properties.

5. Liquid and Physical Properties

5.1 Although the product is supplied as a liquid, its performance is based on the functional properties of the cured material in film form. The coating is formed into a film fully adhered to the substrate.

5.2 *Liquid Property Requirements*—The liquid coating shall comply with the property requirements in Table 1.

5.3 *Cured Film Physical Property Requirements:*

5.3.1 *Specimen Preparation (Dry Time)* (Table 2)—Films are prepared by applying two coats, with a minimum of an 8-h drying period between coats, to a polyethylene sheet substrate (from Test Method D2370, 8.2.2) to give a total dry film thickness of 0.50 ± 0.5 mm (20 ± 2 mils). The film is allowed to thoroughly dry at $23 \pm 2^\circ\text{C}$ ($73.4 \pm 3.6^\circ\text{F}$) and 50 ± 10 % relative humidity for 336 ± 12 h. The film shall be removed from the release paper and turned over after the first 168 h to allow for complete drying.

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

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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.