



Designation: D6694/D6694M – 15 (Reapproved 2023)

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

This standard is issued under the fixed designation D6694/D6694M; 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 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 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 nonconformance with the standard.

1.5 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

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

¹ This specification is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.09 on Liquid Applied Coatings for Roofing and Asphaltic Concrete Pavement.

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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.

D522/D522M 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 Viscometer

D2370 Test Method for Tensile Properties of Organic Coatings

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

D4798/D4798M Practice for Accelerated Weathering Test Conditions and Procedures for Bituminous Materials (Xenon-Arc Method)

E96/E96M Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials

E1953 Practice for Description of Thermal Analysis and Rheology Apparatus

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**.