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Standard Practice for Sampling and Analysis of Built-Up Roof Systems During Application¹

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This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 This practice is a guide for removing specimens for built-up bituminous roof systems during application, but before the application of flood coating and top surfacing, for determining the *approximate* quantities of the components and the possible presence of moisture, or dry spots between plies, in the field. Components may consist of:

- 1.1.1 Insulation, when part of the roof membrane system,
- 1.1.2 Plies of roofing felt,
- 1.1.3 Interply layers of bituminous material, and
- 1.1.4 Top coating, if present, before any surfacing aggregate has been applied.

1.2 This practice is applicable to both 914-mm (36-in.) and 1000-mm (39 ³/₈-in.) wide felt rolls.

1.3 The values stated in SI (metric) units are to be regarded as the standard.

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:*²

[D226 Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing](#)

[D227 Specification for Coal-Tar-Saturated Organic Felt Used in Roofing and Waterproofing](#)

[D250 Standard Specification for Asphalt-Saturated Asbestos](#)

[Felt Used in Roofing and Waterproofing \(Withdrawn 1991\)](#)³

[D2178 Specification for Asphalt Glass Felt Used in Roofing and Waterproofing](#)

[D2626 Specification for Asphalt-Saturated and Coated Organic Felt Base Sheet Used in Roofing](#)

[D3158 Specification for Asphalt Saturated and Coated Organic Felt Used in Roofing \(Withdrawn 1983\)](#)³

[D3378 Specification for Asphalt-Saturated and Coated Asbestos Felt Base Sheet Used in Roofing \(Withdrawn 1985\)](#)³

3. Sampling

3.1 Unless otherwise specified, take at least one specimen for each separate roof, plus one for each 929 m² (10 000 ft²); take specimens at random.

3.2 Take additional specimens in which deficiencies are indicated in the membrane to determine the extent of the deficient area.

4. Test Specimen

4.1 Sweep the surface of the membrane clean where each test specimen will be taken.

4.2 For determining approximate quantities of components, cut a 300- by 300-mm (12- by 12-in.) specimen from the membrane using a template ([Fig. 1](#)).

4.2.1 If the membrane is adhered to the insulation, remove the membrane with the adhering insulation.

4.2.2 If the membrane is adhered directly to the roof deck, estimate the quantity of bitumen remaining on the deck after the specimen is removed.

4.3 For the purpose of determining the felt spacing, cut a 100- by 111-mm (4- by 44-in.) rectangular specimen from the membrane, using a template ([Fig. 1](#)) placed at right angles to the long dimension of the felts.

¹ This practice is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.20 on Roofing Membrane 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.

³ The last approved version of this historical standard is referenced on www.astm.org.