



Designation: D7636/D7636M – 11

Standard Practice for Sampling and Analysis of Modified Bitumen Roof Systems¹

This standard is issued under the fixed designation D7636/D7636M; 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 practice is for removing specimens from existing modified bitumen roof membranes for visual assessment and evaluation for abnormalities in the membrane. The roof membrane consists of one or more plies/sheet materials in which at least one ply is a modified bitumen (MB) sheet, and which is installed with one or more of the following methods: hot asphalt, heat welding (open flame torching or heated air), cold adhesive, or self-adhesive. The roof membrane may consist of one or more plies of the following:

1.1.1 SBS (styrene-butadiene-styrene), APP (atactic polypropylene), or other polymer, modified bitumen sheet materials.

1.1.2 An exposed modified bitumen sheet material, that is, a modified cap sheet, covering multiple layers of built-up roofing (BUR) plies.

1.1.3 Any adhesive or bitumen component used to install the roof membrane.

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 *The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.*

2. Referenced Documents

2.1 *ASTM Standards*:²

[D1079 Terminology Relating to Roofing and Waterproofing](#)

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. Terminology

3.1 *Definitions*—For definitions of terms used in this practice, refer to Terminology [D1079](#).

3.2 *Definitions of Terms Specific to This Standard*:

3.2.1 *hybrid membrane system, n*—MB/BUR roof membrane consisting of a modified bitumen cap sheet with one or more layers of underlying BUR.

3.2.2 *ply or sheet material, n*—a single layer of the modified bitumen roof membrane.

4. Sampling

4.1 Unless otherwise specified, for each abnormal roof area take at least one specimen from the area that exhibits an abnormality plus one “control” specimen. The control specimen should have no obvious abnormalities and should be taken in close proximity to the sampled problem area.

4.2 Additional specimens in which abnormalities are exhibited in the membrane may be taken to determine the extent of the affected area.

5. Test Specimen

5.1 As a minimum, the roof membrane specimens should be taken down to the top surface of the membrane substrate. Sampling down to the level of the roof deck may be necessary to better determine the cause and extent of any abnormality.

5.2 The recommended minimum specimen size is 305 by 305 mm [12 by 12 in.] or 100 by 1120 mm [4 by 44 in.], depending on the nature of the potential membrane problem. If the membrane is a hybrid BUR/MB, the 100 by 1120 mm [4 by 44 in.] specimen size, cutting across the width of the cap sheet, is recommended.

5.2.1 The specimen size and shape may be adjusted, once initial sampling has occurred, to adequately assess the nature of any problem.

6. Significance and Use

6.1 This practice is for removing specimens from existing modified bitumen roof membranes for visual assessment and evaluation for abnormalities in the membrane.

6.2 This practice is not intended for roofs under construction.