



Designation: D227/D227M – 03 (Reapproved 2018)

Standard Specification for Coal-Tar-Saturated Organic Felt Used in Roofing and Waterproofing¹

This standard is issued under the fixed designation D227/D227M; 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.

*This standard has been approved for use by agencies of the U.S. Department of Defense.
This specification replaces Federal specification HH-R-595, Type 15C.*

1. Scope

1.1 This specification covers coal-tar-saturated organic felt intended to be used with coal-tar pitches conforming to the appropriate requirements of Specification [D450/D450M](#) in the construction of built-up roofs and in the construction of waterproofing systems.

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 *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

[D146/D146M](#) Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing

[D450/D450M](#) Specification for Coal-Tar Pitch Used in Roofing, Dampproofing, and Waterproofing

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

3. Terminology

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

¹ This specification is under the jurisdiction of ASTM Committee [D08](#) on Roofing and Waterproofing and is the direct responsibility of Subcommittee [D08.04](#) on Felts, Fabrics and Bituminous Sheet Materials.

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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.

4. Materials and Manufacture

4.1 In the process of manufacture, a single thickness of dry felt shall be saturated with refined coal-tar from which some of the more volatile constituents have been removed.

4.2 The felt shall be produced principally from organic fibers or mixtures thereof. The surface of the felt shall be uniform and relatively smooth. Upon splitting or tearing on the bias, the felt shall appear reasonably free of lumps and particles of foreign substances.

5. Physical Requirements

5.1 The material shall conform to the physical requirements prescribed in [Table 1](#).

5.2 The finished product shall not crack nor be so sticky as to cause tearing or other damage upon being unrolled at temperatures between 10 and 60°C [50 and 140°F].

6. Workmanship, Finish, and Appearance

6.1 The felt shall be saturated and shall show no unsaturated spots at any point upon cutting 50-mm [2-in.] wide strips at random across the entire sheet and splitting them open to their full length.

6.2 The surface of the felt shall not be coated or covered with talc or other substances that would tend to interfere with adhesion between the felt and the plying cement.

6.3 The finished material shall be free of visible external defects such as holes, ragged or untrue edges, breaks, cracks, tears, protuberances, and indentations.

7. Sampling and Test Methods

7.1 Sample the material and determine the properties enumerated in this specification in accordance with Test Methods [D146/D146M](#).

8. Inspection

8.1 *Inspection*—Inspection shall be in accordance with the requirements of this specification.