



Designation: D 227 – 97a

## Standard Specification for Coal-Tar-Saturated Organic Felt Used in Roofing and Waterproofing<sup>1</sup>

This standard is issued under the fixed designation D 227; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

*This standard has been approved for use by agencies of the 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 D 450 in the construction of built-up roofs and in the construction of waterproofing systems.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

### 2. Referenced Documents

#### 2.1 ASTM Standards:

D 146 Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing<sup>2</sup>

D 450 Specification for Coal-Tar Pitch Used in Roofing, Dampproofing, and Waterproofing<sup>2</sup>

D 1079 Terminology Relating to Roofing, Waterproofing, and Bituminous Materials<sup>2</sup>

### 3. Terminology

3.1 *Definitions*—For definitions of terms used in this specification, refer to Terminology D 1079.

### 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.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D-8 on Roofing, Waterproofing, and Bituminous Materials and is the direct responsibility of Subcommittee D08.04 on Felts and Fabrics for Bituminous Roofing and Waterproofing.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 04.04.

### 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 50 and 140°F (10 and 60°C).

### 6. Workmanship, Finish, and Appearance

6.1 The felt shall be saturated and shall show no unsaturated spots at any point upon cutting 2-in. (50-mm) 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 D 146.

### 8. Inspection

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

8.2 *Inspection Alternatives*—Alternative inspection requirements shall be determined by and as agreed upon between the purchaser and the supplier.

### 9. Rejection and Resubmittal

9.1 *Failure to Conform*—Failure to conform to any of the requirements as stated in this specification constitutes grounds for rejection.

9.2 *Rejection Redress*—The supplier shall have the right to inspect the rejected materials. The supplier and the purchaser shall agree to the quantity of rolls deemed unacceptable. The supplier shall then have the right to submit the same number of new rolls as replacement.