



Designation: D 450 – 96 (Reapproved 2006)

# Standard Specification for Coal-Tar Pitch Used in Roofing, Dampproofing, and Waterproofing<sup>1</sup>

This standard is issued under the fixed designation D 450; 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.*

## 1. Scope

1.1 This specification covers three types of coal-tar pitch suitable for use in the construction of built-up roofing, dampproofing, and membrane waterproofing systems.

1.2 The values stated in SI units are to be regarded as the standard. The values in parentheses are for information only

## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

**D 4** Test Method for Bitumen Content

**D 20** Test Method for Distillation of Road Tars

**D 36** Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)

**D 70** Test Method for Density of Semi-Solid Bituminous Materials (Pycnometer Method)

**D 92** Test Method for Flash and Fire Points by Cleveland Open Cup Tester

**D 95** Test Method for Water in Petroleum Products and Bituminous Materials by Distillation

**D 140** Practice for Sampling Bituminous Materials

**D 2398** Test Method for Softening Point of Bitumen in Ethylene Glycol (Ring-and-Ball)<sup>3</sup>

**D 2415** Test Method for Ash in Coal Tar and Pitch

**D 3461** Test Method for Softening Point of Asphalt and Pitch (Mettler Cup-and-Ball Method)

## 3. Classification

3.1 Coal-tar pitches covered by this specification include three types:

3.1.1 *Type I*—Suitable for use in built-up roofing, dampproofing, and membrane waterproofing systems.

3.1.2 *Type II*—Suitable for use in dampproofing and in membrane waterproofing systems.

3.1.3 *Type III*—Suitable for use in built-up roofing, dampproofing, and membrane waterproofing systems, but having less volatile components than Type I or II.

## 4. Materials and Manufacture

4.1 Coal-tar pitch shall be prepared from selected crudes using suitable refining processes to conform to the applicable specifications.

## 5. Physical Requirements

5.1 Coal-tar pitch shall be homogeneous and free of water.

5.2 Each type shall conform to the physical properties prescribed in **Table 1**.

## 6. Sampling and Test Methods

6.1 Sample the material and determine the properties enumerated in this specification in accordance with the following methods:

6.1.1 *Sampling*—Practice **D 140**.

6.1.2 *Water*—Test Method **D 95**.

6.1.3 *Specific Gravity*—Test Method **D 70**.

6.1.4 *Softening Point*—Test Method **D 36** or **D 3461**. In cases where a disagreement exists between the purchaser and the seller, Test Method **D 36** shall be used as the referee method.

6.1.5 *Flash Point*—Test Method **D 92**.

6.1.6 *Pitch Soluble in Carbon Disulfide*—Test Method **D 4**.

6.1.7 *Ash*—Test Method **D 2415**.

6.1.8 *Distillation*—Test Method **D 20**.

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.03 on Surfacing and Bituminous Materials for Membrane Waterproofing and Built-Up Roofing.

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<sup>2</sup> 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.

<sup>3</sup> Withdrawn.