



Designation: D 450 – 96 (Reapproved 2000)^{ε1}

Standard Specification for Coal-Tar Pitch Used in Roofing, Dampproofing, and Waterproofing¹

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 (ϵ) indicates an editorial change since the last revision or reapproval.

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

^{ε1} NOTE—Editorial changes were made throughout in November 2000.

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:

D 4 Test Method for Bitumen Content²

D 20 Test Method for Distillation of Road Tars³

D 36 Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)²

D 70 Test Method for Specific Gravity and Density of Semi-Solid Bituminous Materials³

D 92 Test Method for Flash and Fire Points by Cleveland Open Cup⁴

D 95 Test Method for Water in Petroleum Products and Bituminous Materials by Distillation⁴

D 140 Practice for Sampling Bituminous Materials³

D 2398 Test Method for Softening Point of Bitumen in Ethylene Glycol (Ring-and-Ball)⁵

D 2415 Test Method for Ash in Coal Tars and Pitch²

D 3461 Test Method for Softening Point of Asphalt and Pitch (Mettler Cup-and-Ball Method)⁶

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.

¹ This specification is under the jurisdiction of ASTM Committee D08 on Roofing, Waterproofing, and Bituminous Materials 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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² *Annual Book of ASTM Standards*, Vol 04.04.

³ *Annual Book of ASTM Standards*, Vol 04.03.

⁴ *Annual Book of ASTM Standards*, Vol 05.01.

⁵ Discontinued—See 1984 *Annual Book of ASTM Standards*, Vol 04.04.

⁶ *Annual Book of ASTM Standards*, Vol 05.02.