



Designation: D450/D450M – 07 (Reapproved 2024)

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

This standard is issued under the fixed designation D450/D450M; 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.

1. Scope

1.1 This specification covers two 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 either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system are not necessarily exact equivalents; therefore, to ensure conformance with the standard, each system shall be used independently of the other, and values from the two systems shall not be combined.

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

D4 Test Method for Bitumen Content

D20 Test Method for Distillation of Road Tars (Withdrawn 2023)³

D36/D36M Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)

D70/D70M Test Method for Specific Gravity and Density of Semi-Solid Asphalt Binder (Pycnometer Method)

D92 Test Method for Flash and Fire Points by Cleveland Open Cup Tester

¹ 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.

Current edition approved July 1, 2024. Published July 2024. Originally approved in 1937. Last previous edition approved in 2018 as D450/D450M – 07 (2018). DOI: 10.1520/D0450_D0450M-07R24.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

D95 Test Method for Water in Petroleum Products and Bituminous Materials by Distillation

D140/D140M Practice for Sampling Asphalt Materials

D2398 Test Method for Softening Point of Bitumen in Ethylene Glycol (Ring-and-Ball) (Withdrawn 1984)³

D2415 Test Method for Ash in Coal Tar and Pitch

D3461 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 two 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.

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 D140/D140M.

6.1.2 *Water*—Test Method D95.

6.1.3 *Specific Gravity*—Test Method D70/D70M.

6.1.4 *Softening Point*—Test Method D36/D36M or D3461. In cases where a disagreement exists between the purchaser and the seller, Test Method D36/D36M shall be used as the referee method.

6.1.5 *Flash Point*—Test Method D92.

6.1.6 *Pitch Soluble in Carbon Disulfide*—Test Method D4.

6.1.7 *Ash*—Test Method D2415.