



Standard Specification for Asphalt Used in Dampproofing and Waterproofing¹

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^{ε1} NOTE—Units information was editorially corrected in January 2014.

1. Scope

1.1 This specification covers three types of asphalt suitable for use as a mopping coat in dampproofing; or as a plying or mopping cement in the construction of membrane waterproofing systems with felts in accordance with Specification D226; fabrics in accordance with Specifications D173 or D1668 (asphalt types); asphalt-impregnated glass mat in accordance with Specifications D2178; and with primer in accordance with Specification D41.

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 should be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

- D5 Test Method for Penetration of Bituminous Materials
- D36 Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)
- D41 Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing
- D92 Test Method for Flash and Fire Points by Cleveland Open Cup Tester
- D113 Test Method for Ductility of Bituminous 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.

- D140 Practice for Sampling Bituminous Materials
- D173 Specification for Bitumen-Saturated Cotton Fabrics Used in Roofing and Waterproofing
- D226 Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
- D1668 Specification for Glass Fabrics (Woven and Treated) for Roofing and Waterproofing
- D2042 Test Method for Solubility of Asphalt Materials in Trichloroethylene
- D2178 Specification for Asphalt Glass Felt Used in Roofing and Waterproofing
- D3461 Test Method for Softening Point of Asphalt and Pitch (Mettler Cup-and-Ball Method)

3. Classification

3.1 Asphalts covered by this specification include three types:

3.1.1 *Type I*—A soft, adhesive, “self-healing” asphalt that flows easily under the mop and is suitable for use below grade under uniformly moderate temperature conditions both during the process of installation and during service.

NOTE 1—Type I asphalt is suitable for foundations, tunnels, subways, and so forth.

3.1.2 *Type II*—A somewhat less susceptible asphalt than Type I, with good adhesive and “self-healing” properties, suitable for use above grade where it will not be exposed to temperatures exceeding 50°C [122°F].

NOTE 2—Type II asphalt is suitable for railroad bridges, culverts, retaining walls, tanks, dams, conduits, spray decks, and so forth.

3.1.3 *Type III*—An asphalt less susceptible to temperature than Type II, with good adhesive properties, and suitable for use above grade on vertical surfaces exposed to direct sunlight or temperatures above 50°C [122°F].

4. Materials and Manufacture

4.1 The asphalt shall be prepared from crude petroleum by suitable refining processes to conform to the applicable physical requirements for each type.

5. Physical Requirements

5.1 The asphalt shall be homogeneous and free of water.

TABLE 1 Physical Requirements of Asphalt Used in Dampproofing and Waterproofing

	Type I		Type II		Type III	
	Min	Max	Min	Max	Min	Max
Softening point (ring-and-ball), °C [°F]	46 [115]	60 [140]	63 [145]	77 [170]	82 [180]	93 [200]
Flash point (Cleveland open cup), °C [°F]	232 [450]	...	232 [450]	...	246 [475]	...
Penetration:						
0°C [32°F], 200 g, 60 s; 0.1 mm	5	...	10	...	10	...
25°C [77°F], 100 g, 5 s; 0.1 mm	50	100	25	50	20	40
46°C [115°F], 50 g, 5 s; 0.1 mm	100	130	...	100
Ductility at 25°C [77°F], cm	30	...	10	...	2	...
Solubility in trichloroethylene, %	99	...	99	...	99	...

5.2 Each type shall conform to the appropriate requirements 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**.
- 6.1.2 *Softening Point*—Test Methods **D36** and **D3461**.
- 6.1.3 *Flash Point*—Test Method **D92**.
- 6.1.4 *Penetration*—Test Method **D5**.
- 6.1.5 *Ductility*—Test Method **D113**.
- 6.1.6 *Solubility in Trichloroethylene*—Test Method **D2042**.

7. Inspection and Certification

7.1 Inspection and certification of the material shall be as agreed upon between the purchaser and the seller. Specific requirements shall be made part of the purchase contract.

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8. Rejection and Rehearing

8.1 If the results of any test do not conform to the requirements of this specification, retesting to determine conformity may be performed as agreed upon between the purchaser and the seller.

9. Packaging and Marking

9.1 The material shall be suitably packaged to permit acceptance by the carrier and to afford adequate protection from the normal hazards of handling and shipment.

9.2 Each container shall be plainly marked with the name and brand of the manufacturer or seller.

10. Keywords

10.1 asphalt; dampproofing; fabrics; waterproofing