



Designation: D3745 – 95(Reapproved 2006)

# Standard Practice for Installation of Prefabricated Asphalt Reservoir, Pond, Canal, and Ditch Liner (Exposed Type)<sup>1</sup>

This standard is issued under the fixed designation D3745; 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.

## 1. Scope

1.1 This practice covers the description of suitable materials and procedures for installing prefabricated asphalt reservoir, pond, canal, and ditch liner (exposed type).

1.2 *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:*<sup>2</sup>

- D5 Test Method for Penetration of Bituminous Materials
- D6 Test Method for Loss on Heating of Oil and Asphaltic Compounds
- D36 Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)
- D92 Test Method for Flash and Fire Points by Cleveland Open Cup Tester
- D113 Test Method for Ductility of Bituminous Materials
- D312 Specification for Asphalt Used in Roofing
- D2042 Test Method for Solubility of Asphalt Materials in Trichloroethylene
- D2643 Specification for Prefabricated Bituminous Geomembrane Used as Canal and Ditch Liner (Exposed Type)
- D2822 Specification for Asphalt Roof Cement, Asbestos-Containing

## 3. Terminology

3.1 There are no terms in this practice that require new or other dictionary definitions.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee D08 on Roofing and Waterproofing and is the direct responsibility of Subcommittee D08.20 on Roofing Membrane Systems.

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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.

## 4. Significance and Use

4.1 The practices described are only for water bearing reservoirs, ponds, canals, and ditches.

## 5. Materials

5.1 The materials needed for the installation consist of the lining sheets, a joint sealant (either a hot-mopped asphalt or a cold-applied asphalt mastic type), and batten or cover strips for the joints between sheets; all of which are manufactured for compatibility to prevent exudation.

5.2 The lining sheets should conform to Specification D2643.

5.3 The hot-mopped asphalt joint sealant should conform to one of the following specifications:

5.3.1 Specification D312, Types II, III, or IV.

5.3.1.1 The choice of which type of roofing asphalt to use for a particular application will be influenced by climatic conditions and must be determined by the installer.

5.3.2 An asphalt manufactured to the requirements in Table 1.

5.3.3 *Test Methods*—The properties specified in Table 1 may be determined as follows:

5.3.3.1 *Flash Point*—Test Method D92.

5.3.3.2 *Softening Point*—Test Method D36.

5.3.3.3 *Penetration*—Test Method D5.

5.3.3.4 *Ductility*—Test Method D113.

5.3.3.5 *Weight Loss*—Test Method D6.

5.3.3.6 *Asphalt Soluble in Trichloroethylene*—Test Method D2042.

5.4 The cold-applied joint sealant should meet the requirements of Specification D2822 and should have the approval of the manufacturer of the lining material.

5.5 The batten or cover strips should meet the requirements of Specification D2643, except with a minimum thickness of 8 mm (5/16 in.) and a width of 203 mm (8 in.), unless other materials or thicknesses are recommended by the lining manufacturer or agreed upon between the purchaser and seller.

## 6. Preparation of Subgrade

6.1 Prepare the subgrade, whether soil, brick, concrete, or other substrate, by whatever means are necessary to remove any irregularities that might puncture or deform the lining.