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Standard Guide for the Use of Sodium Bentonite Needle-Punched Geotextile Waterproofing Systems with Cast-in-Place Concrete Below- Grade Foundation Construction¹

This standard is issued under the fixed designation D8425; 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.

1. Scope

1.1 This guide covers general installation guidelines of waterproofing membranes produced as a composite of sodium bentonite contained within two interlocked needle-punched geotextiles for designers to consider when developing project-specific drawings and specifications. This guide covers construction applications where the waterproofing is applied to the positive side of below-grade cast-in-place concrete foundation walls, both backfilled and support of excavation (SOE) construction, and under concrete pressure slabs. This guide does not cover plaza deck construction applications, either split-slab construction or pavers on pedestals, or vegetated green roof waterproofing applications.

1.2 This guide does not cover sodium bentonite waterproofing membranes produced with a corrugation paper carrier, bentonite bonded to a geomembrane, and spray-applied bentonite systems.

1.3 For the purpose of this guide, concrete is assumed to be cast-in-place with a surface profile as recommended in Guide **D5295/D5295M**, consolidated in accordance with applicable guidelines in ACI 309, structurally sound, able to accept the weight of anticipated loads, and meets the local building code requirements. All components of the waterproofing system are assumed to comply with any federal, state, and local environmental regulations that may be in effect at the time of installation. Expansion joints, insulation, and drainage layers are beyond the scope of this guide.

1.4 This guide does not cover sodium bentonite geotextile membranes installed on below-grade foundation walls and slabs constructed with masonry materials, precast concrete, or pneumatically applied concrete (that is, shotcrete).

1.5 The values stated in SI units are to be regarded as standard. The unit values given in parentheses are for reference information only.

¹ This guide is under the jurisdiction of ASTM Committee **D08** on Roofing and Waterproofing and is the direct responsibility of Subcommittee **D08.22** on Waterproofing and Dampproofing Systems.

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1.6 Different sodium bentonite geotextile membranes have different materials of composition and construction which can affect physical properties. The procedures contained in this guide, therefore, may not be universally applicable to all sodium bentonite geotextile membranes under all field conditions.

1.7 This guide does not purport to assign responsibilities of quality assurance or quality control. Specific quality assurance and quality control items should be addressed in project specifications and contract documents.

1.8 This guide does not purport to include requirements for warranties associated with the waterproofing materials or installation.

1.9 This guide does not purport to include all detailing techniques to address various conditions that can be encountered on construction projects.

1.10 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.11 *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

D1079 Terminology Relating to Roofing and Waterproofing

D4439 Terminology for Geosynthetics

D5295/D5295M Guide for Preparation of Concrete Surfaces for Adhered (Bonded) Membrane Waterproofing Systems

D6294/D6294M Test Method for Corrosion Resistance of

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.