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Standard Specification for Precast Concrete Septic Tanks¹

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1. Scope

1.1 This specification covers design requirements manufacturing practices, and performance requirements for monolithic or sectional precast concrete septic tanks.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

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:

- A 82 Specification for Steel Wire, Plain, for Concrete Reinforcement²
- A 184/A 184M Specification for Fabricated Deformed Steel Bar Mats for Concrete Reinforcement²
- A 185 Specification for Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement²
- A 496 Specification for Steel Wire, Deformed, for Concrete Reinforcement²
- A 497 Specification for Steel Welded Wire Fabric, Deformed, for Concrete Reinforcement²
- A 615/A 615M Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement²
- A 616/A 616M Specification for Rail-Steel Deformed and Plain Bars for Concrete Reinforcement²
- A 617/A 617M Specification for Axle-Steel Deformed and Plain Bars for Concrete Reinforcement²
- C 33 Specification for Concrete Aggregates³
- C 39 Test Method for Compressive Strength of Cylindrical Concrete Specimens³
- C 94 Specification for Ready-Mixed Concrete³
- C 125 Terminology Relating to Concrete and Concrete Aggregates³

C 150 Specification for Portland Cement⁴

C 231 Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method³

C 260 Specification for Air-Entraining Admixtures for Concrete³

C 330 Specification for Lightweight Aggregates for Structural Concrete³

C 494 Specification for Chemical Admixtures for Concrete³

C 595 Specification for Blended Hydraulic Cements⁴

C 618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete³

C 685 Specification for Concrete Made by Volumetric Batching and Continuous Mixing³

C 890 Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures⁵

2.2 ACI Standard:⁶

ACI 318-89 Building Code Requirements for Reinforced Concrete

3. Terminology

3.1 For definitions of terms relating to concrete, see Terminology C 125.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *access opening*—a hole in the top slab used to gain access to the inside of the tank for the purpose of cleaning and removing sludge without a person actually having to enter the tank.

3.2.2 *air scum volume*—the number of cubic inches (centimetres) in the space between the liquid surface and the underside of the top slab.

3.2.3 *inspection opening*—a hole in the top slab used for the purpose of observing conditions inside the tank.

3.2.4 *joint*—a physical separation where two pieces of precast concrete are in contact.

3.2.5 *non-sealed joint*—a joint where sealant is not used but where a machined fit will minimize the movement of liquid from one side of a precast concrete wall to the opposite side.

3.2.6 *sealed joint*—a joint that is sealed to prevent liquid

¹ This specification is under the jurisdiction of ASTM Committee C27 on Precast Concrete Products and is the direct responsibility of Subcommittee C27.30 on Water and Wastewater Containers.

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² *Annual Book of ASTM Standards*, Vol 01.04.

³ *Annual Book of ASTM Standards*, Vol 04.02.

⁴ *Annual Book of ASTM Standards*, Vol 04.01.

⁵ *Annual Book of ASTM Standards*, Vol 04.05.

⁶ American Concrete Institute (ACI), Box 19150, Redford Station, Detroit, MI 48219.