



Designation: D3753 – 20

Standard Specification for Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Manholes and Wetwells¹

This standard is issued under the fixed designation D3753; 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 specification covers “fiberglass” (glass fiber-reinforced thermosetting-resin) manholes and wetwells fabricated with polyester, vinyl ester, or epoxy resin for use primarily in sanitary, storm, and industrial sewer applications.

1.2 The values given in inch-pound units are to be regarded as the standard. The values in parentheses are provided for information purposes only.

1.3 The following precautionary caveat pertains only to the test methods portion, Section 8, of this specification: *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.*

NOTE 1—There is no known ISO equivalent to this standard.

1.4 *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

- [C581 Practice for Determining Chemical Resistance of Thermosetting Resins Used in Glass-Fiber-Reinforced Structures Intended for Liquid Service](#)
- [D695 Test Method for Compressive Properties of Rigid Plastics](#)
- [D785 Test Method for Rockwell Hardness of Plastics and](#)

[Electrical Insulating Materials](#)

- [D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials](#)
- [D883 Terminology Relating to Plastics](#)
- [D1600 Terminology for Abbreviated Terms Relating to Plastics](#)
- [D2412 Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading](#)
- [D2583 Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor](#)
- [D2584 Test Method for Ignition Loss of Cured Reinforced Resins](#)
- [D3892 Practice for Packaging/Packing of Plastics](#)

3. Terminology

3.1 *General*—Definitions are in accordance with Terminology [D883](#) and the abbreviations are in accordance with Terminology [D1600](#) unless otherwise indicated.

3.2 *bench and invert, n*—internal flow channel with a sloped bench extending from the edge of the flow channel to the manhole wall designed to facilitate the flow of liquid through the manhole between the pipe connectors.

3.3 *bottom, n*—a flat, domed, dished, or other shaped bottom designed to make the manhole or wetwell watertight at its base.

3.4 *expanded base manhole, n*—a manhole with a larger diameter base section and reduced diameter riser section. (See [Fig. 1](#) for a typical manhole and an expanded base manhole.)

3.5 *expanded base reducer, n*—a portion of the manhole, between the manway reducer and bottom, that changes from one diameter to another in the cylindrical portion of the structure.

3.6 *manway reducer, n*—the top portion of the manhole through which entrance to the manhole is made and where the diameter increases from the entrance way to the larger manhole cylinder.

3.7 *manhole, n*—a constant diameter cylinder attached to a manway reducer designed to handle a manhole cover and ring.

3.8 *manhole cover and frame, n*—those accessories used with the manhole to close the manway entrance (includes grade adjustment rings).

¹ This specification is under the jurisdiction of ASTM Committee [D20](#) on Plastics and is the direct responsibility of Subcommittee [D20.23](#) on Reinforced Thermosetting Resin Piping Systems and Chemical Equipment.

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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.

*A Summary of Changes section appears at the end of this standard