



**American Water Works  
Association**

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**ANSI/AWWA C217-16**  
(Revision of ANSI/AWWA C217-09)

**AWWA Standard**

# Microcrystalline Wax and Petrolatum Tape Coating Systems for Steel Water Pipe and Fittings

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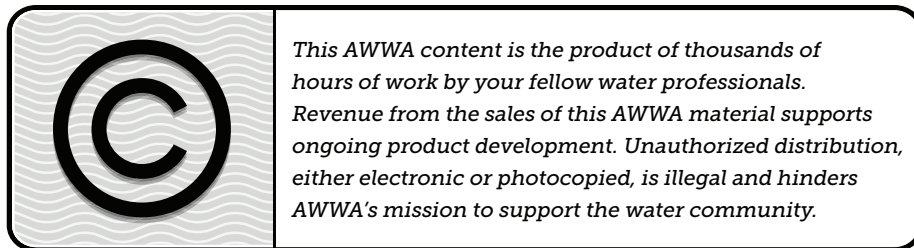
## AWWA Standard

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# Foreword

*This foreword is for information only and is not a part of ANSI/AWWA C217.*

## **I. Introduction.**

I.A. *Background.* This standard was developed to provide information on cold-applied petrolatum tape coatings and petroleum wax tape coatings for external use on special sections, connections, and fittings for buried or submerged steel water pipelines. The latest edition of the standard (2016) was updated to provide a more accurate description of the tape made with microcrystalline wax and petrolatum.

I.B. *History.* Development of this standard was authorized by the American Water Works Association (AWWA) Standards Council on Nov. 3, 1986. The first edition was approved by the AWWA Board of Directors on June 21, 1990. Subsequent revisions to ANSI/AWWA C217 were prepared by the AWWA Standards Committee and approved on June 17, 1995; Jan. 24, 1999; Jan. 18, 2004; and Jan. 25, 2009. This edition was approved on Jan. 16, 2016.

## **II. Special Issues.**

II.A. *Advisory Information on Product Application.* This standard defines the performance of cold-applied petrolatum tape and petroleum wax tape coatings establishing the quality desired for long-term protection and prevention of corrosion. It applies to the exterior coating of steel water pipelines for underground and underwater installation under normal conditions. It is based on previous experience but is not designed for unqualified use under all conditions. The advisability of its use for any installation must be reviewed by the purchaser. If an extended period of aboveground storage of coated pipe is anticipated, the material's ability to resist degradation by ultraviolet light and other atmospheric and environmental conditions should be considered.

**III. Use of This Standard.** It is the responsibility of the user of an AWWA standard to determine that the products described in that standard are suitable for use in the particular application being considered.

III.A. *Purchaser Options and Alternatives.* The following items should be provided by the purchaser.

1. Standard used that is, ANSI/AWWA C217, Microcrystalline Wax and Petrolatum Tape Coating Systems for Steel Water Pipe and Fittings, of latest revision.
2. Any exceptions to the standard that may be required.

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\* American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036.

3. Expected aboveground exposure time (foreword, Section II.A).
4. Description and dimensions of each type of special section for each type of exterior protection.
  - a. Normal or average conditions.
  - b. Unusual conditions (Sec. 1.1.1).
5. Physical properties of primer and coating (Table 1).
6. Coating-system thickness (Sec. 4.3.3.4).
7. Surface preparation (Sec. 4.4.1).
8. Tape coating repair (Sec. 4.4.4).
9. Inspection (Sec. 5.4).
10. Testing (Sec. 5.2).
11. Packaging and shipping (Sec. 6.2).
12. Affidavit of compliance, if required (Sec. 6.3).

III.B. *Modification to Standard.* Any modification to the provisions, definitions, or terminology in this standard must be provided by the purchaser.

**IV. Major Revisions.** Major revisions made to the standard in this edition include the following:

1. The title and scope of the standard were changed to add an additional wax type and expand the intended usage to include steel fittings.
2. The definition for petrolatum was revised and a new definition for microcrystalline wax was added in place of petroleum wax (Section 3).
3. Section 4 was modified to be consistent with the formatting and section numbers of other AWWA coating standards.
4. Table 1 was modified and new Tables 2, 3, and 4 were added to include information and requirements consistent with changes made to other AWWA coating standards.
5. The minimum breaking strength in Table 3 was modified to more accurately reflect the industry-accepted minimum.
6. Minimum thickness of primer listed in Table 4 was modified to require complete coverage to more accurately reflect industry practice.
7. Sec. 4.3 was modified to include the option of using a wax-based filler material in the coating system.
8. Portions of Sec. 4.5, Field Procedures, language were deleted and the reader is referred to AWWA C604 to be consistent with changes in other AWWA coating standards.

9. Section 5, Verification, was modified to be consistent with the new language and format being used in other AWWA coating standards.

10. New requirements and sections for dielectric strength (Sec. 5.2.2.4), cathodic disbondment testing (Table 3 and Sec. 5.2.2.5), breaking strength (Sec. 5.2.2.6), and elongation (Sec. 5.2.2.7) were added for consistency with other AWWA coating standards.

11. A new Sec. 5.3, Quality Assurance and Records, was added.

12. A new Sec. 5.4, Inspection and Testing by the Purchaser, was added.

13. Under new Sec. 5.5, Quality Control Requirements of Applied Coating System, new requirements for coating appearance (Sec. 5.5.1) and primer thickness (Sec. 5.5.2) were added.

14. The Electrical Continuity Inspection section was updated (Sec. 5.5.3).

15. Previous Sec. 5.3, Notice of Nonconformance, was renamed Rejection (new Sec. 5.6) and revised.

16. Section 6, Delivery, was modified to be consistent with other AWWA coating standards.

17. A new Sec. 6.2.1.4 was added under Packaging and Shipping to include wax-based filler.

18. The information in Sec. 6.2.2, Shipping, Handling, and Storage, was updated.

19. Sec. 6.3, Affidavit of Compliance, was modified to include an affidavit for workmanship.

**V. Comments.** If you have any comments or questions about this standard, please call AWWA Engineering and Technical Services at 303.794.7711, FAX at 303.795.7603; write to the department at 6666 West Quincy Avenue, Denver, CO 80235-3098; or email at [standards@awwa.org](mailto:standards@awwa.org).

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# Microcrystalline Wax and Petrolatum Tape Coating Systems for Steel Water Pipe and Fittings

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## SECTION 1: GENERAL

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### **Sec. 1.1 Scope**

This standard establishes minimum requirements for microcrystalline wax and petrolatum tape coating systems for steel water pipe and fittings.

This standard describes exterior coatings that consist of cold-applied microcrystalline wax or petrolatum primers and tapes and their applications to special sections, connections, and fittings to be used with buried, submerged, and above-ground steel water pipelines. The primers and tapes are not intended for use with steel joints or sections of steel pipe where coatings of cement mortar or concrete are applied directly onto the bare steel pipe. These coatings may be field- or shop-applied according to the provisions of this standard.

1.1.1 *Conditions not described in this standard.* This standard does not describe the additional materials and procedures that may be required for difficult conditions, such as those encountered in building some submarine lines, casing pipe, river crossings, and lines that are in rocky areas or in severe soil stress. Consult the manufacturer for the additional materials and procedures that may be required for these conditions. These materials may not be described in this standard.