

American Water Works Association

ANSI/AWWA C214-95

(Revision of ANSI/AWWA C214-89)



AWWA STANDARD
FOR
**TAPE COATING SYSTEMS FOR THE
EXTERIOR OF STEEL WATER PIPELINES**



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AMERICAN WATER WORKS ASSOCIATION

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Foreword

This foreword is for information only and is not part of AWWA C214.

I. Introduction

I.A. *Background.* This standard covers the minimum material and application requirements for prefabricated plastic tape to be plant-applied to the exterior of steel water pipe for purposes of underground corrosion protection. Currently, the only plastic tape coatings for which significant performance experience in this application has been accumulated are based on polyethylene. However, this standard can also be used to qualify tapes that are based on other polyolefin-type materials.

I.B. *History.* The first edition of this standard was approved by the AWWA Board of Directors on Jan. 30, 1983. The second edition was approved on June 22, 1989, and had an effective date of Jan. 1, 1990. Major revisions in the second edition included deletion of references to AWWA C209; deletion of numerical reference to the maximum operating temperature of steel water pipelines; addition of a statement of applicability to the “exterior of steel water pipelines in the potable-water supply industry” in Sec. 1.1, Scope; and addition of item 21, “Maximum internal operating pressure of the pipeline” to the foreword, Sec. III.B, Supplemental Information Required for Use of This Standard. Addendum C214a-91, approved by the AWWA Board of Directors on June 23, 1991, added additional physical property requirements limiting the amount of nonpolyolefinic material in inner-layer tape to a minimum of 1.0 percent and a maximum of 3.5 percent, the amount of nonpolyolefinic material in outer-layer tape to a minimum of 3.0 percent and a maximum of 7.0 percent, and required the tape manufacturer to certify that the tape meets these criteria. It also revised Sec. 5.3.11 (previous Sec. 4.2.11), deleting the phrase “and 140°F (60°C)” from that section.

II. Special Issues

II.A. *Advisory Information on Product Application.* This standard defines prefabricated plastic tape coatings in terms of performance to establish the quality desired for long-term protection and prevention of corrosion. It is intended for the exterior coating of steel water pipelines for underground or underwater installation under normal conditions. It is based on the best-known experience, but is not designed for unqualified use under all conditions, and 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, consideration should be given to the ability of the outer wrap to resist degradation from ultraviolet light and other atmospheric and environmental conditions.*

Future air emission regulations may restrict the use of liquid adhesives covered by this standard. If this occurs, consult the manufacturer for equivalent alternatives.

III. **Use of This Standard.** AWWA has no responsibility for the suitability or compatibility of the provisions of this standard to any intended application by any user. Accordingly, each user of this standard is responsible for determining that the standard’s provisions are suitable for and compatible with that user’s intended application.

III.A. *Purchaser Options and Alternatives.* The following items should be covered in the purchaser’s specifications:

1. Standard used—that is, AWWA C214, Standard for Tape Coating Systems for the Exterior of Steel Water Pipelines, of latest revision.

2. Any exceptions to the standard that may be required.
3. Diameter, length, and location of pipeline.
4. Affidavit of compliance, if required (Sec. 6.3).
5. Location of coating application with reference to environmental considerations.
6. Requirements for coating system thickness (Tables 2, 3, and 4, and Sec. 4.3.1.4).
7. Requirements for tape dimensions (Sec. 4.3.2.2.2).
8. Requirements for cleaning standard (Sec. 4.4.2.2).
9. Requirements for hard rubber roller (Sec. 4.4.3.2).
10. Requirements for cutback at pipe ends (Sec. 4.4.3.4).
11. Requirements for coating repair (Sec. 4.4.4).
12. Requirements for welded field-joint coating (Sec. 4.4.5).
13. Requirements for inspection and testing (Sec. 4.3.3 and Sec. 5).
14. Requirements for coating materials acceptance testing (Sec. 5.1). NOTE: With reference to Sec. 5.1 (option 2), when submission of samples of proposed materials for testing by the purchaser is specified, the purchaser's specifications should address the assignment of testing costs. Commonly accepted industry practice for this option is that the cost of initial testing of all coating material samples originally offered by the constructor be borne by the purchaser. If any initial samples fail to conform to the standard, additional samples may be tested. All costs of testing additional samples are borne by the constructor.
15. Requirements for optional inspection (Sec. 5.2.1).
16. Requirements for coating-system test frequency (Sec. 5.4.1).
17. Requirements for selection of holiday detector (Sec. 5.4.2).
18. Requirements for pipe rejection (Sec. 5.5).
19. Requirements for delivery (Sec. 6).
20. Provision for pipe bedding and trench backfill (Sec. 4.5.3).
21. Requirements for packaging (Sec. 6.2.1).
22. Maximum internal operating temperature of the pipeline (Sec. 1.1.1).
23. Requirements for outdoor storage (Sec. 4.3.1.3).
24. Requirements for nonpolyolefinic material determination (Tables 2 and 3, Sec. 4.3.1.2, and Sec. 4.3.1.3).

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

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

1. The format has been changed to AWWA standard style.
2. The definitions of parties (Sec. 3) have been revised to approved wording.
3. In the foreword, Sec. III.A., Purchaser Options and Alternatives, the following has been added: No. 24, Nonpolyolefinic material determination (Tables 2 and 3, Sec. 4.3.1.2, and Sec. 4.3.1.3).
4. In Table 4, "penetration resistance" has been changed to "penetration/deformation resistance." Test method has not been changed.
5. The word "primer" has been changed to "liquid adhesive" throughout the standard.
6. The addendum to this standard, approved June 23, 1991, has been inserted into the appropriate sections of this standard.

7. Reference ASTM* D-12-78 has been changed to ASTM D4218.

8. In Sec. 4.4.2.7, Weld seam cover, new procedures are listed that must be followed for the coating of spiral welded pipe weld seams.

9. Provisions for use of a hard rubber roller were added (Sec. 4.4.3.2).

V. Comments. If you have any comments or questions about this standard, please call the AWWA Standards and Materials Development Department, (303) 794-7711 ext. 6283, FAX (303) 795-1440, or write to the department at 6666 W. Quincy Ave., Denver, CO 80235.

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