



**American Water Works
Association**

The Authoritative Resource on Safe Water®

ANSI/AWWA C214-07
(Revision of ANSI/AWWA C214-00)

AWWA Standard

Tape Coating Systems for the Exterior of Steel Water Pipelines



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AWWA Standard

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Foreword

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

I. Introduction.

I.A. *Background.* This standard describes the minimum material and application requirements for prefabricated plastic tape to be plant applied to the exterior of steel water pipe to protect the pipe against underground corrosion. 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 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. The third edition was approved June 17, 1995, and had an effective date of Dec. 1, 1996. Major revisions in the second edition included deleting references to ANSI/AWWA C209. In the third edition, the references to ANSI/AWWA C209 were reinstated and remain in this fifth edition. The second edition also deleted numerical reference to the maximum operating temperature of steel water pipelines; added a statement of applicability to the “exterior of steel water pipelines in the potable-water supply industry” in Sec. 1.1, Scope; and added item 21, “Maximum internal operating pressure of the pipeline,” to the foreword. Addendum C214a-91, approved 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 and limiting the amount of nonpolyolefinic material in outer-layer tape to a minimum of 3.0 percent and a maximum of 7.0 percent. The tape manufacturer was also required to certify that the tape met these criteria. Addendum C214a-91 also revised Sec. 5.3.11 (previously Sec. 4.2.11), deleting the phrase “and 140°F (60°C)” from that section. The fourth edition of ANSI/AWWA C214 was approved on Jan. 23, 2000. This fifth edition was approved on Jan. 21, 2007.

II. Special Issues.

II.A. *Advisory Information on Product Application.* This standard defines the performance of prefabricated plastic tape coatings establishing 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. 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 ability of the outer wrap to resist degradation from ultraviolet light and other atmospheric and environmental conditions should be considered.

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

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 C214, Tape Coating Systems for the Exterior of Steel Water Pipelines, of latest revision.
2. Any required exceptions to the standard.
3. Diameter, length, and location of pipeline.
4. Location of coating application with reference to environmental considerations.
5. Operating temperature range (Sec. 1.1.1).
6. Determining nonpolyolefinic material (Tables 2 and 3, Sec. 4.3.1.2 and 4.3.1.3).
7. Outdoor storage (Sec. 4.3.1.3).
8. Coating system thickness (Tables 2, 3, and 4, and Sec. 4.3.1.4).
9. Tape dimensions (Sec. 4.3.2.2.2).
10. Inspecting and testing (Sec. 4.3.3 and Section 5).
11. Visual standards (Sec. 4.4.2.3).
12. Weld treatment (Sec. 4.4.2.7).
13. Hard rubber roller use (Sec. 4.4.3.2).
14. Roll temperature (Sec. 4.4.3.2 and 4.4.3.3).
15. Cutback at pipe ends (Sec. 4.4.3.4).
16. Coating repair (Sec. 4.4.4).
17. Welded field-joint coating (Sec. 4.4.5).
18. Conditions not discussed (Sec. 4.4.7).
19. Pipe bedding and trench backfill (Sec. 4.5.3).
20. Compaction of bedding and backfill (Sec. 4.5.3.3).
21. Coating materials acceptance testing (Sec. 5.1). NOTE: With reference to