



**American Water Works
Association**

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ANSI/AWWA C215-16
(Revision of ANSI/AWWA C215-10)

AWWA Standard

Extruded Polyolefin Coatings for Steel Water Pipe

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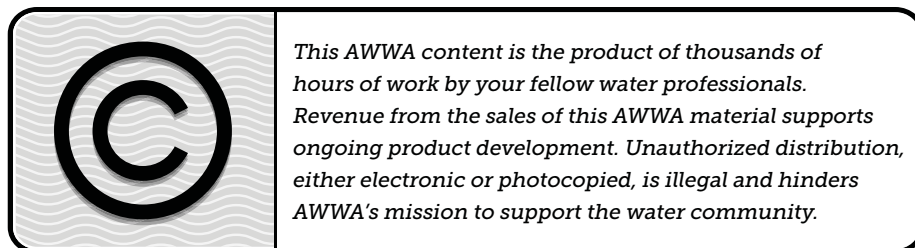
AWWA Standard

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Foreword

This foreword is for information only and is not a part of ANSI/AWWA C215.*

I. Introduction.

I.A. *Background.* Extruded polyolefin pipe-coating systems were first applied on steel pipe in 1956 using a crosshead-die extrusion system. In 1965, side extrusion was introduced in Europe and became available in the United States in 1972.

I.B. *History.* The first edition of ANSI/AWWA C215 was approved by the AWWA Board of Directors on June 19, 1988, and had an effective date of Jan. 1, 1989. The second edition of ANSI/AWWA C215 was approved on Jan. 30, 1994, and had an effective date of Nov. 1, 1994. The third edition incorporated the latest technology and requirements. It was approved on June 20, 1999. The fourth edition of ANSI/AWWA C215 was approved on Jan. 18, 2004. The fifth edition incorporated the latest technology and requirements. It was approved on Jan. 17, 2010, and had an effective date of April 1, 2010. This edition was approved on Jan. 16, 2016.

II. Special Issues. ANSI/AWWA C215 is intended to govern the exterior coating of steel water pipelines for underground or underwater installation under normal conditions. It is based on current experience, but it is not intended for unqualified use under all conditions. The applicability of its use for any installation must be reviewed by the purchaser.

Currently, significant experience in extruded polyolefin coatings applied to steel water pipe is limited to polyethylene (PE) material.

Extruded polyolefin coatings described in ANSI/AWWA C215 can be shop-applied to straight lengths of steel water pipe. Three coating-application systems are described in the standard: the crosshead-die system (Type A) and the side-extrusion system with and without primer (Types B and C).

Future air emission rules may regulate the use of liquid adhesives (primers) described in this standard. If this occurs, consult the manufacturer for equivalent alternatives.

III. Use of 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:

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

1. Standard used—that is, ANSI/AWWA C215, Extruded Polyolefin Coatings for Steel Water Pipe, of latest revision.
2. Any exceptions to the standard.
3. Diameter, length, weld configuration, and location of pipeline.
4. Temperature of conveyed water (Sec. 1.1.2).
5. Requirements for coating thickness (Sec. 4.3.1.4).
6. Requirements for coating application at pipe ends (coating cutback) (Sec. 4.4.3.4, 4.4.4.4, and 4.4.5.5).
7. Requirements for coating repair (Sec. 4.5).
8. Provisions for field procedures (Sec. 4.6).
9. Requirements for coating of field joints (Sec. 4.7).
10. Requirements for inspection and testing (Sec. 5.1, 5.2, 5.3, and 5.4).
11. Requirements for loading, shipping, handling, and outdoor storage (Sec. 6.2).
12. Affidavit of compliance (Sec. 6.3).

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

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

1. The title of the standard was changed to be consistent with other AWWA steel pipe coating standards.
2. The scope of the standard was revised for Type B and Type C applications to include 2-in. and larger-diameter sizes rather than 2-in. through 144-in. diameter sizes.
3. References in Section 2 were updated.
4. Table 4, Physical Properties of the Liquid Adhesives (Primer) for Type C, was deleted.
5. Sec. 4.4.2.2, Abrasive Blast Cleaning, was revised to be consistent with the other AWWA steel pipe coating standards.
6. The existing wording in Sec. 4.6, Field Procedures, was removed. The revised section now references ANSI/AWWA C604.
7. Section 5, Verification, was modified to be consistent with the new language being used in the other AWWA steel pipe coating standards.
8. Sec. 5.2.3.7, Cathodic Disbondment, was revised.
9. The requirements in Sec. 5.5.3, Coating Thickness, were updated.
10. Additional information on temperature range was added to Sec. 5.5.4, Adhesion.

11. Sec. 5.5.4.3, Rejection, was expanded to provide additional guidelines.
12. Section 6 was modified to be consistent with other AWWA steel pipe coating standards.
13. Sec. 6.2, Packaging and Shipping, was revised to be consistent with other AWWA steel pipe coating and lining standards. The sections on stacking, trench side placement, and outdoor storage were deleted.
14. Sec. 6.3, Affidavit of Compliance, was modified to include an affidavit for workmanship. Similar language will be added to all other AWWA coating standards.

V. Comments. If you have any comments or questions about this standard, please contact 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.

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AWWA Standard

Extruded Polyolefin Coatings for Steel Water Pipe

SECTION 1: GENERAL

Sec. 1.1 Scope

This standard describes the materials, systems, and application requirements for shop-applied extruded polyolefin coatings for the exterior of steel water pipes.

1.1.1 *Extrusion types.* This standard describes the following three types of coating-system applications:

- Type A, crosshead-die extrusion, consists of an adhesive and an extruded polyolefin sheath. This system is limited to pipe diameters ½ in. through 36 in. (13 mm through 900 mm).
- Type B, side extrusion, consists of an extruded adhesive and an extruded polyolefin sheath. This system is limited to pipe diameters 2 in. (50 mm) and larger.
- Type C, side extrusion, consists of a liquid adhesive (primer) layer, extruded butyl rubber adhesive, and extruded polyolefin sheath. This system is limited to pipe diameters 2 in. (50 mm) and larger.

1.1.2 *Maximum temperatures.* AWWA steel pipe coating standards are written for, and are based on, the service temperature of potable water. Extruded polyolefin coatings have performed at higher temperatures. Consult the coating manufacturer for conditions and limitations.