ANSI/AWWA C550-17
(Revision of ANSI/AWWA C550-13)

American Water Works Association

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AWWA Standard

Protective Interior Coatings for Valves and Hydrants

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STANDARD
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Since 1881

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AWWA Standard

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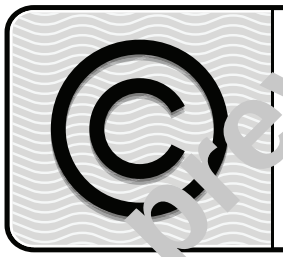

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Contents

All AWWA standards follow the general format indicated subsequently. Some variations from this format may be found in a particular standard.

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Foreword

This foreword is for information only and is not a part of ANSI/AWWA C550.*

I. Introduction.

I.A. *Background.* This standard describes protective interior coatings for valves used for water supply, wastewater collection and treatment, and reclaimed water service having a pH range from 4 to 9; and for hydrants used for water supply service. The standard describes the material, application, and performance requirements for these interior coatings. The coating shall be either a liquid or powder system and shall not contain coal tar. These coatings are applied to interior ferrous surfaces of valves and hydrants where corrosion protection is specified.

I.B. *History.* An AWWA joint task group was formed on Jan. 1, 1971, to study protective coatings for valves and hydrants in response to a request from the Gate Valve and Swing Check Valve, Butterfly Valve, and Fire Hydrant Standards committees. The purpose of this task group was to assemble all of the available information on protective coatings for valves and hydrants and to prepare a report from this information.

The AWWA Standards Committee on Protective Interior Coatings for Valves and Hydrants produced the first edition of ANSI/AWWA C550 in 1980. It was approved by the AWWA Board of Directors on Jan. 25, 1981. Subsequent editions were approved on Jan. 28, 1990; June 17, 2001; Jan. 16, 2005; and Jan. 20, 2013. This edition of the standard was approved on Jan. 14, 2017.

I.C. *Acceptance.* In May 1985, the US Environmental Protection Agency (USEPA) entered into a cooperative agreement with a consortium led by NSF International (NSF†) to develop voluntary third-party consensus standards and a certification program for direct and indirect drinking water additives. Other members of the original consortium included the Water Research Foundation (formerly AwwaRF) and the Conference of State Health and Environmental Managers (COSHEM). The American Water Works Association (AWWA) and the Association of State Drinking Water Administrators (ASDWA) joined later.

In the United States, authority to regulate products for use in, or in contact with, drinking water rests with individual states.‡ Local agencies may choose to impose requirements more stringent than those required by the state. To evaluate the health

* American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036.
† NSF International, 789 North Dixboro Road, Ann Arbor, MI 48105.
‡ Persons outside the United States should contact the appropriate authority having jurisdiction.

effects of products and drinking water additives from such products, state, provincial, and local agencies may use various references, including

1. Specific policies of the state, provincial, or local agency.

2. Two standards developed under the direction of NSF: NSF/ANSI 60, Drinking Water Treatment Chemicals—Health Effects, and NSF/ANSI 61, Drinking Water System Components—Health Effects.

3. Other references, including AWWA standards, *Food Chemicals Codex*, *Water Chemicals Codex*,* and other standards considered appropriate by the state, provincial, or local agency.

Various certification organizations may be involved in certifying products in accordance with NSF/ANSI 61. Individual states, provinces, or local agencies have authority to accept or accredit certification organizations within their jurisdictions. Accreditation of certification organizations may vary from jurisdiction to jurisdiction.

Annex A, "Toxicology Review and Evaluation Procedures," to NSF/ANSI 61 does not stipulate a maximum allowable level (MAL) of a contaminant for substances not regulated by a USEPA final maximum contaminant level (MCL). The MALs of an unspecified list of "unregulated contaminants" are based on toxicity testing guidelines (noncarcinogens) and risk characterization methodology (carcinogens). Use of Annex A procedures may not always be identical, depending on the certifier.

ANSI/AWWA C550 does not address additives requirements. Users of this standard should consult the appropriate state, provincial, or local agency having jurisdiction in order to

1. Determine additives requirements, including applicable standards.

2. Determine the status of certifications by parties offering to certify products for contact with, or treatment of, drinking water.

3. Determine current information on product certification.

II. Special Issues. This standard has no applicable information for this section.

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:

* Both publications available from National Academy of Sciences, 500 Fifth Street, NW, Washington, DC 20001.

1. Standard used—that is, ANSI/AWWA C550, Protective Interior Coatings for Valves and Hydrants, of latest revision.

2. Details of any special service conditions such as salt water, acid, high temperature, wastewater, or reclaimed water must be communicated to the manufacturer or its agent (Sec. 1.1.1.3).

3. Details of other federal, state or provincial, and local requirements (Sec. 4.1).

4. Other coating material not specified in Sec. 4.1 that may be required for use in nonpotable water.

5. Any special surface preparation requirements (Sec. 4.2.1).

6. Holiday testing, if required. Consult manufacturers for availability of special holiday tests (Sec. 5.1.3).

7. Affidavit or certificate of compliance, if required (Sec. 6.1). If holiday testing is required, purchasers should consult manufacturers for same or such tests in their specification.

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

IV. Major Revisions. Major revisions to the standard in this edition include

1. Sec. 5.3, Basis for Rejection, was added.

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.

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AWWA Standard

Protective Interior Coatings for Valves and Hydrants

SECTION 1: GENERAL

Sec. 1.1 Scope

This standard describes protective interior coatings for valves used for water supply, wastewater collection and treatment, and reclaimed water service having a pH range from 4 to 9; and for hydrants used for water supply service. The standard describes the material, application, and performance requirements for these interior coatings. The coating shall not contain coal tar. These coatings are applied for protection of ferrous surfaces of valves and hydrants.

1.1.1 *Special coating conditions.*

1.1.1.1 Exterior coatings. It is normal commercial practice for the coating applicator to apply this coating to the exterior surface of resilient seat gate valves and hydrant components. It should be recognized that the performance requirements for exterior service may vary from those specified for interior use because of differences in exposure conditions.

1.1.1.2 Internal hydrant coatings. This standard covers interior hydrant coatings in areas designed for constant contact with water supply. It does not cover internal coatings of dry-barrel hydrants on areas downstream of the main valve.

1.1.1.3 Special service conditions. The purchaser and the manufacturer shall agree on special coating requirements prior to manufacturing of product if

special service conditions exist. Special service conditions may include salt water, acid, high temperature, wastewater, or reclaimed water. Coatings for these special service conditions may or may not conform to this standard.

Sec. 1.2 Purpose

The purpose of this standard is to provide the minimum requirements for protective interior coatings for valves and hydrants, including materials, coating process, testing, and repair.

Sec. 1.3 Application

This standard can be referenced in specifications for purchasing and receiving protective interior coatings for valves and hydrants. This standard can be used as a guide for materials, application, and performance requirements for these interior coatings. The stipulations of this standard apply when this document has been referenced and only to protective interior coatings for valves and hydrants.

SECTION 2: REFERENCES

This standard references the following documents. In their latest editions, these documents form a part of this standard to the extent specified within the standard. In any case of conflict, the requirements of this standard shall prevail.

ASTM* D2794—Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).

ASTM G62—Standard Test Methods for Holiday Detection in Pipeline Coatings.

NSF†/ANSI‡ 61—Drinking Water System Components—Health Effects.

SECTION 3: DEFINITIONS

The following definitions shall apply in this standard:

1. *Application:* The method by which the coating material is applied or deposited on the valve, hydrant, or component part thereof. Methods of application may include, but are not restricted to, the following:

* ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428.
† NSF International, 789 North Dixboro Road, Ann Arbor, MI 48105.
‡ American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036.