



**American Water Works  
Association**

ANSI/AWWA C550-05  
(Revision of ANSI/AWWA C550-01)

The Authoritative Resource on Safe Water<sup>SM</sup>

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*AWWA Standard*

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# Protective Interior Coatings for Valves and Hydrants



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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 the special protective interior coatings for valves and hydrants used for water supply service. The standard describes the material, application, and performance requirements for these special 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. 15, 1971, to study protective linings 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 linings and 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. The second edition was approved on Jan. 28, 1990. The third edition was approved on June 17, 2001. This edition of the standard was approved on Jan. 16, 2005.

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 American Water Works Association Research Foundation (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

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\*Persons outside the US 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. An advisory program formerly administered by USEPA, Office of Drinking Water, discontinued on Apr. 7, 1990.
2. Specific policies of the state, provincial, or local agency.
3. 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.
4. 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 or local agencies have authority to accept or accredit certification organizations within their jurisdiction. 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.

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\*NSF International, 789 N. Dixboro Rd., Ann Arbor, MI 48105.

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

‡Both publications available from National Academy of Sciences, 2102 Constitution Ave. N.W., Washington, DC 20418.

**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 C550, Standard for Protective Interior Coatings for Valves and Hydrants, of latest revision.
2. Whether compliance with NSF/ANSI 61 Drinking Water System Components—Health Effects, is required, in addition to the requirements of the Safe Drinking Water Act.
3. Details of other federal, state, local, and provincial requirements (Sec. 4.1).
4. Any special surface preparation requirements (Sec. 4.2.1).
5. Inspection responsibilities (Sec. 5.1).
6. Holiday testing, if required. Consult manufacturers for availability of special holiday tests (Sec. 5.2.3).
7. Affidavit or certificate of compliance, if required (Sec. 6.3).

**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.** There are no major revisions.

**V. Comments.** If you have any comments or questions about this standard, please call the AWWA Volunteer and Technical Support Group at (303) 794-7711, FAX (303) 795-7603, or write to the group at 6666 West Quincy Avenue, Denver, CO 80235-3098, or e-mail at [standards@awwa.org](mailto:standards@awwa.org).

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Association

ANSI/AWWA C550-05  
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## *AWWA Standard*

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# Protective Interior Coatings for Valves and Hydrants

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## SECTION 1: GENERAL

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### Sec. 1.1 Scope

This standard describes the special protective interior coatings for valves and hydrants used for water supply service. The standard describes the material, application, and performance requirements for these special 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.

1.1.1 *Exceptions.* This standard does not cover the following:

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. 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 Special service conditions. Coatings agreed on between the purchaser and the manufacturer for special service conditions, including salt water, acid, and high temperature.