ANSI/AWWA **C550-24**

(Revision of ANSI/AWWA C550-17)

AWWA Standard

Protective Interior Coatings for Valves and Hydrants

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American Water Works Association

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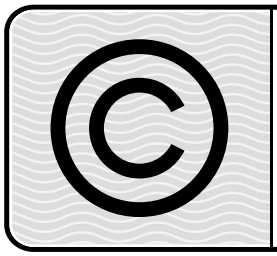
AWWA Standard

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Committee Personnel

The AWWA Standards Committee for Protective Interior Coatings for Valves and Hydrants, which reviewed and approved this standard, had the following personnel at the time of approval:

Christine Kirby, *Chair*
T.C. Harbour, *Vice-Chair*

General Interest Members

J. Albertoni, California Department of Water Resources, Sacramento, Calif.
W.T. Berhe, ALS Global, Irvine, Calif.
A. Dail (*liaison, nonvoting*), Standards Engineer, AWWA, Denver, Colo.
E. Engelskirchen, Freese and Nichols, Inc., Houston, Tex.
J. Hebenstreit, UL LLC, Northbrook, Ill.
C.H. Kirby, Lockwood, Andrews & Newnam, Inc., Houston, Tex.
J. Metcalf, DEC Engineering, Houston, Tex.
A. Moon, Quiddity Engineering, Austin, Tex.
D.D. Naomi, C.P.S. Engineering & Land Surveying, Inc., Lafayette, La.
M.C. White (*Standards Council liaison, nonvoting*), CDM Smith, Chicago, Ill.

Producer Members

K. Frakes (*alternate*), Tnemec Company, North Kansas City, Mo.
P. Gifford, Mueller Water Products, Chattanooga, Tenn.
T.C. Harbour (*alternate*), Mueller Water Products, Decatur, Ill.
R. Hasak, Tnemec Company, North Kansas City, Mo.
M. Horton, U.S. Pipe and Foundry, Bessemer, Ala.
K. Johnson (*alternate*), M&H Valve Company, Anniston, Ala.
R. Looney, American AVK Company, Minden, Nev.
A. Nelson (*alternate*), Waterous Company, South Saint Paul, Minn.
M. Page, EJ, East Jordan, Mich.
D.B. Scott, American Flow Control, Birmingham, Ala.
B. Strasser, Clow Valve Co./McWane Inc., Oskaloosa, Iowa
J.H. Wilber (*alternate*), American AVK, Littleton, Colo.
K.J. Wright (*alternate*), EJ, East Jordan, Mich.

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User Members

B. Baca, US Bureau of Reclamation, Denver, Colo.

S. Gilberg, City of Eagan, Eagan, Minn.

J.C. Hall, City of Joliet, Joliet, Ill.

C. Herman, Central Arizona Project, Phoenix, Ariz.

J. St. Pierre, City of Manchester Water Works, Manchester, N.H.

J. Tull, Las Vegas Water District, Las Vegas, Nev.

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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. 15, 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; Jan. 20, 2013; and Jan. 14, 2017. This edition of the standard was approved on June 8, 2024.

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). 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

* American National Standards Institute, 1180 Avenue of the Americas, 10th 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.

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requirements more stringent than those required by the state. To evaluate the health 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 or local agency.

2. Four standards developed under the direction of NSF: NSF/ANSI/CAN[§] 60, Drinking Water Treatment Chemicals—Health Effects; NSF/ANSI/CAN 61, Drinking Water System Components—Health Effects; NSF/ANSI/CAN 372, Drinking Water System Components—Lead Content; and NSF/ANSI/CAN 600, Health Effects Evaluation and Criteria for Chemicals in Drinking Water.

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

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

NSF/ANSI/CAN 600 (which formerly appeared in NSF/ANSI/CAN 60 and 61 as Annex A, "Toxicology Review and Evaluation Procedures") 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 NSF/ANSI/CAN 600 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.

[§] Standards Council of Canada, 55 Metcalfe Street, Suite 600, Ottawa, ON K1P 6L5 Canada.

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

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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 information should be provided by the purchaser:

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 federal, state, provincial, territorial, 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 state this in their specification.

III.B. *Modification to Standard.* Any modification to 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. The language in Sec. 5.1.3 *Holiday testing* was revised to clarify holiday testing scope and procedure per Method A of ASTM G62, as high voltage testing per Method B is potentially destructive and outside the scope of this standard.
2. Added new holiday testing subsection 5.1.3.1 to clarify that some casting geometries may inherently lead to holidays requiring remediation.

V. Comments. If you have any comments or questions about this standard, please call AWWA Engineering and Technical Services at 303.794.7711; write to the department at 6666 West Quincy Avenue, Denver, CO 80235-3098; or e-mail at standards@awwa.org.

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American Water Works Association
Dedicated to the World's Most Vital Resource®

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

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