789 N. Dixboro Rd,
Ann Arbor, Michigan
48105-9753 USA

T +1 734 769 8010
E standards@nsf.org
nsf.org

Joint Committee on Drinking Water Additives – System Components

May 30, 2025

Proposed revision to NSF/ANSI/CAN 61 – Drinking Water System Components – Health Effects (61i182r2)

Revision 2 of NSF/ANSI/CAN 61, issue 182 is being forwarded to the Joint Committee for consideration. Please review the proposal and **submit your ballot by June 20, 2025** via the NSF Online Workspace.

Please review all ballot materials. When adding comments, please include the section number applicable to your comment and add all comments under one comment number whenever possible. If you need additional space, please use the attached blank comment template in the reference documents and upload online via the browse function.

Please note that your last recorded vote from any previous ballot draft revision(s) will not be carried forward. Please respond affirmative, negative, or abstain to the content of this revision. Comments on any prior revision(s) will not be carried forward.

Purpose

The proposed revision will correct the exposure temperature in Table N-1.5, removes notes from normative text, removes a duplicate reference, and revises terminology such as 'must' and 'may' throughout the standard according to IEC Directive.

Revision 2 addresses comments to propose that temperature definitions remain within the standard.

Background

Section 1.3 Normative References: removes a duplicate reference.

Section 2: removes several terms not used in the standard.

Section 4.1.2: removes note from normative text.

Section 9.1.1: removes note from normative text.

N-1.2.7 Material exposure: replaces text with a reference to Section 3.1.6.2 instead.

N-1.8.3.1 Static condition: removes note from normative text.

N-1.8.4.4: removes requirement from informative text.

789 N. Dixboro Rd,
Ann Arbor, Michigan
48105-9753 USA

T +1 734 769 8010
E standards@nsf.org
nsf.org

Table N-1.5: corrects the exposure temperature as ‘4’ was dropped unintentionally from the Fahrenheit temperature requirement.

Several verbal forms for expressions are updated throughout the standard according to IEC Directive.

If you have any questions about the technical content of the ballot, you may contact me in care of:

France Lemieux, Chair
Joint Committee on Drinking Water Additives – System Components
c/o Amy Jump, Joint Committee Secretariat
T (313) 426-4918
E ajump@nsf.org

[Note – the recommended changes to the standard which include the current text of the relevant section(s) indicate deletions by use of ~~strikeout~~ and additions by grey highlighting. **Revision 2 changes are indicated by yellow highlighting.** Rationale Statements are in *italics* and only used to add clarity; these statements will NOT be in the finished publication.]

NSF/ANSI/CAN Standard for Drinking Water Additives –

Drinking Water System Components – Health Effects

.
.
.

1 General

.
.
.

1.3 Normative references

The following documents contain requirements that, by reference in this text, constitute requirements of this standard. At the time this standard was balloted, the editions listed below were valid. All documents are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the documents indicated below. The most recent published edition of the document shall be used for undated references.

.
.
.

APHA/AWWA/WEF, *Standard Methods for the Examination of Water and Wastewater*, 22nd edition (hereinafter referred to as *Standard Methods*)

.
.
.

~~The Society for Protective Coatings, *Steel Structures Painting Manual*. Volume 2. Reference Paint Application Specification No. 2 (SSPC-PA2)~~

Rationale: Removes duplicate entry.

.
.
.

2.3 adsorption media: A process media material upon which a gas, liquid, solid, or dissolved material ~~will be~~ is retained.

Rationale: updating verbal forms for expressions according to IEC Directive.

.
.
.

2.13 cold water application: A product application that is intended to result in continuous exposure to water in ambient temperature. Products are tested for an end use temperature of 23 ± 2 °C (73 ± 4 °F).

Rationale: The term will remain in the standard and the 61 Reorganization Task Group will discuss revision of the term to meet the intent of the standard.

.
.
.

2.15 commercial hot water application: A product application that is intended to result in continuous or intermittent exposure to water that has been raised from ambient temperature. Intermittent exposure is defined as any hot water contact that is not continuous. Products are tested for an end use temperature of 82 ± 2 °C (180 ± 4 °F).

Rationale: The term will remain in the standard and the 61 Reorganization Task Group will discuss revision of the term to meet the intent of the standard.

.
.
.

2.74 potable water contact area of tanks: The potable water contact areas of tanks shall include both the area normally submerged during use as well as the areas where water ~~may~~ can condense and fall back into the tank, such as ceilings.

Rationale: updating verbal forms for expressions according to IEC Directive.

~~**2.75 prerinse assembly**: An endpoint device with a hose and spray whose application is water delivery for the rinsing of tableware in commercial kitchens.~~

Rationale: term not used in the standard.

.
.
.

~~**2.78 reductive media**: Process media that chemically facilitate reduction on the media surface and thereby enhance removal of ions from water.~~

Rationale: term not used in the standard.

.
.
.

4.1.2 Coatings and other barrier materials requested to be evaluated on their own that are intended for application to pipes or pipe-related products shall be evaluated under Section 5.

> ~~NOTE —~~ Coatings and other barrier materials, which meet the requirements of Section 5 at a specific surface area-to-volume ratio, shall be considered to meet the requirements of a pipe or pipe-related product application for a surface area-to-volume ratio less than or equal to the ratio accepted under the Section 5 evaluation.

Rationale: Removes note from normative text.

.
.
.

5.5.2.2 Field-applied paint and coating systems

Field-applied paint and coating systems shall be applied in accordance with the detailed use instructions (see Section 5.3.2) under the supervision of the testing laboratory. Products shall be applied to a glass slide when appropriate. Products requiring a reactive substrate shall be applied to the appropriate alternate substrate. Coating products shall be applied using application conditions as specified by the manufacturer in the detailed use instructions, e.g., the highest recommended percentage of thinner, the shortest curing period between coats or layers, the maximum recommended film thickness per coat, and the shortest final curing period prior to immersion. Products shall be cured within ± 4 °C of the specified cure temperature. For exothermic coatings with a maximum field use thickness in excess of 120 mil (3.0 mm), an additional evaluation at the manufacturer's minimum recommended field use thickness shall be conducted. The maximum dry film thickness per coat attested to by the testing laboratory shall be based on the average per coat dry film thickness evaluated. When samples are prepared using an airless plural component system the system shall be operated at the midpoint of the coating manufacturer's recommended pressure and temperature range.

> NOTE — The practical application of coatings ~~may~~ can result in spots of coating thicknesses in excess of the maximum dry film thickness per coat attested to by the testing laboratory. Guidance on acceptable variations from the maximum dry film thicknesses is provided in The Society for Protective Coatings *Steel Structures Painting Manual Volume 2*. Reference *Paint Application Specification No. 2 (SSPC-PA2)***Error! Bookmark not defined.** where the average of spot measurements on each 10 m^2 (100 ft^2) area shall not exceed the specified maximum thickness, and no single spot measurement shall be more than 120% of it. In that document, spot measurements are defined as the average of at least three gauge readings within a 1.5-in (4-cm) diameter circle.

Rationale: updating verbal forms for expressions according to IEC Directive.

.
.
.

5.5.2.3 Factory-applied paint and coating systems

Paint and coating systems requiring factory application, factory curing, or both shall be prepared and applied in accordance with the detailed use instructions (see Section 5.3.2) under the supervision of the testing laboratory. Products shall be applied to a glass slide when appropriate. Products requiring a reactive substrate shall be applied to the appropriate alternate substrate. Coating products shall be applied using application conditions as specified by the manufacturer in the product use instructions, e.g., the highest recommended percentage of thinner, the shortest curing period between coats or layers, the maximum recommended film thickness per coat. Products shall be cured within ± 4 °C of the specified cure temperature, however temperature control is not required between the end of cure and immersion for factory applied coatings. For exothermic coatings with a maximum field use thickness in excess of 120 mil (3.0 mm), an additional evaluation at the manufacturer's minimum recommended field use thickness shall be conducted. The maximum dry film thickness per coat attested to by the testing laboratory shall be based on the average per coat dry film thickness evaluated.

> NOTE — The practical application of coatings ~~may~~ can result in spots of coating thicknesses in excess of the maximum dry film thickness per coat attested to by the testing laboratory. Guidance on acceptable variations

from the maximum dry film thicknesses is provided in The Society for Protective Coatings *Steel Structures Painting Manual Volume 2*. Reference *Paint Application Specification No. 2 (SSPC-PA2)*Error! Bookmark not defined. where the average of spot measurements on each 10 m^2 (100 ft^2) area shall not exceed the specified maximum thickness, and no single spot measurement shall be more than 120% of it. In that document, spot measurements are defined as the average of at least three gauge readings within a 1.5-in (4-cm) diameter circle.

Multiple layer paint and coating systems, which require the application of distinct coating product formulations in sequence, shall be applied in a stepped manner so as to expose all layers. Multiple coats of the same product (of the same color) applied in sequence shall not constitute multiple layers and shall not be applied in a stepped manner. Multiple coats of the same product (of different colors) applied in sequence shall not constitute multiple layers and shall not be applied in a stepped manner, unless deemed necessary by the testing laboratory to address potential health effects concerns from the differences in color formulations. Stepped coating systems shall be applied per the dimensions in Table 5.1.

NOTE — It is recognized that a coating system ~~may~~ can be applied using a combination of factory and field application techniques. This is considered acceptable as long as the coating system is tested to the manufacturer's recommended application conditions, as specified in Sections 5.5.2.2 and 5.5.2.3.

Rationale: updating verbal forms for expressions according to IEC Directive.

.
.
.

9.1.1 Endpoint devices specifically included in the coverage of this section are:

— remote chillers;

— lavatory faucets (e.g., centersets, widespread, mini-spread, and basin cocks), except as exempted in Section 9.1.2;

— bar faucets;

— kitchen faucets (e.g., top mounts and wall mounts);

— hot and cold water dispensers;

— drinking fountains, drinking fountain bubblers, and water coolers;

— glass fillers;

— residential refrigerator ice makers and water dispensers;

— standalone, residential plumbed-in ice maker devices;

— flexible plumbing connectors and flexible risers intended for potable water applications;

— supply stops and endpoint control valves; and

— commercial kitchen devices, limited to the following:

  — pot and kettle fillers;

— devices with extended standpipes or risers; and
— prerinse assemblies that include an auxiliary spout or other outlet.

~~NOTE 1~~ — Only the commercial kitchen devices listed above shall be evaluated using the 18.9-L (5-gal) normalization.

~~NOTE 2 —~~ The base device to which the prerinse component is added shall be considered a commercial kitchen device only if it meets the definition of either a pot and kettle filler or a device with extended standpipes or risers.

Rationale: Removes note from normative text.

.
.
.

N-1.2.7 Material exposure

See Section 3.1.6.2

~~Materials shall be exposed according to the protocol outlined for the materials' specified end use(s). If a material is intended for use in the manufacture of products covered under more than one section of this standard, the most rigorous exposure condition shall be followed as defined in Section 3.1.4. Materials intended to be processed by more than one method (e.g., injection molding, extrusion, or stamping) shall be tested in each of the processed forms.~~

.
.
.

N-1.8.3.1 Static condition

The contaminant concentration shall be adjusted to reflect differences in surface area-to-volume relationships between laboratory and field exposures under static conditions. This calculation shall use the N1 term defined in Section N-1.8.3. The N2 term shall always equal one when calculating normalized static concentrations.

For multiple-installation products (e.g., pipes, fittings, and joining and sealing products used with pipes and fittings), the $V_{F(static)}$ component of the N1 term shall be the volume of water contained within the assumed length of pipe corresponding to the segment of the system in which the product is used (e.g., 100 ft of pipe in the service line or 280 ft of pipe in the residence).

For valves, water meters, service saddles, backflow preventers and other products not present in the system at regularly repeating intervals, the $V_{F(static)}$ component of the N1 term shall be the volume of water a product holds (on its own) when filled to capacity; $V_{F(static)}$ shall equal 1 L (0.26 gal) for all products that, when filled to capacity, hold (on their own) < 1 L (0.26 gal) of water.

NOTE 1 — Table N-1.11 details the assumptions and resulting N1 factors for typical product categories.

~~NOTE 2 —~~ For internal threaded products, SA_F shall be equal to the normally wetted surface area of the product including 25% of the threaded area(s). The capacity of the product shall be equal to the volume of water contacted by the wetted surface area of the product including the volume contained within 25% of the threaded area(s). When the product capacity is < 1 L (0.26 gal), $V_{F(static)}$ shall equal 1 L (0.26 gal). When the product capacity is equal to or > 1 L (0.26 gal), $V_{F(static)}$ shall be equal to the capacity.

Rationale: Removes note from normative text.

.
.
.

N-1.8.4.4 For all in-line devices, normalized contaminant concentrations shall be adjusted to a 12-h exposure when the final exposure is other than 12 h in length.

NOTE — For example, when the final exposure for an in-line device is 16 h, the normalized contaminant concentrations are ~~shall be~~ multiplied by a factor of $^{12}/_{16}$.

Rationale: Removes requirement from informative text.

.
.
.

N-1.8.6 Normalization for other products

The normalization factors described below shall be applied to products and materials not covered in Sections N-1.8.4 and N-1.8.5. For these products, a single normalized concentration (either static condition or flowing condition, whichever is most conservative) shall be determined for each contaminant. For products that have a flowing N2 value ≤ 0.1, the static condition shall be the most conservative condition. For products that have a flowing N2 value > 0.1, the flowing condition shall be the most conservative condition. Normalization factors that are not included in Table N-1.11 shall be determined on a case-by-case basis using the equation in Section N-1.8.3. Where a product is available in various sizes, the product with the highest surface area-to-volume ratio (typically the smallest diameter) shall be evaluated. For products, components, or materials that can ~~may~~ be used in any of the four end use categories in Table N-1.11, qualifying by use of the largest normalization factor shall qualify other use categories. Table N-1.11 in this annex details the assumptions and resulting N1 and N2 values for various product categories.

Rationale: updating verbal forms for expressions according to IEC Directive.

.
.
.

Table N-1.5
Exposure sequence for cold applications

Exposure temperature	Exposure time	Elapsed time	Comment
23 ± 2 °C (73 ± 4°F)	24 ± 1 h	1 d	extraction water is decanted and discarded; the exposure vessel or product is refilled with exposure water and exposure is continued
23 ± 2 °C (73 ± 4 °F)	24 ± 1 h	2 d	extraction water is decanted and discarded; the exposure vessel or product is refilled with exposure water and exposure is continued
23 ± 2 °C (73 ± 4 °F)	24 ± 1 h	3 d	extraction water is collected for analysis