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Joint Committee on Plastics and Recreational Vehicle Plumbing Components

October 18, 2024

Proposed revision to NSF/ANSI 14: *Plastics Piping System Components and Related Materials* (14i143r2)

Revision 2 of NSF/ANSI 14, issue 143 is being forwarded to the Joint Committee for consideration. Please review the proposal and **submit your ballot by November 8, 2024** 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.

Purpose

The purpose of this ballot is to change the locations and order of footnotes in Table 9.13 to clarify that the impact test at 22.8 °C (73 °F) does not apply solely to products certified to ASTM D2241.

Background

An issue paper (PLAS-2024-4) was submitted to change the location of footnote “a” in Table 9.13 from the “Potable water” column header and the “Impact at 22.8 °C (73 °F)” cell in the “Test” column to the “Wall casing” column header and the “24 h” cell in the “Wall casing” column.

The original placement causes confusion and could potentially be interpreted as meaning that the impact test at 22.8 °C (73 °F) only applies to products certified to ASTM D2241 and not to other standards in the table beyond those associated with potable water. The change also resulted in rearranging the order of the remaining footnotes.

The issue paper was presented and discussed at the 2024 Plastics and Recreational Vehicle Plumbing Components Joint Committee annual meeting, and was voted unanimously to be balloted.

Revision 1: The r1 ballot unanimously passed the Joint Committee on September 5. Based on a comment received in balloting the Public Health Council, the ballot has been revised for clarity.

Revision 2: This r2 ballot clarifies the different test frequencies for PVC intended to be used in potable water, based on the three standards listed (ASTM D1785, ASTM D2241, and CSA B137.3). It also clarifies original footnote “b” (now “a”) and moves footnotes that were previously in header columns or header rows to only those cells to which they apply.

For additional background information, please refer to the:

- Issue paper, annual meeting discussion excerpt, and PHC comment spreadsheet under Referenced Items
- The Rationale statement at the end of the ballot

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

Kevin Kalakay
Chair, Joint Committee on Plastics and Recreational Vehicle Plumbing Components
c/o Monica Milla, NSF Joint Committee Secretariat
Tel: (734) 214-6223 | E-mail: mmilla@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 gray highlighting. Rationale statements are in *italics* and only used to add clarity; these statements will NOT be in the finished publication.]

NSF/ANSI Standard for Plastics —

Plastics Piping System Components and Related Materials

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9 Quality assurance

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9.10 Product-specific quality assurance requirements

Tables 9.2 through 9.40 provide product-specific quality assurance requirements.

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Table 9.13
PVC pipe test frequency

Test	Potable Water [a]	DWV	DWV (3.25" OD)	DWV cellular core	Sewer	Well Casing [b]
acetone	annually	—	annually	annually	annually	—
bond	—	—	—	weekly	—	—
burst pressure [c]	24 h [d] a,b	—	—	—	—	—
deflection load and crush	—	annually	annually	—	—	annually
cellular structure	—	—	—	annually	—	—
dimensions						
pipe outside diameter	2 h	2 h	2 h	2 h	2 h	2 h
pipe wall thickness	2 h	2 h	2 h	2 h	2 h	2 h
pipe out-of-roundness	2 h	2 h	2 h	2 h	2 h	2 h
flattening resistance	annually	—	annually	annually	annually	—
impact resistance at 0 °C (32 °F) [d] b	24 h [c]	—	—	—	—	24 h [b] [d]
impact at 22.8 °C (73 °F) [a,c,d] b	24 h [a,e]	24 h	24 h	24 h	24 h	—
joint tightness	—	—	—	—	annually	—
stiffness	—	annually	annually	annually	annually	annually
sustained pressure	annually	—	—	—	—	—
tup puncture resistance	—	—	—	—	—	annually
product standard(s)	ASTM D1785, ASTM D2241, CSA B137.3	ASTM D2665	ASTM D2949	ASTM F891, ASTM F3128	ASTM D2729, ASTM D3034, ASTM F679	ASTM F480

[a] Test does not apply to CSA B137.3 products.

[b] If one material is continuously used in several machines or sizes, then when a steady-state operation is obtained on each machine, sample selection shall be from a different extruder each day and rotated in sequence among all machines or sizes.

[c] Test only applies to CSA B137.3 products.

[d] Impact testing shall be in accordance with ASTM F480 as referenced in Section 2 of this standard and the specified impact classification of IC-1, IC-2, or IC-3.

[e] 23 °C (73 °F) impact applies only to products produced under ASTM D2241 as referenced in Section 2 of this standard.

~~[a] 23 °C (73 °F) impact applies only to products produced under ASTM D2241 as referenced in Section 2 of this standard.~~

~~[b] Impact testing shall be in accordance with ASTM F480 as referenced in Section 2 of this standard and the specified impact classification of IC-1, IC-2, or IC-3.~~

~~[c] Test does not apply to CSA B137.3.~~

~~[d] If one material is continuously used in several machines or sizes, then when a steady state operation is obtained on each machine, sample selection shall be from a different extruder each day and rotated in sequence among all machines or sizes.~~

~~[e] Test only applies to CSA B137.3 products.~~

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Rationale:

Based on a comment received from a Public Health Council voter on the r1 ballot, this revised r2 ballot:

- ***Adds "products" to new footnote "a" / former footnote "b": "*Test does not apply to CSA B137.3 products.*"***

Upon re-examination of all footnotes, this ballot also:

- ***Removes footnote "a" from the "Potable water" column header as it does not apply to every entry in the column.***
- ***Removes footnote "b" from the "Wall casing" column header as it does not apply to every entry in the column.***
- ***Removes original footnote "d" from the "impact resistance at 0 °C (32 °F)" and "impact at 22.8 °C (73 °F)" row headers as it does not apply to every entry in the row.***
- ***Clarifies the different test frequencies for PVC intended to be used in potable water, based on the three standards listed (ASTM D1785, ASTM D2241, and CSA B137.3). For example:***
    - ***CSA B137.3 does not have burst pressure or impact at 22.8 C (managed by new footnote "a").***
    - ***CSA B137.3 is the only standard to have impact at 0 C (managed by new footnote "c").***
- ***Rearranges the order of the remaining footnotes.***