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Joint Committee on Plastics and Recreational Vehicle Plumbing Components

August 20, 2025

Proposed revision to NSF/ANSI 14: *Plastics Piping System Components and Related Materials* (14i151r2)

Revision 2 of NSF/ANSI 14, issue 151 is being forwarded to the Joint Committee for consideration. Please review the proposal and **submit your ballot by September 10, 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.

Purpose

The purpose of this ballot is to add CSA B182.2 quality assurance requirements for PVC pipe and fittings to Table 9.13 for PVC pipe and Table 9.14 for PVC fittings.

Background

An issue paper (PLAS-2024-15) noted that CSA B182.2, *PSM Type Polyvinylchloride (PVC) Sewer Pipe and Fittings (PSM Type)* is a reference standard in NSF/ANSI 14, but NSF/ANSI 14 currently has no quality assurance requirements for products certified to the CSA standard.

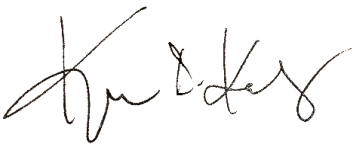
The proposed changes in this ballot add these quality assurance requirements to the appropriate tables, Table 9.13 for pipe and Table 9.14 for fittings.

The **revision 1** ballot received 8 affirmative votes (67%),4 negative votes (33%), and one abstention. All commenters noted that the impact test in CSA B182.2 is conducted at 0° C, not 23° C.

The current **revision 2** ballot addresses these comments by updating Table 9.13 to make it clear that the impact test is conducted at 0° C.

Please refer to the issue paper and r1 comments and responses under Referenced Items for additional background information.

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



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[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. Deletions for dashes and footnote numbers, where strikeout alone is difficult to see, are shown in red. 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
acetone	annually	—	annually	annually	annually	—
bond	—	—	—	weekly	—	—
burst pressure	24 h [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) [b]	24 h [c]	—	—	—	~~—~~ 24 h [d]	24 h [~~d~~e]
impact at 22.8 °C (73 °F) [b, e]	24 h [a,~~e~~f]	24 h	24 h	24 h	24 h [g]	—
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 CSA B182.2	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] Test only applies to CSA B182.2 products.

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

[g] 23 °C (73 °F) impact applies only to products produced under ASTM D2729 and ASTM D3034 as referenced in Section 2 of this standard.

Table 9.14

PVC fittings and pipe bell ends test frequency

Test	Potable water	DWV	Sewer	Well casing	PSM sewer fittings	Pipe bell ends
acetone	—	—	24 h [a]	—	—	—
burst pressure [b,c]	weekly	—	—		—	weekly
deflection load and crush resistance [d]	—	annually	—	annually	—	—
deflection test	—	start-up [e]	—	—	—	—
dimensions						
body wall thickness	weekly [f]	weekly [f]	weekly [f]	weekly [f]	—	—
socket bottom average diameter and out-of-roundness [g,h]	24 h	24 h	24 h	24 h	24 h	start-up
socket entrance average diameter and out-of-roundness [g,h]	24 h	24 h	24 h	24 h	24 h	start-up
socket depth [g,h,i]	24 h	24 h	24 h	24 h	24 h	start-up
socket wall thickness	weekly [f]	weekly [f]	weekly [f]	weekly [f]	weekly [f]	start-up
spigot ends of fittings: minimum wall thickness	weekly [f]	weekly [f]	weekly [f]	weekly [f]	—	—
spigot ends of fittings: average diameter and out-of-roundness [i,j]	24 h	24 h	24 h	24 h	—	—
thread length	(see Footnote i)	(see Footnote i)	(see Footnote i)	(see Footnote i)	—	—
thread gauge	24 h	24 h	—	24 h	—	—
flattening	—	annually [k]	—	—	—	—
heat reversion [l]	8 h	8 h	—	—	—	—
impact at 22.8 °C (73 °F) [d]	—	weekly	—	—	monthly [m]	—
joint tightness	—	—	—	—	—	annually
shear test	—	start-up [e]	—	—	—	—
tup puncture resistance	—	—	—	annually	—	—
threaded joint strength (hydrostatic)	—	—	—	weekly	—	—
unrestrained hydrostatic test	—	start-up [e]	—	—	—	—

Table 9.14

PVC fittings and pipe bell ends test frequency

Test	Potable water	DWV	Sewer	Well casing	PSM sewer fittings	Pipe bell ends
product standard(s)	ASTM D2464 ASTM D2466 ASTM D2467 CSA B137.3	ASME A112.4.4 ASTM D2665 ASTM D2949 CSA B181.2	ASTM D2729 ASTM D3034	ASTM F480	ASTM F1336 CSA B182.2	ASTM D2672 ASTM D3139 ASTM D3212

[a] Acetone applies only to products produced under ASTM D2729 as referenced in Section 2 of this standard.

[b] Burst pressure requirement does not apply to reducer bushings.

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

[d] Toilet flanges listed to ASTM D2665, D2949, CSA B181.2, and ASME A112.4.4 are exempt from the QC requirements of crush and impact.

[e] This requirement applies only to products under ASME A112.4.4.

[f] Once walls have been measured and verified to be within specification twice within a week of startup, wall thickness measurements shall be conducted no less than once per month.

[g] Plug gauges are permitted, provided that the mold has been qualified by complete dimensioning and performance of appropriate testing on all products from all mold cavities to verify compliance with the referenced standard.

[h] Requirements do not apply to ASTM D3034 fabricated fittings and bell ends.

[i] Socket depth and thread length are only required to be verified at the time a new tool is "qualified" or when new or repaired cores are made.

[j] Ring gauges are permitted, provided that the mold has been qualified by complete dimensioning and performance of appropriate testing on all products from all cavities to verify.

[k] Flattening applies only to products produced under ASTM D2949 as referenced in Section 2 of this standard.

[l] This requirement applies only to products produced under CSA B181.2 and CSA B137.3.

[m] This requirement does not apply to products produced under CSA B182.2.

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Rationale:

- ***Adds CSA B182.2 as a quality assurance requirement and clarifies that impact testing at 22.8 °C (73 °F) for PSM sewer fittings does not apply to CSA B182.2 (Tables 9.13 and 9.14)***
- ***Updates Table 9.13 to make it clear that the impact test in CSA B182.2 is conducted at 0° C.***