



Summary of Substantive Changes
between the 2016 and the 2016a editions of
NSF/ANSI 14, “Plastics Piping System Components and Related Materials”

Presented to the IAPMO Standards Review Committee on December 13, 2016

General: The changes to this standard might have an impact on currently listed products. The significant changes are:

- Updated the referenced standards to reflect the current editions.
- Added requirement for compliance of thread sealants with IAPMO PS 36 (see Section 8.4).
- Added definitions for calibration, verification of calibration and clarified calibration requirements (see Sections 3 and 9.4)
- Added missing references to footnote 9 (see Table 13).

Section 3, Definitions: Added two definitions, calibration and verification of calibration as follows:

3.8 calibration: A comparison of two measurement devices or systems, one of known uncertainty and better accuracy, and one of unknown uncertainty (the unit to be calibrated).

NOTE – The term calibration, as used in this standard, also involves the process of adjustment – the operation of bringing a measuring instrument into a state of performance/accuracy suitable for use.

3.63 verification of calibration: The demonstration that a particular instrument or device produces results within specified limits by comparison with those produced by a traceable standard (reference standard) over an appropriate range of measurements

Section 8.4, Thread compounds, sealants, gasket lubricants, solvent cement, and adhesives: Added requirements for compliance of thread sealants with IAPMO PS 36 as follows:

The manufacturer shall label each container with the designations and identifications required in the applicable standards as referenced in 2 of this Standard. The container shall bear an appropriate batch number identifying the day, month, and year of manufacture, as well as the formulation designation. In instances where the manufacturer has more than one plant location or produces for other suppliers or distributors, an identifying symbol shall be used.

Thread sealants shall meet the requirements of IAPMO PS-36.

Table 8.1 – Thread Sealants

<u>Test</u>	<u>Frequency</u>
<u>Threaded-Joint Test</u>	<u>Annually</u>
<u>Reactivity Test</u>	<u>Annually</u>



Section 9.4, Verification of the calibration of equipment: Clarified the requirements for calibration and verification of calibration as follows:

9.4.1 Verification

The calibration of all equipment used to check critical dimensions (as defined in section 5.4) shall be verified weekly.

NOTE: Consideration is given to thread gauges and go/no-go socket gauges which cannot be verified on a weekly basis. In lieu of verification, these equipment shall be calibrated in accordance with 9.4.2.

Other equipment (including, but not limited to pressure gauges, scales, etc.) shall be verified at a minimum of once annually.

Verification shall consist of checking the zero point, if applicable, and the critical dimension or a point near the upper limit of the instrument. ~~Where applicable, references used for verification shall be traceable to the National Institute of Standards and Technology (NIST). Other equipment, including equipment used for measuring ingredients in in-plant blending operations, shall be verified at a minimum of once annually.~~

Records of equipment verification shall include the following:

- Date that the verification was performed;
- Identity of the equipment verified (description and serial number);
- Verification data;
- Description of any corrective actions taken, if applicable; and
- Identity of the person who performed the verification.

Variations from these minimum requirements shall be permitted if an alternate program is established in writing and determined to be equivalent.

9.4.2 Calibration

Where applicable, calibrations of equipment, or references used for verification (e.g., gauge blocks, weights, etc.), shall be traceable to the SI (International System of Units) through a recognized calibration laboratory (such as NIST, NPL, NRC, etc.). Checks needed to maintain confidence in the calibration status of the equipment or reference shall be carried out according to defined procedures and/or schedules established by the manufacturing facility; and based on its stability, purpose, and usage.



Table 13, PVC fittings and pipe bell ends test frequency: Added missing references to footnote 9 in four places on Table 13 as follows:

Table 13 – PVC fittings and pipe bell ends test frequency

Test	Potable water	DWV ¹	Sewer ²	Well casing	PSM sewer fittings	Pipe bell ends
acetone	—	—	24 h	—	—	—
burst pressure ⁸	weekly	—	—	—	—	weekly
deflection load and crush resistance	—	annually	—	annually	—	—
dimensions						
body wall thickness	weekly	weekly	weekly	weekly	—	—
socket bottom avg. diameter and out of roundness ^{3, 9}	24 h	24 h	24 h	24 h	24 h	start-up
socket entrance avg. diameter and out of roundness ^{3, 9}	24 h	24 h	24 h	24 h	24 h	start-up
socket depth ^{3, 7, 9}	24 h	24 h	24 h	24 h	24 h	start-up
socket wall thickness	weekly	weekly	weekly	weekly	weekly	start-up
spigot ends of fittings: min wall thickness	weekly	weekly	weekly	weekly	—	—
spigot ends of fittings: avg. diameter and out of roundness ^{5, 9}	24 h	24 h	24 h	24 h	—	—
thread length ⁷	(see footnote 7)	(see footnote 7)	(see footnote 7)	(see footnote 7)	—	—
thread gauge	24 h	24 h	—	24 h	—	—
flattening	—	annually	—	—	—	—
heat reversion ⁴	—	8 h	—	—	—	—
impact @ 22.8 °C (73 °F) ⁶	—	weekly	—	—	monthly	—
joint tightness	—	—	—	—	—	annually
tip puncture resistance	—	—	—	annually	—	—
threaded joint strength (hydrostatic)	—	—	—	weekly	—	—
product standards	ASTM D2464 ASTM D2466 ASTM D2467	ASTM D2665 ASTM D2949 CSA B181.2	ASTM D2729 ASTM D3034 ASTM F679	ASTM F480	ASTM F1336	ASTM D2672 ASTM D3139 ASTM D3212
¹ Flattening applies only to products produced under ASTM D2949 as referenced in 2 of this Standard. ² Acetone applies only to products produced under ASTM D2729 as referenced in 2 of this Standard. ³ 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.						

⁴ This requirement applies only to products produced under CSA B181.2.
⁵ 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.
⁶ Toilet flanges listed to ASTM D2665, D2949 and CSA B181.2 are exempt from the QC requirements of crush and impact.
⁷ 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.
⁸ Burst pressure requirement does not apply to reducer bushings.
⁹ Requirements do not apply to F679 fabricated fittings and bell ends.
 NOTE – No point anywhere along the length of the spigot shall the O.D. be allowed to fall below the minimum for equivalent size pipe.