



**Summary of Substantive Changes
between the 2010a and 2011 editions of
NSF/ANSI 14, “Plastics Piping System Components and Related Materials”**

Presented to the IAPMO Standards Review Committee on August 13, 2012

General: Changes to this standard may have an impact on currently listed products. The changes are as follows:

- Revised the *dependent transfer listing* requirements to allow for the evaluation of pipe that cannot be tested due to their specific design with regards to the occurrence of mixed mode failures (Section 5.7)
- Removed the weekly burst pressure requirement for reducer bushings (Table 9 and Table 13)
- Removed the annual accelerated regression testing requirement (Table 29)
- Revised Table 30 to include both post-industrial and post-consumer recycled materials (Table 30)

Section 5.7, Chlorine Resistance – Dependent Transfer Listing Requirements: NSF States that “This issue provides an alternate method for section 5.7, Chlorine Resistance – Dependent Transfer Listing requirements under the physical and performance requirements of section 5. The revised language will allow for the evaluation of pipe that cannot be tested at a high stress level at the highest temperature due to their specific design with regards to the occurrence of mixed mode failures.”

The changes are as follows:

[5.7.1 Solid wall pipe with optional inner or outer polymeric layer](#)

- Three (3) data points at ~~the highest stress~~ one hoop stress level and at the highest temperature conditions ~~shall be used~~ as for the original data set;
- Two (2) data points at ~~the second highest stress~~ a second hoop stress level at least 80 psi lower than the first stress level and at the highest temperature conditions ~~shall be used~~ as for the original data set;
- The 95% lower prediction limit (LPL) shall ~~also~~ be calculated for the original material data at these temperatures/stress conditions;
- ~~The 95% upper prediction limit (UPL) shall be calculated for the original material data at these temperature/stress conditions;~~
- All five (5) data points (failure times) shall meet or exceed the LPL for that condition;
- ~~All five (5) data points (failure times) shall meet or not exceed the UPL for that condition;~~
- The five (5) data points shall be added to the original data set and all parameters in section 13 of the ASTM F2023 shall be calculated. The new values shall comply with the requirements of ASTM F876.

[5.7.2 Pipe with middle polymeric layer](#)

- Five (5) data points at one hoop stress level at the highest temperature conditions as for the original data set;
- The 95% LPL shall be calculated for the original material data at these temperatures/stress conditions;
- All five (5) data points (failure times) shall meet or exceed the LPL for that condition;
- The five (5) data points shall be added to the original data set and all parameters in section 13 of the ASTM F2023 shall be calculated. The new values shall comply with the requirements of ASTM F876.



Table 9 – Chlorinated poly(vinyl chloride) (CPVC) fittings test frequency: Removed the weekly burst pressure requirement for reducer bushings by adding the following footnote.

² [Burst pressure requirement does not apply to reducer bushings.](#)

Table 13 – PVC fittings and pipe bell ends test frequency: Removed the weekly burst pressure requirement for reducer bushings by adding the following footnote.

² [Burst pressure requirement does not apply to reducer bushings.](#)

Table 29 – Oriented Polyvinyl Chloride (PVCO) pressure pipe: Removed the annual accelerated regression testing requirement as follows:

Test	Frequency
Dimensions	
Pipe OD	2 h
Pipe wall thickness	2 h
Sustained pressure	annually
Accelerated regression	annually
Burst	24 h
Flattening	8 h
Extrusion quality	8 h
Impact	24 h
Hydrostatic integrity	annually
Product standard	ASTM F1483 AWWA C9091 ¹
¹ Pipe compliant to AWWA C909 shall additionally follow the QC requirements of AWWA C909.	

Table 30 – *Pipe and fittings having ~~post-industrial~~ recycled content*: Revised the title as shown and footnote 1 as follows to include both post-industrial and post consumer recycled materials.

¹ *Each batch of material made by blending virgin material with each shipment of ~~post-industrial~~ recycled material shall be tested for cell classification.*