



**Summary of Substantive Changes  
between the 2012 and the 2013 editions of  
NSF 14 “Plastics Piping System Components and Related Materials”**

**Presented to the IAPMO Standards Review Committee on July 7, 2014**

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

- Added an additional method for testing solid wall pipe (see Section 5.7.1)
- Removed the requirement relating to adding (5) data points to the original data (see Section 5.7.1 and 5.7.2).
- Added an option to mark the cell class designation on the pipe and fittings (see Sections 8.2 and 8.3).
- Revised quality assurance tables (see Tables 2, 5, 6, 9, 10A, 10B, 13, 16, 17, 18, 20, and 34)

Section 5.7.1, Solid wall pipe with optional inner or outer polymeric layer: Added an additional method for testing solid wall pipe and removed the requirement relating to adding (5) data points to the original data set as follows:

*Method A:*

- *Three (3) data points at one hoop stress level at one of the temperature conditions as for the original data set;*
- *Two (2) data points at a second hoop stress level at least 80 psi lower than the first stress level and at the same temperature conditions as for the first stress level;*
- *The 95% lower prediction limit (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; and*
- ~~*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.*~~

*Method B:*

*Other sets of data, using at least 2 of the same temperatures as the original data set and meeting the following requirements:*

- *Minimum of 2 data points per temperature/hoop stress combination;*
- *Minimum of 3 temperature/hoop stress combinations;*
- *One hoop stress level shall be at least 80 psi different than the others;*
- *The 95% lower prediction limit (LPL) shall be calculated for the original material data at these conditions;*
- *All data points (failure times) shall meet or exceed the LPL for their respective conditions; and*
- *All data points shall be added to the original data set and all parameters in Section 13 of ASTM F2023 shall be calculated. The new values shall comply with the requirements of ASTM F876.*



Section 5.7.2, Pipe with middle polymeric layer: removed the requirement relating to adding (5) data points to the original data set as follows:

~~—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.~~

Sections 8.2, Pipe and 8.3, Fittings and appurtenances: Added an option of marking the cell class on pipe and fittings as follows:

#### 8.2.2 Material Cell Class Designation

Material cell class designation shall be permitted to be marked on pipe. Where the cell class designation marked on pipe exceed the minimum cell class required in the referenced standard, annual monitoring shall be required for compliance with the cell class designation marked on the pipe.

#### 8.3.2 Material Cell Class Designation

Material cell class designation shall be permitted to be marked on fittings and appurtenances. Where the cell class designation marked on fittings and appurtenances exceed the minimum cell class required in the referenced standard, annual monitoring shall be required for compliance with the cell class designation marked on the fittings and appurtenances.

Section 9.2, Start-up and qualification: Clarified the term mold qualification as follows:

Mold qualification as discussed in this section shall be defined as molds that produce precise functional finish dimensions not otherwise obtained by an additional manufacturing process. The test frequency indicated for fittings...

Table 2, Minimum number of test specimens for a sample: Added a crush test.

Table 5, ABS pipe testing frequency: Added ash content and ash composition tests.

Table 6, ABS fitting test frequency: Changed duration for crush test on DWV from 8 to 24 h

Table 9, CPVC fittings test frequency: Removed footnote 7 exempting reducer bushings from the burst pressure test and add new Note requiring minimum O.D. to be maintained.

Table 10A, PEX, PE-RT, PE-water, PE-storm sewer~~PE-gas and PB~~ pipe and tubing test frequency:

Removed PB pipe, added PEX, PE-RT and PE (storm sewer) pipe to the table and included a hydrostatic pressure test and an ESCR test.

Table 10B, PE-gas pipe and fitting test frequency: Added PE fittings and included new sustained pressure test.

Table 13, PVC fittings and pipe bell ends test frequency: Added new Note requiring minimum O.D. to be maintained.

Table 16: ~~Polyolefin and Polyvinylidene Fluoride (PVDF) pipe for~~ Corrosive waste drainage systems (pipe): Added a hydrostatic pressure test and mechanical joint pull-out test.

Table 17: ~~Polyolefin and Polyvinylidene Fluoride (PVDF) fittings for~~ Corrosive waste drainage systems (fitting): Added out of roundness, outside diameter, hydrostatic pressure, and mechanical joint pull-out tests.

Table 18, Composite pipe test frequency: Added CPVC-AL-CPVC.

Table 20, PP pipe and fittings test frequency: Added additional thread and dimensional tests and new footnotes corresponding to the added tests.

Table 34 -Sprinkler pipe and fitting test frequency: Added this table and reference to UL 1821 for thermoplastic sprinkler pipe and fittings for fire protection service.