



**Summary of Substantive Changes  
between the 2018 and the 2019 editions of  
NSF 14 “Plastics Piping System Components  
and Related Materials”**

**Presented to the IAPMO Standards Review Committee on June 15, 2020**

**General:** The change to this standard should not have an impact on currently listed products. The substantive changes are:

- Clarified the PVC ingredients requirements (see Section 5.5)
- Revised the chlorine resistance test failure requirements (see Section 5.8.2)
- Clarified the generic ingredients requirements (see Section 9.3)
- Added marking verification requirements (see Section 9.9, and Table 9.1)

Section 5, Physical and Performance Requirements: Clarified the PVC ingredients requirements as follows:

**5.5 PVC ingredients**

*Generic ingredients (calcium stearates, ~~paraffinic hydrocarbon waxes~~ paraffin wax, polyethylene ~~waxes~~ wax, titanium dioxides, calcium carbonates) intended for use in PVC compounds shall comply with the chemical and physical properties in PPI Technical Report Number 2 (TR-2)<sup>2</sup> Parts A.2, A.3, A.4, A.5 and A.6 respectively. Other ingredients intended for use in PVC compounds shall comply with PPI TR-2 Part B.<sup>2</sup>*

Section 5.8, Chlorine resistance – Equivalency for polyethylene compound modifications: Revised the chlorine resistance test failure requirements as follows:

**5.8.2 Method B (1/2” DR 9 testing)**

- a) *Test six specimens of the original compound per ASTM D3350-145 Section 10.1.11 with an exception in the pipe size. Test specimens shall be 1/2” DR 9 pipe.*
- b) *Test six specimens of the modified compound per ASTM D3350-145 Section 10.1.11 with an exception in the pipe size. Test specimens shall be 1/2” DR 9 pipe.*
- c) *Testing shall be performed at 90 °C and at a test stress of 360, 400, or 450 psi as per ASTM D3350-14<sup>5</sup> Table 2.*
- d) *Specimens of the original compound shall be tested to failure.*
- e) *Specimens of the modified compound shall be tested to failure or until the log average (geometric mean) test time is ~~above that of the original compound~~ equal to or above 87% of the log average failure time of the original compound as determined by the analysis section.*

Section 9, Quality assurance: Clarified the generic ingredients requirements as follows:

**9.3 Generic ingredients**

*The quality assurance program shall ensure that ~~that each lot of~~ generic ingredients complies comply with the requirements of Section 5.5 when tested according to the frequencies in Table 9.31. Records shall be maintained according to Section 9.5.*



### **9.9 Marking verification requirements**

Unless otherwise specified by an applicable standard as referenced in Section 2 of this Standard, verification of applicable product marking requirements shall be conducted according to Table 9.1.

Table 9.1, Marking verification frequency: This table was added.

The following tables were revised or corrected:

Table ~~9.5~~9.6, ABS pipe testing frequency:

Table ~~9.6~~9.7, ABS fitting test frequency:

Table ~~9.10~~~~B~~9.11B, PE gas piping and fitting test frequency:

Table ~~9.11~~9.12, Fittings for PE and PEX tubing test frequency:

Table ~~9.12~~9.13, PVC pipe test frequency: This table was revised to correct an incorrect reference to ASTM D3128. The correct standard reference is ASTM F3128.

Table ~~9.13~~9.14, PVC fittings and pipe bell ends test frequency:

Table ~~9.33~~9.31, PVC pressure pipe and fabricated fittings for water transmission and distribution

The following tables in Section 9 were deleted (remaining tables renumbered)

Table 9.22, Pressure rated composite pipe for elevated temperature services

Table 9.23, Fittings for pressure rated composite pipe for elevated temperature services

Table 9.27, Multilayer pipe type 2, compression fittings, and compression joints for hot and cold drinking water systems.

Table 9.29, Quality assurance requirements for material suppliers, special compounders, and generic ingredient suppliers: The table was renumbered and revised to add testing frequency for Generic Ingredients.

Table ~~9.31~~ 9.29, Quality assurance requirements for material suppliers ~~and~~ special compounders, and generic ingredient suppliers