TO: Joint Committee on Plastics and Recreational Vehicle Plumbing Components
FROM: Mr. Barry Pines, Vice Chairperson
DATE: May 27th, 2020
SUBJECT: Proposed revision to NSF/ANSI 14 Plastics piping system components and related materials (14i107r3)

Draft 3 of NSF/ANSI 14 issue 107 is being forwarded to the Joint Committee for balloting. Please review the changes proposed to this Standard and submit your ballot by June 17th, 2020 via the NSF Online Workspace (http://standards.nsf.org).

Please review all ballot materials. When adding comments, please include the section number applicable your comment and add all comments under one comment number whenever possible. If additional space is needed, you may upload a word or .PDF version of your comments online via the browser function.

Purpose
This ballot will revise language regarding dependent listing transfer in NSF/ANSI 14.

Background
Section 5.7 – Chlorine resistance – Dependent transfer listing currently lists testing requirements for pipe which is comprised of a different color in the polymer matrix yet made from material that already has a chlorine resistance classification. This is to verify that the change in color does not adversely impact the oxidative resistance of the originally classified material.

There is no verification in this section based on changes in manufacturing practices. For example, there is a potential change in manufacturing process from the originally classified compound when that compound is manufactured at different facilities such as a resin supplier versus a pipe producer.

The issue paper submitted on this subject was presented at the 2019 Joint Committee on Plastics and RV Plumbing Components meeting and was sent to the Plastics Task Group on Dependent Listing Transfer for further language development. That group met twice, and straw balloted proposed language in an r2 ballot. This r3 ballot was drafted in response to comments received on that r2 straw ballot.

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

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NSF/ANSI Standard for Plastics —

Plastics piping system components and related materials

5 Physical and performance requirements

5.7 Chlorine resistance – Dependent listing Oxidative Equivalency requirements

In order to qualify a pipe made from a material that already has a chlorine resistance classification, the following minimum requirements shall be met for each pipe which is comprised of a different color in the polymer matrix yet made from that classified material and shall be referred to as a Dependent Transfer Listing.

NOTE — This requirement does not apply to changes in color of an external, coextruded polymer layer which is separate and distinct from the pipe polymer matrix.

For a material that already has a chlorine resistance classification (denoted original material), oxidative equivalency is required on pipe or material comprised of a different color from the original material or when the production site differs from that of the original material. When the pipe or material production site differs from that of the original material, a minimum of one color shall be selected from the production site being assessed.

This requirement does not apply to changes in color of an external, coextruded polymer layer which is separate and distinct from the pipe polymer matrix.

Qualified pipe shall meet the minimum requirements of 5.7.1 and 5.7.2.

5.7.1 Solid wall pipe with optional inner or outer polymeric layer

— three data points at one hoop stress level at one of the temperature conditions as for the original data set;

— two 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; and

— all five data points (failure times) shall meet or exceed the LPL for that condition.
5.7.2 Pipe with middle polymeric layer

— five 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; and

— all five data points (failure times) shall meet or exceed the LPL for that condition.

**NOTE** — The hoop stress level shall be chosen so that there are no mixed mode failures. In the occurrence of such failures, the testing shall be repeated at a lower stress that would generate brittle failures.