Summary of Substantive Changes
between the 2009 and 2017 editions of
ASME A112.18.6/CSA B125.6, Flexible water connectors

Presented to the IAPMO Standards Review Committee on October 16, 2017

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

- Updated the referenced standard for the fill valve thread requirements from ASME A112.19.5 to ASSE 1002/ASME A112.1002/CSA B125.12 (see Section 4.4.4)
- Added temperature requirements for flexible connectors intended only for cold water applications (see Sections 4.7, 5.2 and 5.3).
- Reduced the flow rate used for testing Icemakers from 3.8 L/m (1.0 gpm) to 1.9 L/m (0.5 gpm) (see Table 1).

Section 2, Reference publications: The following referenced standards were added or updated as follows:
ASME B1.1-2003 (R2008)
Unified Inch Screw Threads (UN and UNR Thread Form)
ASME A112.18.1-~~2005~~ 2012/CSA B125.1-~~05~~ 12
Plumbing supply fittings
ASSE 1002-2015/ASME A112.1002-2015/CSA B125.12-15
Anti-siphon (fill valves for water closet tanks
ASTM D6284-~~02~~ 09
Standard Test Method for Rubber Property - Effect of Aqueous Solutions with Available Chlorine and Chloramine
NSF 61-~~2007a~~ 2015
Drinking Water System Components – Health Effects
NSF/ANSI 372-2016
Drinking Water System Components - Lead content

Section 3.2, Abbreviations: Abbreviations were added as follows:
NPT - National Pipe Taper
NPTF - National Pipe Taper Fuel and Oil
UNS - Unified National Special

Section 4.1, Toxicity and lead content:
4.1.3 Flexible connectors intended to convey or dispense water for human consumption through drinking or cooking shall not contain a weighted average lead content in excess of 0.25% when evaluated in accordance with the test method specified in NSF/ANSI 372.

Section 4.4.4, Fill valve threads: Updated the referenced standard for the fill valve thread requirements from ASME A112.19.5 to ASSE 1002/ASME A112.1002/CSA B125.12 as follows:
~~4.3.4~~ 4.4.4 Fill valve threads shall comply with ~~ASME A112.19.5~~ ASSE 1002/ASME A112.1002/CSA B125.12, except that fill valve threads may be Class 2B.

Section 4.7, Working temperature: Added working temperature requirements for flexible connectors intended only for cold water applications as follows:

Flexible connectors

a) intended for hot and cold water applications shall function at supply temperatures between 4 and 71°C (40 and 160°F) and shall withstand water at ~~82~~ 85°C (~~180~~ 185°F) for 0.5 h without failure of the pressure envelope; or

b) intended only for cold water applications shall function at supply temperatures between 4 and 43°C (40 and 110°F) and shall withstand water at 52°C (125°F) for 0.5 h without failure of the pressure envelope.

Section 5.2 Intermittent impulse pressure test: Added temperature requirements for flexible connectors intended only for cold water applications as follows:

5.2.2 Procedure

The intermittent impulse pressure test shall be conducted as follows:

a) Supply water to the specimen in such a manner that the flowing pressure upstream of the specimen does not exceed 517 kPa (75 psi) and the flow rate is 7.6 ± 1.9 L/min (2.0 ± 0.5 gpm), at the following temperatures:
   i) 82 ± 3°C (180 ±5°F) for flexible connectors intended for hot and cold water application
   ii) 49 ± 3°C (120 ± 5°F for flexible connectors intended only for cold water applications.

b) For each cycle, stop the flow and increase the pressure from 517 kPa (75 psi) to 1240 ± 35 kPa (180 ± 5 psi).

c) Cycle the specimen for 100 000 cycles at a minimum of 7 cycles/min at the following rates:
   i) 3 ± 1 s at 517 kPa (75 psi) maximum; and
   ii) 3 ± 1 s at 1240 ± 35 kPa (180 ± 5 psi) maximum.

Section 5.3 Burst pressure test: Added temperature requirements for flexible connectors intended only for cold water applications as follows:

5.3.2 Procedure

The burst pressure test shall be conducted as follows:

a) Fill the specimen with water.

b) For flexible connectors intended
   i) for hot and cold water applications, submerge the specimen in water at 82 ± 3°C (180 ± 5 °F) for 30 min. Alternatively, if the medium is air, condition the specimen for 60 min at ambient laboratory conditions while flowing water at 82 ± 3°C (180 ± 5 °F) through it; or
   ii) only for cold water applications, submerge the specimen in water at 49 ± 3°C (120 ± 5°F) for 30 min. Alternatively, if the medium is air, condition the specimen for 60 min at ambient laboratory conditions while flowing water at 49 ± 3°C (120 ± 5°F) through it.

c) Pressurize the specimen at 1724 ± 35 kPa (250 ± 5 psi).

d) Hold the specimen at the temperature and pressure specified in Items b) and c) for 30 min.

e) Remove the specimen from the water, if applicable.

f) Inspect the specimen for leaks while it is still being subjected to the test pressure.

Section 6, Markings: Added marking requirements for flexible connectors intended only for cold water applications as follows:

6.4.3 In addition to meeting the requirements of Clause 6.1 or 6.2, flexible connectors intended only for cold water applications shall be permanently marked "Only for use with cold water".

**"The equivalent French wording is "Pour utilisation avec eau froide seulement".*

6.4.4 The requirement specified in Clause 6.4.3 shall not apply to flexible connectors that are an integral part of a fixture fitting that complies with ASME A112.8.1/CSA B125.1.

Table 1, Maximum pressure drop for flexible connectors: Reduced the flow rate used for testing Icemakers from 3.8 L/m (1.0 gpm) to 1.9 L/m (0.5 gpm).