



To: Manufacturers of backflow prevention assemblies

From: Henry W. Chang, Chief Engineer, and Program Manager

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Subject: Evaluation Policy 22-001 - Update to Section 10.1.1.3.2 - Bodies and Covers

This policy is being issued to notify manufacturers of backflow prevention assemblies of an update to Section 10.1.1.3.2 - Bodies and Covers found in the *Manual of Cross-Connection Control, Tenth Edition*. The update affects the material requirements for bronze alloys.

Lead-free requirements for copper-based alloys have been revised due to the change in the definition of “lead-free” in the Safe Drinking Water Act. That revision, paired with current material supply chain issues, has led to the development and use of some copper-based alloy materials that have performed well and have shown good dezincification and corrosion resistance.

10.1.1.3.2 Bodies and Covers

Materials to be used in construction of these parts of the assembly shall be either valve bronze that conforms to ASTM Designation B61 or B62 or B584 UNS number C84400 or other ASTM designated bronze alloys that contain at least ~~79%~~ 75% copper and less than ~~15%~~ 22% zinc or gray iron that conforms to ASTM Designation A126, Class B or Class C; or ductile iron that conforms to ASTM Designation A536, Grade 65-45-12; or stainless steel that conforms to ASTM Designation A276 or A296 either UNS No. S30400, S30500, S31600 or steel pipe and flanges that are suitably protected against corrosion (see 10.1.1.3.12 Protective Coatings); or engineered plastic.

In addition, if the ASTM designated bronze alloy contains 15% or more, but less than 22% zinc, the following shall be required:

- a) Compliance to ISO (International Organization for Standardization) 6509:2014 – Corrosion of metals and alloys – Determination of dezincification resistance of copper alloys with zinc – Part 1: Test Method and Part 2: Assessment Criteria or Compliance to AS (Australian Standard) 2345:2006 (R2010) – Dezincification resistance of copper and
- b) Compliance to ASTM B858-06(2018) – Standard Test Method for Ammonia Vapor Test for Determining Susceptibility to Stress Corrosion Cracking in Copper Alloys or ISO 6507:1988 – Copper Alloys – Ammonia Test for Stress Corrosion Resistance.

The manufacturer shall provide 3rd party documentation showing compliance.