

**City of Milwaukee
Department of Public Works**

Milwaukee Water Works

**Material Specifications for
Corporation Stops, Ball Valve
Sizes 3/4" Through 2"**



City of Milwaukee Specification No. 30A-C-3
Revised September 18, 2014

- I. **GENERAL REQUIREMENTS:** Vendors bidding through the Department of Administration - Business Operations Division, Procurement Services Section shall comply with the latest version of City of Milwaukee Specification No. 70b-D-7, except as modified herein. **MATERIAL FURNISHED UNDER THIS SPECIFICATION SHALL BE MANUFACTURED IN THE UNITED STATES.**
- II. **TECHNICAL REQUIREMENTS**
- A. **Description:** Corporation stops, described herein, shall consist of a ball type valve which is threaded directly into a water main or a service saddle. The unit shall be suitable for installation with the main under pressure and shall be furnished complete with a coupling nut for connection to flared copper service piping.
- B. **Standards:** Corporation stops shall be NSF 61 and NSF 372 certified and designed in accordance with the latest revisions of AWWA C800, Standard for Underground Service Line Valves and Fittings, as modified herein.
- C. **Material:** Corporation stop materials shall conform to the following requirements:
1. Material of the body and ball shall be "No Lead" meeting ASTM B584 UNS copper alloy C89833 or C89520 as specified in the latest revision of AWWA C800, Section 4.
 2. The ball shall be coated with a nontoxic, non water soluble, tenacious, self lubricating film, Teflon® or equal, that can withstand ambient temperature changes within a range of 32 degrees to 80 degrees Fahrenheit and possesses suitable bonding and wearing qualities
 3. The stem seals shall be made of high-grade rubber suitable for potable water.
 4. The valve seats shall be molded NBR or Buna-N rubber in compliance with ASTM D2000 or an approved equal.
- D. **Workmanship:** Corporations shall be of high quality and all castings shall be free from defects of any kind. Completed valves shall be free from metal chips.
- E. **Corporation Stop Design:**
1. Inlet threads shall be AWWA standard threads (CC) in accordance with AWWA C800, Section 4, Table 7, unless otherwise specified on the construction plan or bid documents.
 2. Outlet ends and coupling nuts shall comply with AWWA C800 for flared connection with Type "K" copper unless otherwise specified on the construction plan or bid documents.
 3. The corporation stops shall be of straight-through/full port design.

4. The operating stem shall be in alignment with the flow passage through the corporation stop when in the open position.
5. The pressure class for the corporation stops shall be “high-pressure”, as defined in AWWA C800, and shall be capable of withstanding a hydrostatic test pressure of 300 psi.
6. The corporation seat shall be designed such that it provides a drip tight seal at 150 psi with the ball in the fully closed position.
7. Valve body shall be clearly and permanently marked by either casting or stamping to indicate a low lead casting.

F. Tests by Manufacturer:

1. Hydrostatic Test: A hydrostatic pressure of 300 psi shall be applied to each corporation in the open position.
2. Leakage Test: A hydrostatic pressure of 150 psi shall be applied to each corporation stop in the closed position. The corporations shall show no leakage in either the open or closed position test.
3. In lieu of the hydrostatic test of 300 psi and leakage test of 150 psi, the manufacturer may substitute an air under water test to a pressure of 125 psi for each of the required tests. The corporations shall show no leakage for either test.
4. A chemical analysis of the copper alloy, including lead content, shall be made.

G. Certification by Manufacturer: Upon request, the contractor shall submit manufacturer's certifications in duplicate to the Superintendent of Milwaukee Water Works attesting to the following:

1. Hydrostatic and leakage tests or the air under water tests.
2. Chemical analysis.

III. ACCEPTABLE BRANDS

A. The following manufacturers are acceptable to Milwaukee Water Works:

The Ford Meter Box Company
A.Y. McDonald Mfg. Co.
Mueller Co.
Cambridge Brass

- B. The above manufacturers are intended to be descriptive, but not restrictive. Other items of equal quality conforming to the requirements of this specification will be considered.

IV. INSPECTION BY CITY

- A. All required drawings, manuals and certifications shall be furnished before any materials will be inspected and accepted.
- B. The Superintendent of the Milwaukee Water Works, or a duly authorized representative, will inspect all materials furnished under this specification.
- C. Testing will be done on ten (10) percent of the whole shipment and rejections will be based on the results of testing of these samples.
- D. Corporations will be hydrostatically tested to 300 psi.
- E. Any materials found not conforming to this specification will be rejected and must be replaced at no cost to the City including all freight costs.