

METROPOLITAN UTILITIES DISTRICT OF OMAHA
OMAHA, NEBRASKA

SPECIFICATIONS FOR
HIGH DENSITY POLYETHYLENE (HDPE) PIPE
AND FITTINGS FOR WATER DISTRIBUTION SERVICE

Section 1.1 - Scope

Polyethylene pipe and fittings shall conform to AWWA C906-07, except as superseded and/or supplemented herein. If these specifications and AWWA C906 differ, these specifications shall govern.

Polyethylene pipe and fittings shall not be manufactured more than six months prior to the delivery date to the job site or District's storage yard.

Unless otherwise stated in the contract documents, polyethylene pipe and fittings shall be ductile iron pipe size (DIPS) and SDR 9 (Pressure Class 200 psi).

The District approves the following manufacturers of polyethylene pipe and fittings:

Performance Pipe
J-M Manufacturing Company
Georg Fischer Central Plastics Company

Section 4.2 - Materials

4.2.3 *Properties.* HDPE pipe and fittings shall be constructed of PE 3408 materials.

4.2.7 *Colored Materials used for Pipe Identification.* Polyethylene water pipe shall be black have a minimum of three (3) permanent blue stripes extending the length of the pipe and being equally spaced around the circumference of the pipe. The blue stripe shall be a minimum of 2" wide.

Section 4.3 - Pipe Requirements

4.3.2 *Dimensions and Tolerances.* Pipe shall conform to the applicable dimension requirements specified in AWWA C906-07 Table 5 and 6 except for 54" nominal pipe size. Outside diameter of 54" nominal pipe size shall be 57.560" and the wall thickness shall be as such to provide for a working pressure of 200 psi (SDR 9).

Section 4.5 - Joining Methods

4.5.1 *General.* Unless otherwise specified in the contract documents, all polyethylene joints shall be thermally butt fused.

Section 6.1 - Marking

6.1.2 *Required Markings.* Markings shall include the manufacturer's name, ANSI/AWWA C906, nominal OD, pipe size DIPS), material code designation PE 3408, dimension ratio (DR), and pressure class (PC).

Section 6.2 -Shipping, Handling and Storage

6.2.1 *Handling.* All piping and related materials shall be handled with care. Pipe shall be handled by use of slings, hoists, skids, or other standard means. Handling shall not be conducted with chains or cables. Pipe and related materials shall not be dropped or rolled as a means of handling.

6.2.2 *Shipping.* Care shall be taken during shipment to prevent cuts, scratches and other damage. Blocking and hold-downs shall be used during transportation to prevent shifting and movement. Chains or cables shall not be used for hold-downs. During transportation, the leading edge of the pipe shall be covered to prevent exhaust, debris and insects from entering the pipe. Small pipe shall not be transported inside larger pipe.

6.2.3 *Storage.* HDPE pipe and fittings shall be stored in a manner as to prevent damage to the pipe and fittings. The storage area shall be a relatively smooth, level surface free of stones, debris or other materials that could damage the pipe or fittings. Storage sites shall provide for handling equipment to move about freely. Small pipe shall not be stored inside larger pipe. If pipe is stored in piles, piles shall be oriented such that the thickest pipe is on the bottom of the pile and progresses with the thinnest pipe on the top of the pile. Piles shall be constructed in a pyramidal fashion and shall follow the Plastics Pipe Institute's Material Handling Guide.

Section 6.3 - Affidavit of Compliance

The manufacturer shall provide an affidavit with each pipe/fitting shipment that all materials comply with the requirements of AWWA C906 and this specification. The affidavit shall include the manufacturer's production code, including the day, month, and year of production, and all testing results required by AWWA C906 for each shipped item. The affidavit shall include the M.U.D. job number for which material is being furnished.

Section 7.1 - Warranty

The manufacturer shall warrant pipe and/or fittings for a minimum period of five (5) years after delivery to M.U.D.'s contractor or storage yard. Within this period of time, costs accrued by the District for replacement or repair of pipe and/or fittings found to have defects in material and workmanship and/or not complying with AWWA C906, these specifications and/or the manufacturer's documents shall be the responsibility of the manufacturer.