

SUGGESTED CONDENSED EXTERNAL MANHOLE FRAME SEAL SPECIFICATION

(New Construction X-85 Lightweight External Seal)

PART 1 GENERAL

1.01 WORK REQUIRED

The Contractor shall install a frame seal on all new sanitary manholes included in this project. The frame seal shall span the entire grade adjustment area of the manhole by connecting to the bottom base flange of the manhole frame casting and to the top of the manhole cone.

1.02 SUBMITTALS

The Contractor shall make submittals of the Manufacturers literature, shop drawings installation instructions and other items in accordance with the provisions of the Standard Specifications.

PART 2 PRODUCTS

2.01 FRAME SEAL

The frame seal shall remain flexible throughout a 25 year design life, allowing for repeated vertical movement of the frame of not less than 2 inches and/or repeated horizontal movement of not less than 1/2 inch. The sleeve portion of the seal shall be corrugated with a minimum unexpanded vertical height of 10 inches and be capable of being mechanically locked to the base flange of the manhole frame casting. The sleeve and any extension shall have a minimum thickness of 0.085 inches and shall be made from a high quality EPDM rubber suitable for both above and below grade applications. The rubber shall conform to the applicable material requirements of ASTM C-923 and have a hardness (durometer) of 45+5. The area of the seal that compresses against the base flange of the manhole frame casting and the chimney/cone shall have a series of sealing fins to facilitate a watertight seal.

The top compression band shall be "C" shaped to uniformly compress and mechanically lock the sleeve onto the base flange of the manhole frame casting. Both the top and bottom compression bands shall have a take-up mechanism capable of developing a minimum of 400 lbs. of torque.

- A. Acceptable Manufacturers
 - 1. Cretex Specialty Products

PART 3 EXECUTION

3.01 SURFACE PREPARATION AND INSTALLATION

The surface preparation and installation of the frame seal shall be in accordance with the manufacturer's instructions.

PART 4 MEASUREMENT AND PAYMENT

4.01 FRAME SEAL AND EXTENSIONS

All costs for furnishing and installing an external frame seal shall be included in the unit price bid for sanitary manholes.

NOTE: A specifier is within his rights to issue a proprietary specification that names only one brand. If in the informed and professional judgment of the specifier, his client's needs will be best served by naming a particular brand, then he has the responsibility to limit his specification to one source. This practice is even acceptable on publicly funded projects. This principle of proprietary specification has found legal support in the case of Whitten Corp v. Paddock Pool Builders, Inc., a Federal District Court case from Massachusetts (376 F. Supp125). Further support came in 1975 when the U.S. Supreme Court rejected further appeal and review.

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