

SUGGESTED SPECIFICATION FOR INTERNAL MANHOLE OR PIPE JOINT SEALS

PART 1 GENERAL

1.01 SCOPE

This section includes the materials and procedures required to provide for the internal sealing of joints in Precast Concrete manholes and in most types of pipe, including but not limited to Reinforced Concrete, PVC, HDPE, Fiberglass, Steel or Vitrified Clay. The sealing shall be accomplished via the installation of a mechanical internal joint sealing system. Seals shall only be permitted on joints subjected to not greater than 14 feet of head pressure (approximately 6 psi).

PART 2 PRODUCTS

2.01 INTERNAL JOINT SEAL

Internal joint seals shall consist of a flexible rubber sleeve and stainless steel expansion bands conforming to the following requirements.

- A. Rubber Sleeve – The flexible rubber sleeve shall be molded or extruded from a high grade rubber compound conforming to the applicable material requirements of ASTM C-923 with a minimum 1500 psi tensile strength, maximum 18% compression set and a hardness (durometer) of 48±5.

The sleeve shall have a minimum width of 7.5 inches and a minimum thickness of 3/16 inches. Both end sections of the sleeve shall have an integrally formed expansion band recess and series of sealing fins to facilitate a watertight seal. These sealing fins shall have teardrop holes or air pockets to allow them to conform to minor surface irregularities that may be encountered on the manhole or pipe surfaces. The sleeve is designed to span joints with separations of not greater than 3 inches with no offset. Offsets will reduce the allowable span distance.

- B. Expansion Bands – The expansion bands used to compress the sleeve against pipe or manhole wall shall be formed from a minimum 16 gauge stainless steel conforming to the applicable material requirements of ASTM C-923, Type 304 and shall have a minimum width of 1-3/4 inches. Expansion bands may consist of one or two pieces depending on the inside diameter of the manhole or pipe. To prevent ballooning, a center band shall be used where greater than 6 feet of head pressure (approximately 2.5 psi) is expected.

The mechanism used to expand the bands shall have the capacity to develop the pressure necessary to provide a watertight seal once the bands have been locked into place. Any fasteners used to lock the bands into place after tightening shall be stainless steel conforming to ASTM F-593, Type 304.

- C. Acceptable Manufacturer's
 - 1. Cretex Specialty Products
 - 2. Pre-Approved Equal

PART 3 EXECUTION

3.01 INSTALLATION

All work to be performed shall be in strict accordance with the ENGINEER's specifications and recommendations, including installation and application of all products as required and in accordance with the manufacturer's recommended installation and surface preparation instructions. The CONTRACTOR shall be responsible for field measuring each pipe or manhole joint to be sealed. This information is required to determine the proper size of rubber sleeve and the size and number of expansion bands required to complete each installation.