

ASTM F2304 - 10 Standard Practice for Sealing of Sewers Using Chemical Grouting

Active Standard ASTM F2304 Developed by Subcommittee: [F36.20](#) | **Book of Standards Volume:** [04.12](#)

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ASTM F2304

Significance and Use

The inspection, testing, and repair of sewer pipe joints is a practice that can assist in maintaining and optimizing sewer performance. It is important to identify methods that use the most current compounds and technology to ensure the reduction of infiltration and exfiltration. The method selected should utilize environmentally safe grout and minimize the disruption of traffic.

This practice serves as a means to inspect, test, and seal sewer pipe joints, having selected the appropriate chemical grouts, using the packer method. Television inspection and joint testing are used to identify sewer line conditions, defective joints, and document the repairs undertaken. Instruction on joint sealing, if necessary, is then detailed, using pressure injection into the soils encompassing the pipe joint with a chemical grout (chemical sealing material).

This practice should not be used for longitudinally cracked pipe, severely corroded pipe, structurally unsound pipe, flattened, or out-of-round pipe. In areas with high groundwater pressure, greater than 10 psi (68.9 ksi) at the test point, consult equipment manufacturers.

1. Scope

1.1 This practice describes the procedures for testing and sealing individual sewer pipe joints with appropriate chemical grouts using the packer method. Sewer systems shall include sanitary, storm, and combined and their appurtenances. Chemical grouting is a soil sealing process, which seals the voids within the soil surrounding the exterior of the pipe at the point of leakage. Chemical grouting is not considered a structural repair.

1.2 This practice applies to sewers 6 to 42 in. (18 to 107 cm) in diameter. Larger diameter pipe may be grouted with specialized packers or man entry methods. Host pipe interior surfaces must be adequate to create an effective seal for the packer elements.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 Worker safety training should include reviewing the hazards associated with hoses, pumps, tanks, couplers, compressors, bottles, motors, and all other related application apparatus. Additional safety considerations including safely handling, mixing, and transporting of chemical grouts should be provided by the chemical grout manufacturer or supplier or both. Their safe operating practices and procedures should describe in detail appropriate personal protective equipment (PPE) for the various grouting operations. Operations covered should include the proper storage, transportation, mixing, and disposal of chemical grouts, additives, and their associated containers.

1.5 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Documents *(purchase separately)*

NASSCO Standards

NASSCO Specifications Guidelines, Wastewater Collections Systems Maintenance and Rehab, Television Inspection, Main Sewers

Index Terms

grout; infiltration; sewer; Chemical grouts/grouting; Rehabilitation--sewerlines; Sewerlines; ICS Number Code 93.030 (External sewerage systems)

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