

Strong-Plug® Specifications



Rev: 02-2018

INTENT: To provide a system for the stopping and sealing of leaks in concrete or masonry structures prior to the application of Strong-Seal® products.

1.0 General

- 1.1 This specification shall govern all work, materials, and equipment required for substrate rehabilitation for the purpose of eliminating active infiltration as a result of applying an instant-setting cementitious material to the surfaces of brick, concrete, or any other masonry construction material.
- 1.2 Described herein are the procedures to be followed prior, during, and after the use of Strong-Seal® products. The applicator, approved and trained by the manufacturer, shall furnish all labor, equipment and materials for applying an instant-setting cementitious material. All aspects of the installation shall be in accordance with the manufacturer's recommendations and per the following procedures to include:
 - A. The removal of any loose and unsound material
 - B. Cleaning of the area to be sprayed
 - C. The elimination of active infiltration prior to liner application

2.0 Materials

- 2.1 Infiltration Control Material:
Strong-Seal® Strong-Plug®, an instant-setting cementitious product specifically formulated for leak control, shall be used to stop minor water infiltration and shall be mixed and applied per manufacturer's recommendations. Strong-Plug® shall meet the following performance specifications:

Strong-Plug® Performance Specifications:

Compressive Strength	ASTM C109	>1,000 psi @ 1 hour >2,500 psi @ 24 hours
Sulfate Resistance	ASTM C267	No weight loss after 15 cycles @ 2000 ppm
Freeze/Thaw Resistance	ASTM C666	100 cycles
Pull Out Strength	ASTM C234	14,000 lb
Set Time	ASTM C403	<1 minute

- 2.2 Water:
Water used to mix product shall be clean and free from contaminants. Questionable water shall be tested by a laboratory per ASTM C94. Potable water need not be tested.
- 2.3 Other Materials:
No other material shall be used with the material described in 2.1 without prior approval or recommendation from The Strong Company, Inc.

3.0 Equipment

- 3.1 Applicator shall use equipment that permits for the mixing of very small batches of instant-setting material either by hand, spoon, or trowel in a clean pail or bowl.

4.0 Application

- 4.1 Surface Preparation:
 - 4.1.1 Covers shall be placed over invert to prevent extraneous material from entering the sewer lines before cleaning.
 - 4.1.2 All foreign material shall be removed from the manhole wall and bench using a high pressure water spray (minimum 3,000 psi). If grease, chemicals, previous coatings or linings, or other surface contaminants are present, the substrate shall be cleaned with steam, chemical cleaning compounds, or surface abrading as necessary to provide a clean substrate. Loose and protruding brick, mortar, and concrete shall be removed using a mason's hammer and chisel and/or scraper.
- 4.2 Mixing of Instant-Setting Material:
 - 4.2.1 For each pound of product, 3.0 to 4.0 fluid ounces of water shall be used. The required amount of water shall be added to the pail or bowl first, followed by the product. The product shall be mixed by hand, spoon, or trowel until a slurry consistency is achieved. Mixing shall occur near the application site and in amounts that can be applied within 1 minute. Only enough water shall be used to achieve the desired consistency. Mixing shall not be required when applying dry product

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directly to leak. All other mixing procedures as noted on product pail shall be followed.

4.3 Application of Instant-Setting Material:

- 4.3.1 The instant-setting material shall be quickly and firmly applied by hand or trowel directly to leak. For dry application, the material shall be firmly held in place to allow infiltrating water to harden the material. Firm pressure shall be constantly applied until material has set.
- 4.3.2 Some leaks may require weep holes to localize the infiltration during application. Weep holes shall be plugged with the instant-setting patching material prior to application of other Strong-Seal® products.
- 4.3.3 When severe infiltration exists, pressure grouting may be required by using a cementitious grout or chemical grout. Manufacturer's recommendations shall be followed when pressure grouting is required.

5.0 Curing

- 5.1 No special curing requirements are needed.
 - 5.1.1 Strong-Plug® does not require any hold times. Once material has set, Strong-Seal® products can be immediately applied overtop.

6.0 Weather

- 6.1 No application shall be made if ambient temperature is below 40 degrees Fahrenheit. No application shall be made to frozen substrates or if the substrate is expected to freeze within 24 hours after application.

7.0 Limited Warranty

The Strong Company, Inc. warrants that this product was produced in conformity with its standard specifications or formulations within recognized tolerances, free of adulteration or contamination, and that the product will perform in accordance with representations in Strong-Seal® literature when properly applied in strict conformance with the printed instructions on container and prescribed in technical data instructions and when applied to a properly prepared surface.

The sole remedy of the purchaser shall be replacement of the product or refund of the purchase price of the product if any defect in material or variance in the product beyond recognized tolerances in the specifications is found to exist.

No other remedy including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss shall be available to the purchaser.

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