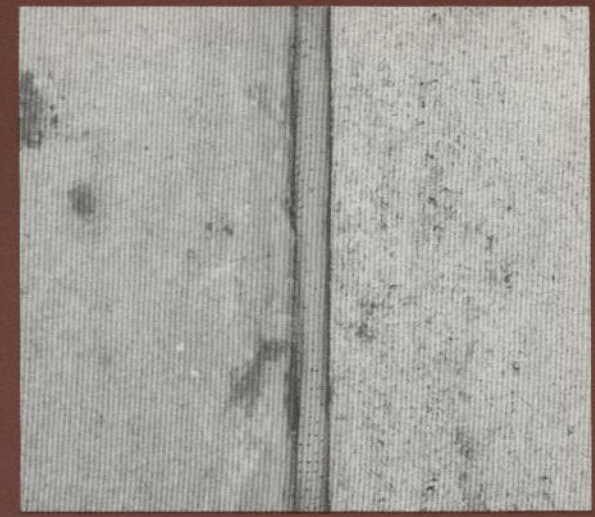
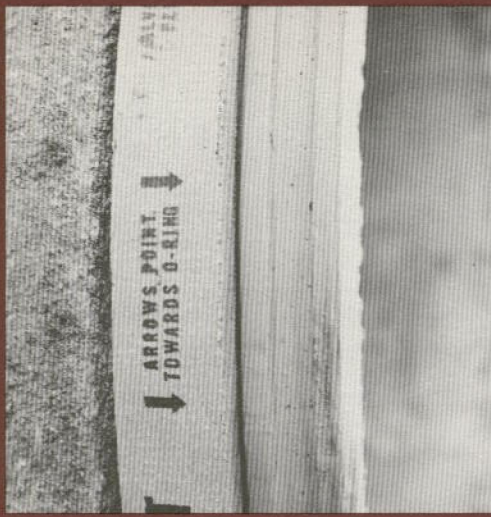


**It Takes Only Seconds  
To Provide Lifetime Protection  
Against Corrosive Attack  
Of Steel Joint Rings  
On Concrete Pipe**



**FLEX-PROTEX joint filler**  
**The Economical Alternative to Grout**



# FLEX-PROTEX<sup>®</sup>

## joint filler

The better, faster, easier method of applying Portland cement

FLEX-PROTEX joint filler is the fast, economical and reliable alternative to time-consuming grouting.

The method is applicable to reinforced concrete pipe (AWWA Specification C-302) and similar pipe with exposed steel joint rings.

FLEX-PROTEX joint fillers are factory-formed loops, custom designed for the type and size of pipe on which they are to be used.

### Easy Pipeline Installation

Installation is as easy as 1-2-3

- (1) Place the FLEX-PROTEX joint filler loop over the spigot ring shank and against the spigot shoulder. (Install the O-ring in accordance with the pipe manufacturer's recommendations.)
- (2) Push pipe home.
- (3) Backfill.

The simple procedure takes only seconds. The labor-intensive and costly positioning of the diaper for grout application, the mixing and pouring, and the rodding are eliminated.

The joint filler loop looks like a gasket, installs like a gasket, and the crewman who installs the O-ring gasket can install the FLEX-PROTEX ring. This minimizes the joint-making crew and means significantly less open-ditch time.

FLEX-PROTEX joint fillers are made of polyurethane foam with unhydrated Portland cement, the cement totaling not less than 63 percent of the weight, uniformly dispersed throughout. Hydration of the Portland cement is slow, depending on available ground moisture, with complete set requiring several weeks. The ground water sets up the cement.

# joint filler

There cannot be any gaps in a FLEX-PROTEX loop, assuring application of the Portland cement completely around the circumference of the pipe, preventing rust and corrosion.

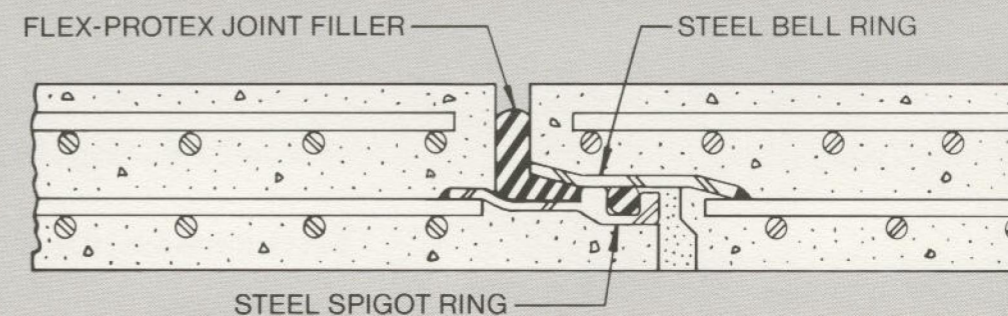
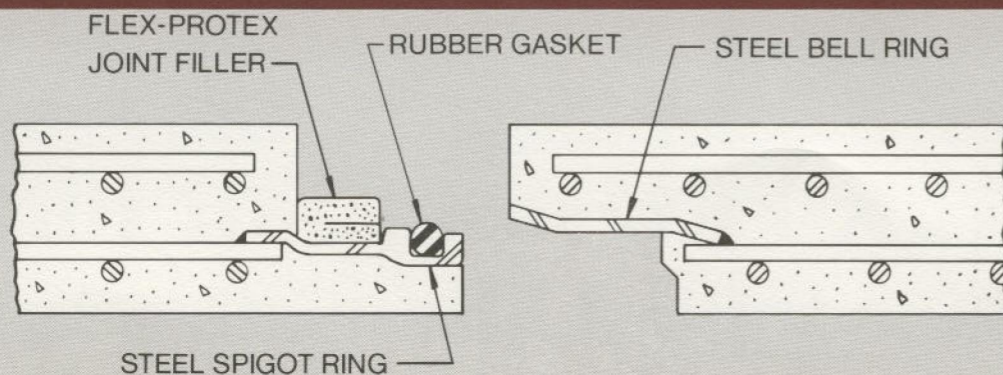
### Versatile Applications

The slow hydration rate of the Portland cement makes FLEX-PROTEX joint fillers the ideal solution for protection of concrete pipe with steel joints in underwater applications, in wet ditches, or under difficult conditions such as in tunnels or on jacked pipe.

The FLEX-PROTEX system permits early settlement of the pipe and deflection for directional change without damage to the joint.

As seen in the photographs at the top, FLEX-PROTEX loops are clearly marked for proper installation and fit securely on the spigot shank between the O-ring groove and the spigot shoulder. FLEX-PROTEX loops can be installed in seconds by one person. The loops are slit partially through to form a wedge of protective foam filling the space between the spigot and the bell ring. The cross-sectional drawings below show FLEX-PROTEX joint filler installed on reinforced concrete pipe (AWWA Specification C-302) with the joint open and in the home position.

FLEX-PROTEX joint fillers are protected by one or more of the following U.S. Patents: 3897073, 3904213, 3909010, 3912285, 3917285, 3923311, and other pending patents.





## Ten Reasons for Specifying FLEX-PROTEX joint fillers

### Technical:

1. Effectively protects steel joint rings in underground installations of reinforced concrete pipe. Exhumation of eight year test joints showed "complete protection of the steel joint rings and the hardened filler had to be chiseled off of the spigot ring."
2. Slow hydration provides complete joint flexibility for early pipe settlement.
3. The Portland cement hydrates with ground water.
4. Portland cement joint protection is now possible with subaqueous and jacked tunnel pipe.
5. Assures 360-degree joint protection.

### Economic:

1. Reduces the pipe installation crew to a minimum.
2. Eliminates diapers.
3. Eliminates the grout mixes and the need for sand, cement and water at the job site.
4. Installs as easily as an O-ring gasket.
5. Permits immediate backfilling of the trench.

## Suggested Specifications

### Exterior Protection of Concrete Pipe Joint Rings

Concrete pipe with exposed steel end rings shall be joined with prefabricated FLEX-PROTEX joint fillers or approved equal.

The prefabricated joint protector shall be a loop with an appropriate length so it will have a slight stretch when placed on the spigot ring behind the gasket groove and

against the spigot shoulder. It shall be composed of water permeable polyurethane foam with an admixture of not less than 63 percent by weight of Portland cement. It shall have a suitable cross-section to protect the exposed steel joint ring surfaces and be sufficiently compressible to allow the pipe to be pushed "home" without difficulty.



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