



15 gallon size shown

Includes:

- Non-regulated, non-hazardous, Corrosion Inhibitor for fire sprinkler systems
Shipping class 55; Weight approx. 8.3 lbs per gallon
- MSDS sheet
- Placard to identify system as treated
- 1 pair latex gloves
- 1 Potter Pipe-Shield™ test kit

Stock number:

- 5 Gallon - 1119105
- 15 Gallon - 1119115
- 55 Gallon - 1119155

Potter Pipe-Shield™ is Potter's patent pending, biostatic, environmentally friendly corrosion inhibitor. Potter Pipe-Shield™ was specifically developed to protect wet, dry and pre-action fire sprinkler systems from MIC (Microbiologically Influenced Corrosion) and oxygen corrosion. It was developed with the environment in mind and is non-regulated, non-hazardous and completely biodegradable, with a neutral pH.

Potter Pipe-Shield™ delivers corrosion protection without adverse affects to the environment. Potter Pipe-Shield™ does not contain Biocides and or pesticides commonly used to control or kill bacteria.

Application or injection into the fire sprinkler system is easy using the Potter Portable Chemical Injection System (PCIS). After injection application, Potter Pipe-Shield™ maintenance levels may be tested using the Potter Pipe-Shield™ test kit, stock #1119170. The test kit changes color to confirm the proper level of Potter Pipe-Shield™ within the system.

Long term monitoring of the sprinkler system for corrosion and analysis is recommended using the PCMS-RM part #1119546 for wet systems and DPCMS-RM part # 1119547 for dry systems. Please see bulletins #5401180 and #5401181 respectively. The optional PCMPK Corrosion Monitoring Probe part #0090180 can be used in conjunction with the monitoring stations for automatic notification of corrosion problems.

CAUTION

If a corrosion monitoring station is used on a system treated with Potter Pipe-Shield™, do not inject the inhibitor through the monitoring station. This could affect the analysis of the coupons and probe. In order for the corrosion monitoring station to provide an accurate indication of system status, the corrosion monitoring station should be isolated from the system as the inhibitor is added. Place the monitoring station back on line when the injection of the inhibitor is complete.

How Does Potter Pipe-Shield™ Work?

To understand how Potter Pipe-Shield™ works we must review how MIC and oxygen corrosion occur:

Stainless Steel protects itself from corrosion by attracting a complete oxygen layer to the exposed steel. This oxygen layer keeps free radical oxygen and MIC causing bacterium from penetrating into the steel and causing corrosion. When the surface of stainless steel is scratched, oxygen is "taken" from the air and heals the scratched area. This is why stainless steel does not rust.

Black iron also has a layer of oxygen on top of the metal; but it has "holes" in it and allows free radical oxygen and MIC bacterium to penetrate the surface. The result is oxygen or MIC corrosion.

Potter Pipe-Shield™ works by forming a complete layer over the oxygen layer. The holes that exist in the oxygen layer are effectively protected from oxygen and MIC corrosion. Potter Pipe-Shield™ accomplishes this as it is a monomer which has a positive (+) or "cationic" charge. The oxygen layer on the surface of the iron has a negative (-) or "anionic" charge. Attraction of the positively charged Potter Pipe-Shield™ to the negatively charged oxygen layer is complete and results in a chemical bond. An effective wall is formed blocking the penetration of oxygen free radicals and MIC bacterium.

If the surface of the piping is "scratched", maintenance levels of Potter Pipe-Shield™ repair the area much in the same way oxygen in the air repairs stainless steel. New additions of piping, valves, alarms, sprinklers, etc. are also automatically coated using this same principle. Potter Pipe- Shield™ only coats one molecule thick and avoids interference with sprinklers or the function of the fire sprinkler system.

CAUTION

Potter Pipe-Shield™ treats the pipe by bonding to the pipe wall as it travels through the water. Trapped air can prevent the water from reaching certain sections of pipe leaving them untreated. It is imperative that as much air as possible be removed from the sprinkler system to allow the Pipe-Shield to flow to all sections of the sprinkler system. A Potter Automatic Air Release, PAAR stk #1030000 or other method of venting trapped air should be used.

Application Procedure

Application or injection into the fire sprinkler system is easy using the Potter Portable Chemical Injection System (PCIS). # 1119920 Pipe-Shield does not need to be added every time fresh water enters the system. The initial injection of Potter Pipe-Shield™ should protect the system for 2 years of normal sprinkler system quarterly testing.

The water in the fire sprinkler system should be tested for the presence of Pipe-Shield™ using the Pipe-Shield™ Test Kit stk# 1119170 after draining and refilling the system, activation of the system, or annually at a minimum. If the level of Pipe-Shield™ is determined to be low, the system shall be opened, allowing water to flow through and additional Pipe-Shield™ shall be injected into the flowing water to bring the level up.

To maintain appropriate levels of Pipe-Shield™ in the system, maintenance doses of Pipe-Shield™ shall be injected into the system as follows:

.25% per volume annually for wet systems after 2 years of no activity other than quarterly testing or anytime the system is drained and refilled.

.5% per volume for wet systems if more than 25% of the pipe has been replaced or if the system has activated.

.5% per volume for dry pipe or pre-action systems whenever a full flow trip test is performed or every 3 years at a minimum.

Note: Apply Potter Pipe-Shield™ at a .5% of water volume for wet pipe systems and – 1% for Dry and Pre-Action systems.

CAUTION

Potter Pipe-Shield™ shall only be injected into flowing water. In order to ensure Pipe-Shield will be properly dispersed throughout the sprinkler system, water must be flowing through the system as the Pipe-Shield is injected.

Potter Pipe-Shield™ maintenance levels may be tested using the Potter Pipe-Shield™ test kit, stk #1119170 The test kit changes color to confirm the proper level of Potter Pipe-Shield™ within the system.

Some means of allowing water to flow through the system shall be made to allow for proper dispersal of Pipe-Shield.

An automatic air release valve Potter model # 1030000 PAAR shall be installed in the wet pipe fire sprinkler system to automatically exhaust trapped air. This will aid in the distribution of Pipe-Shield throughout the fire sprinkler system.

1. Review the MSDS sheet for Potter Pipe-Shield™ and use all safety equipment required before handling Potter Pipe-Shield™. Review first aid procedures in advance. Place Potter Pipe-Shield™ MSDS sheet in OSHA “Right to Know” station. Hold a safety meeting with all involved personnel on the correct handling of Potter Pipe-Shield™.

2. Check local ordinances requiring the need for backflow prevention when introducing corrosion inhibitors, specifically Potter Pipe-Shield™ into fire sprinkler systems. Refer to the MSDS as needed.
3. Completely drain the sprinkler system through the 2” main drain, any auxiliary drain and flushing connection to remove deposits and bacterium.
4. The point of connection shall be on the system riser on the system side of any installed backflow device in the vicinity of the main water control valve.

CAUTION

Do not inject Potter Pipe-Shield™ directly into the corrosion monitoring station as this may affect the corrosion analysis.

5. Connect the PCIS to the sprinkler system following the instructions in the PCIS bulletin # 5401177. Note that there should be a shutoff/isolation valve between the outlet of the PCIS and the sprinkler system.
6. Insert the fluid intake tube of the portable Potter Chemical Injection System (PCIS) directly into the inhibitor container.
7. Open any remote valves or drains.
8. Slowly open the main water control valve to begin filling the system.
9. Open the isolation valve between the pump and the sprinkler system.
10. Turn the pump on.
11. Monitor any open valve and close as soon as water discharges through it.
12. When an amount of Potter Pipe-Shield™ has been injected into the sprinkler system equating to .5 – 1% of the total gallons of the sprinkler system, close the isolation valve.
13. Finish filling the system.
14. Shut off the pump.
15. Check Potter Pipe-Shield™ concentration in system, using Potter Pipe-Shield™ test kit stk # 1119170 at farthest end of system. Maintain Potter Pipe-Shield™ concentration to a level of .5% per system volume.

Shelf Life and Storage

Three years from manufacturing date (on label). Store preferably inside. Consult MSDS for proper storage information.

CAUTION

Hazard Safety Information:
Always wear safety goggles and protective clothing when handling chemicals.