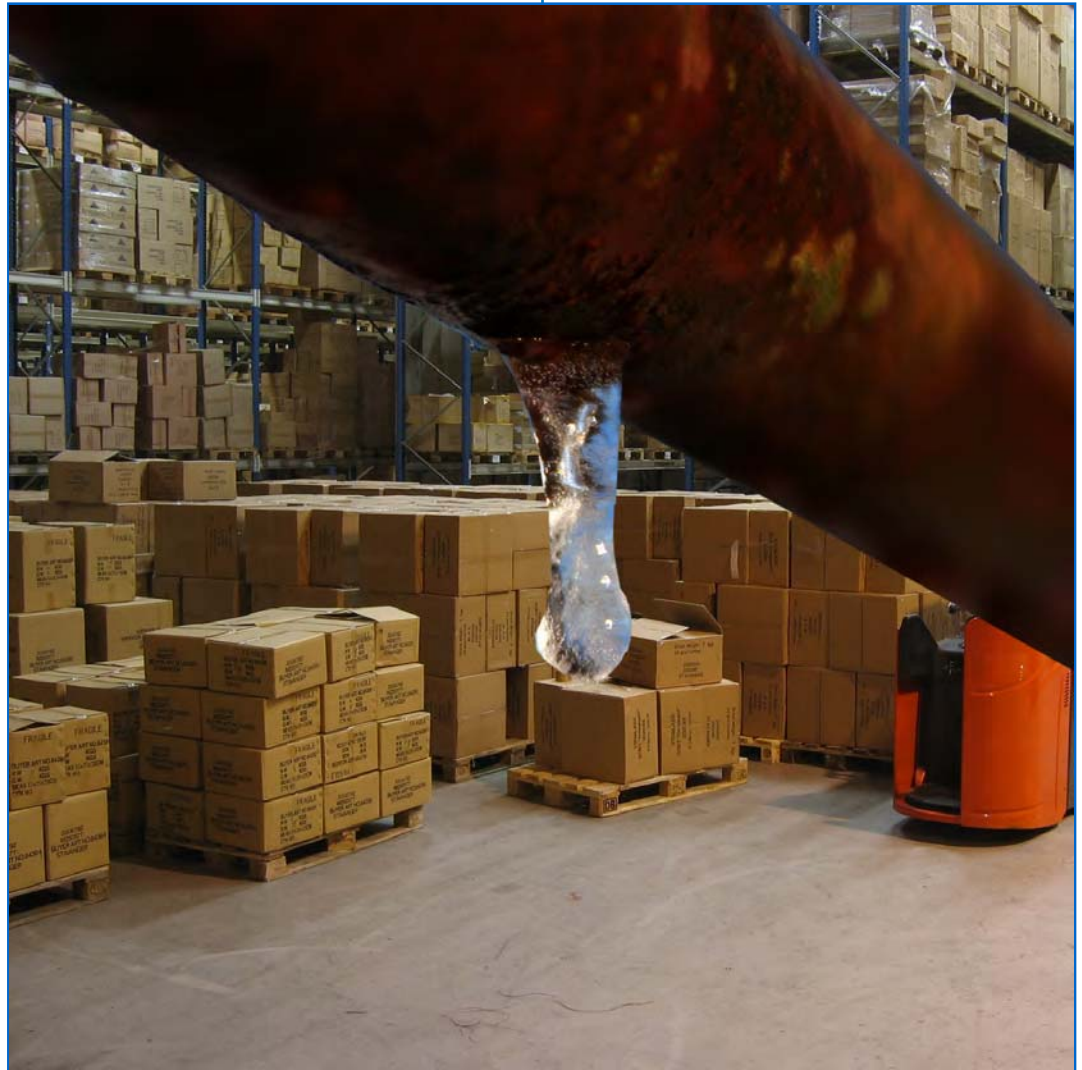


# MIC Testing

When sprinkler systems leak, business stops;  
merchandise can be destroyed and records damaged.



ESL can provide a Microbiologically Influenced Corrosion (MIC)  
assessment of your sprinkler system to comply with  
jurisdictional requirements and help prevent damage.

Fire Protection  
Consulting

Fire Hydrant  
Flow Testing

Private Hydrant  
Testing

Fire Safety  
Training

Hydraulic Water  
Modeling

MIC Testing

Fire Code  
Consulting

Construction  
Management

Construction  
Consulting

Forensic  
Analysis

Litigation  
Support

Engineered Solutions International, LLC  
315 Ponce de Leon Ave Suite 770  
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Engineered  
Solutions

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## What is MIC?

Microbiological Influenced Corrosion (MIC) refers to corrosion in which tubercle covered pits are formed on the interior of a pipe wall allowing bacteria to thrive. Municipal water systems may contain these microorganisms that live on nutrients in the water. Certain combinations of these microbes can encourage an accelerated rate of corrosion in alloy pipe including steel, copper and ductile iron.

## What does MIC have to do with Fire Sprinkler Protection?

The most obvious MIC problem is the development of leaks in a wet pipe system resulting in damage to products and equipment. A less apparent but potentially more serious problem results from the build-up of tuberculation nodules inside the sprinkler system. Build-up restricts the flow of water, changing the hydraulic dynamics of the sprinkler system and risking lower protection density than designed.

Additionally, the build-up can break off from the interior of the pipe and become lodged in another part of the system causing a blockage or a plugged sprinkler head. Even if the system does not experience leaks or blockages, the interior corrosion will reduce the rated working pressure of the pipe and cause premature pipe failure.

## Does NFPA address MIC issues?

Yes. The 2002 edition of NFPA 13, section 15.1.5 states that "Water supplies and environmental conditions shall be evaluated for the existence of microbes and conditions that contribute to microbiologically influenced corrosion (MIC)". The NFPA also requires a disclosure of possible MIC issues on the final Owners Certificate. Consequently, many jurisdictions are now requiring a MIC test report to be submitted with any new fire sprinkler plans.

## How do you test for MIC?

Water samples are taken from municipal systems during a hydrant flow test or from drains on existing fire sprinkler systems. Lab analysis and interpretation of these results can be provided by ESL to determine a fire sprinklers system's susceptibility to MIC exposure.

## Why use Engineered Solutions (ESL) for MIC testing?

We are an independent third party and do not conduct remediation of MIC affected systems. This allows us to present an unbiased analysis of your potential exposure. ESL is a collaboration of professional engineers and technical experts with extensive protection expertise.

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