CORTEC CORPORATION

Environmentally Safe VpCI®/MCI® Technologies

CorroLogic® CUI High-Temp Inhibitor

DESCRIPTION

CorroLogic® CUI High-Temp Inhibitor is a water-based corrosion inhibitor designed to protect against corrosion under insulation (CUI) in high temperature applications up to 1100 °F (600 °C). CorroLogic® CUI High-Temp Inhibitor can extend the life of piping and other insulated surfaces in refining, petrochemical, and marine environments, thus minimizing replacement material and labor costs. The product is non-corrosive and non-flammable, so it can be applied and used safely in widely varying conditions.

PACKAGING & STORAGE

CorroLogic® CUI High-Temp Inhibitor is available in 5 gallon (19 L) plastic pails, 55 gallon (208 L) metal drums, liquid totes, and bulk.

To ensure best product performance, store in original packaging, indoors, and out of direct sunlight at 40-100 °F (4-38 °C).

Shelf life: 2 years

VpCI® FORMULATED PRODUCTS FOR PROCESS INDUSTRIES

FEATURES

- High temperature resistance up to 1100 °F (600 °C)
- Non-flammable
- Protects in wet and dry cycles
- Long lasting

BENEFITS

- Inhibits CUI on pipes and other insulated metal surfaces
- Reduces frequency of maintenance and repair related to CUI
- Increases overall plant safety by reducing dangerous corrosion-related failures
- Minimizes stress corrosion cracking, crevice corrosion cracking, pitting, and localized corrosion

APPLICATION

A typical and extremely useful application is the protection of insulated steam or hot oil pipelines. Moisture trapped beneath the surface of the insulation can cause corrosion that is difficult to detect. If unnoticed and untreated for too long, this corrosion can result in potentially disastrous leaks with costly damage.

To discourage CUI, CorroLogic® CUI High-Temp Inhibitor should be sprayed on the inside of insulation or applied to surfaces to be insulated before insulation installation. CorroLogic® CUI High-Temp Inhibitor may also be applied to existing surfaces when corrosion is found during maintenance. If the integrity of the component is not compromised, it may be cleaned, coated, and insulated, or wrapped in new insulation treated with CorroLogic® CUI High-Temp Inhibitor to provide future protection.

Mix thoroughly prior to use. CorroLogic® CUI High-Temp Inhibitor should be applied to the insulation or surface to be insulated prior to wrapping. Product should be spread at a rate of 150–200 ft^2 per gallon (3.68-4.9 m^2/L) on insulation or surface being insulated. For best results, pipes or metal surfaces treated with CorroLogic® CUI High-Temp Inhibitor should be protected within 10 minutes with either an insulation

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blanket or similar pipe wrapping. CorroLogic® CUI High-Temp Inhibitor is light and powder-like once dried.

Possible applications include insulated piping or exhaust manifolds in

- Power Plants
- Refineries
- Ships
- Offshore Rigs
- Other Industrial Facilities

Cortec® Technical Services should be contacted prior to application to discuss the type of insulation, pipe material, surface finish, and operating conditions.

METALS PROTECTED

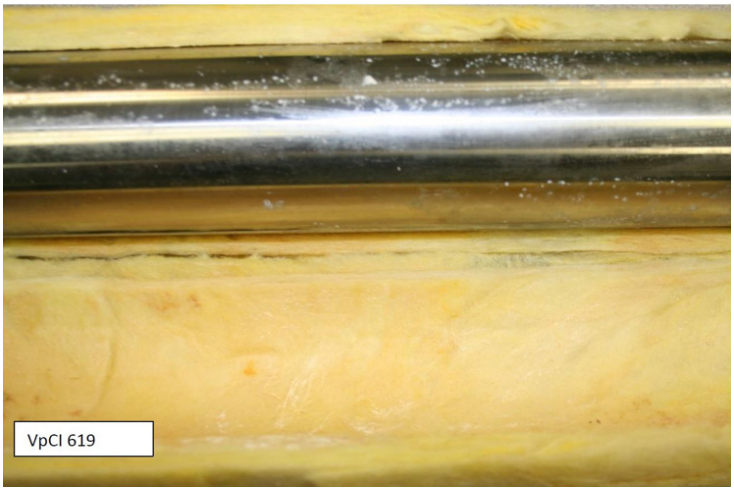
- Carbon Steel
- Cast Iron
- Galvanized
- Stainless Steel

TYPICAL PROPERTIES

Appearance	White thixotropic liquid
Dry Time	20 minutes
Non-Volatile Content	18-22%
pH	8.2-8.7 (1% aqueous)
Density	8.7-9.6 lb/gal (1.04-1.15 kg/L)

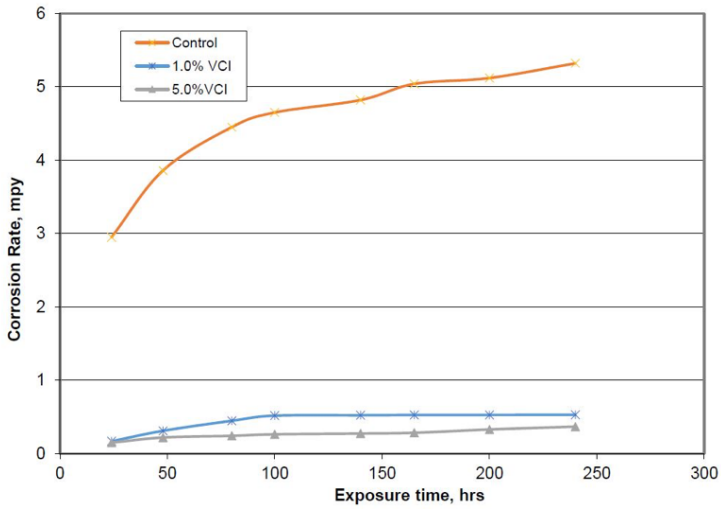
TEST RESULTS

Unprotected pipe, after 240 hours of testing in high temperature conditions with regular chloride injection.



Pipe protected by CorroLogic® CUI High-Temp Inhibitor after 240 hours of testing in high temperature conditions with regular chloride injection.

Corrosion Behavior of API 5L X65 Mild Steel Pipe at 220 °F (104 °C)



Corrosion behavior of steel pipes in boiling chloride water solution (200 ppm). Corrosion rate (mpy) of untreated control (orange) versus samples treated with 1% CorroLogic® CUI High-Temp Inhibitor (blue) and 5% CorroLogic® CUI High-Temp Inhibitor (gray).

Test results can be found in "Protection Effectiveness of Vapor Corrosion Inhibitor CUI High-Temp Inhibitor for Corrosion Under Insulation at Elevated Temperatures," prepared for CORTEC® Corporation by Dr. Behzad Bavarian, California State University, Northridge, USA 91330, February 2018.

https://www.cortecvci.com/Publications/Papers/CUI-report-on-VCI-619.pdf

CorroLogic® CUI High-Temp Inhibitor

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