



VpCI® FORMULATED PRODUCTS FOR PROCESS INDUSTRIES

VpCI®-619



PRODUCT DESCRIPTION

VpCI®-619 is a water-based corrosion inhibitor designed to protect against corrosion under insulation (CUI) in high temperature applications up to 1100 °F (600 °C). VpCI®-619 can extend the life of piping and insulation 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.

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, VpCI®-619 should be sprayed on the inside of insulation before it is wrapped around new pipes or other metal surfaces that need to be insulated. VpCI®-619 may also be applied to existing pipes when corrosion is found during maintenance. If the integrity of the pipe is not compromised, the pipe may be cleaned and wrapped in new insulation treated with VpCI®-619 to provide future protection.

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

APPLICATION

VpCI®-619 should be applied to the insulation prior to wrapping or coating pipes. Mix thoroughly prior to use. Product should be spread at a rate of 150 – 200 ft² per gallon (3.68-4.9 m²/L) on insulation. For best results, pipes or metal surfaces treated with VpCI®-619 should be protected as soon as possible with either an insulation blanket or similar pipe wrapping. VpCI®-619 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

METALS PROTECTED

- Carbon Steel
- Cast Iron

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)

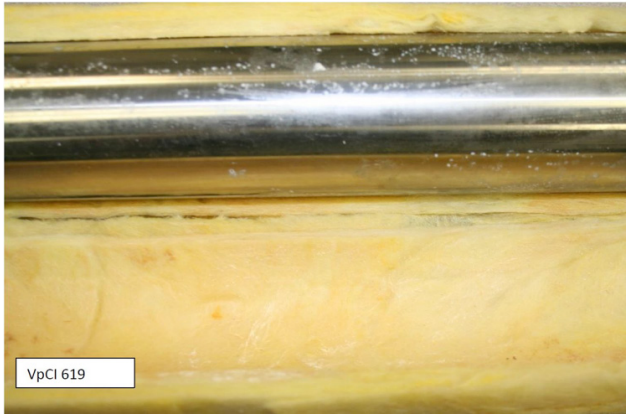
STORAGE AND PACKAGING

VpCI®-619 is available in 5 gallon (19 liter) plastic pails, 55 gallon (208 liter) metal drums, liquid totes, and bulk. Do not allow product to freeze. Shelf life: 24 months at 75 °F (24 °C).

TEST RESULTS

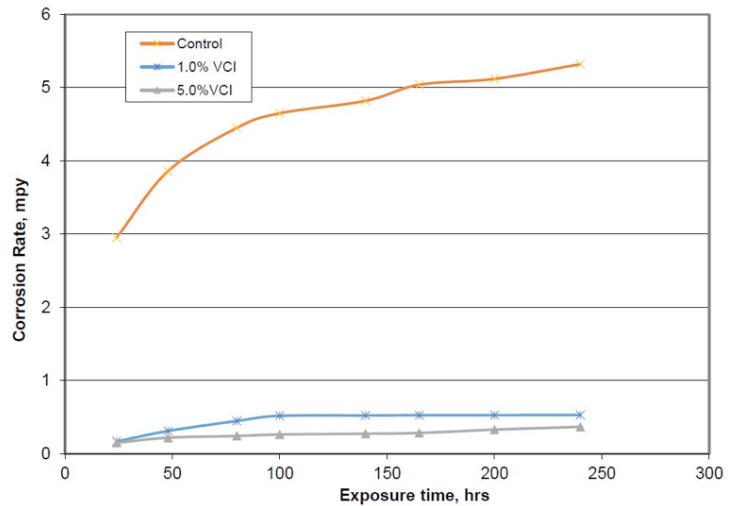


Unprotected pipe, after 240 hours of testing in high temperature conditions with regular chloride injection.



Pipe protected by VpCI®-619 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% VpCI®-619 (blue) and 5% VpCI®-619 (gray).

Test results can be found in "Protection Effectiveness of Vapor Corrosion Inhibitor VpCI®-619 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>

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