

Editorial Contact:
Cortec® Advertising Agency:

Shannon Garrow
(651) 429-1100 Ext. 1128

sgarrow@cortecvci.com

Company Contact:
Cortec® Corporation

Jay Zhang
(651) 429-1100 Ext. 1150

jzhang@cortecvci.com

Technical Contact:
Cortec® Corporation

Ming Shen
(651) 429-1100 Ext. 1166

mshen@cortecvci.com



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PRESS RELEASE



Vapor-Phase Protection against AST Soil-Side Corrosion—Now Faster Than Ever with CorroLogic® Nano VpCI® Powder!

Protecting Aboveground Storage Tanks (ASTs) from soil-side corrosion is an ongoing and critical concern for ensuring tank bottom integrity. Moisture trapped in the unseen void spaces between tank bottoms and tank pads can encourage corrosion to fester inside, ultimately leading to tank leakage and failure if left unaddressed. Tanks in harsh environments are especially at risk for soil-side corrosion on tank bottoms. This risk is intensified by extremely harsh elements such as those in the MENA (Middle East North Africa) region, where high humidity, airborne chlorides, and corrosive elements in the soil can seep into the hidden spaces below ASTs and initiate corrosion. Protecting against soil-side corrosion is therefore crucial in terms of both asset preservation and human and environmental safety.





CorroLogic® Nano VpCI® Powder is a Vapor phase Corrosion Inhibitor powder of superfine particles, a few microns in size, designed particularly for soil-side corrosion protection of ASTs. When applied in enclosed void spaces, such as those below ASTs, CorroLogic® Nano VpCI® Powder diffuses, sublimates, and forms a self-healing protective film on the metal surfaces. Due to its superfine particle size, CorroLogic® Nano VpCI®

Powder works faster, travels farther, and has better coverage than standard VpCI®. In addition to protecting against soil-side corrosion in ASTs, it is also effective for applications in other hard-to-reach recessed areas, interior cavities, and voids. The many potential uses for CorroLogic® Nano VpCI® Powder include the following:

- Soil-side protection of Aboveground Storage Tanks (ASTs)
- Protection of tubular structures, pipes, vessels with complex geometry, and hard-to-reach areas
- Equipment protection after hydrostatic testing
- Protection of parts, components, and completed assemblies during shipping and storage



Superfine particles like those in CorroLogic® Nano VpCI® Powder have many unique properties. They disperse faster because diffusion coefficient is inversely proportional to particle size (Stokes Einstein Equation). They travel longer distances due to greater buoyancy and smaller gravity. Laser Doppler Anemometry (LDA) showed that in turbulent flow, particle velocity of CorroLogic® Nano VpCI® Powder was twice that of regular sized VpCI®.



CorroLogic® Nano VpCI® Powder also has much larger specific surface area compared to larger particles of the same mass, enabling greater coverage as well as faster sublimation (transition from powder to vapor). These special physicochemical features give CorroLogic® Nano VpCI® Powder faster protection kinetics and enable a much faster buildup of a protective VpCI® environment in hard-to-reach recessed voids.

CorroLogic® Nano VpCI® Powder can be applied by fogging, dusting, or sprinkling the product into the space needing protection, with little or no surface preparation required. Other benefits of CorroLogic® Nano VpCI® Powder include:

- Very low toxicity
- No bioaccumulation potential
- Biodegradable
- No silicates, phosphates, nitrites, or heavy metals

CorroLogic® Nano VpCI® Powder meets the testing requirements of NACE TM0208-2013 and MIL-1-22110C. It is compatible with carbon steel, stainless steel, and aluminum.

To find out more about Cortec's CorroLogic® Nano VpCI® Powder, please visit:

https://www.cortecvci.com/Publications/PDS/Corrologic_Nano_VpCI_Powder.pdf

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