

## CORROSION INHIBITING VpCI® POWDERS

# VpCI®-309 / VpCI®-309 SF Corrosion Inhibiting VpCI® Powder for Ferrous Metals



- Provides protection of aluminum, carbon steel, and steel alloys
- Commercial equivalent to MIL I-22110C
- LD50 ORAL: 2100mg/kg of body weight

## APPLICATIONS

- Tubular structures, pipes, vessels, and turbines
- Internal surfaces of compressors, turbines, engines, tanks, boilers, and heat exchangers
- Dry lay-up of closed circuit cooling systems
- Equipment protection after hydrostatic testing
- Parts, components, and completed assemblies during shipping and storage
- Segmental concrete bridge tendons/cables

## METHOD OF APPLICATION

Apply powder by dusting, fogging, or sprinkling. After application simply cover, close, or seal the interior cavity or void.

Fogging is easily achieved with a low pressure air hose and sandblast cup or by inverting a wet/dry vacuum. Large conventional sandblasting systems can also be used.

Please contact Cortec® Technical Service for specific dosing, equipment recommendations, and for application guidance.

## DOSAGE

0.3-0.5 oz/ft<sup>3</sup> (300-500 g/m<sup>3</sup>)

## METHOD OF REMOVAL

When required, VpCI®-309/309 SF in powder form can be removed by using a low pressure air gun or by a water rinse. Typically, if applied in aqueous form the product does not require removal.

## PRODUCT DESCRIPTION

VpCI®-309 is a Vapor phase Corrosion Inhibitor powder for corrosion protection of ferrous metals in recessed areas, interior cavities, and voids.

VpCI®-309 provides an extremely efficient dry method to protect metals within an enclosed space. The VpCI® vaporizes and adsorbs on all metal surfaces reaching all exposed areas including recessed sections and interior cavities.

VpCI®-309 SF, a silica-free version, is available upon request.

## FEATURES

- Does not contain silicates, phosphates, nitrites, or heavy metals
- Provides up to 24 months of continuous protection
- Provides monomolecular inhibiting layer
- Vapor phase inhibiting action protects inaccessible and recessed surfaces
- Protected products can be shipped to customers without removing powder
- If the VpCI® layer is disturbed by moisture or opening the enclosed space, the layer is replenished by continuous vapor redeposition
- Little or no surface preparation is required
- Prevents further corrosion of pre-coated and painted surfaces
- Easy to apply
- When required powder can be removed by air gun or water rinse

## PACKAGING AND STORAGE

VpCI®-309 is available in 5 pound (2.3 kg), 50 pound (23 kg), and 100 pound (45 kg) lined drums. Store in a sealed container in a dry warehouse avoiding direct exposure to sunlight, with temperature not exceeding 150°F (65°C). Shelf life is up to 24 months.

## METALS PROTECTED

- Carbon steel
- Stainless steel
- Aluminum

## TYPICAL PROPERTIES

### VpCI®-309

Appearance	White to off-white powder
pH	6.5-8 (1% aqueous)
Density	38-39 lb/ft <sup>3</sup> (0.61-0.63 kg/L)

### VpCI®-309 SF

Appearance	White to off-white powder
pH	6.5-8.0 (1% aqueous)

## PRECAUTIONS

- Caking of powder may occur when it is exposed to moisture and then dried. The likelihood of this is increased when powder is exposed to high heat and multiple wet/dry cycles. When powder gets caked, baked, and hardened it requires removal by mechanical means or by aggressive acid clean. To avoid caking of powder do not over apply or unevenly disperse the dry powder.
- Powder is not soluble in hydrocarbon fluids. Rinse powder from vessels before adding hydrocarbon fluids.
- Powder should be removed from area; each side of weld, before welding, or other high temperature processing.
- VpCI®-309 contains silica. It is not recommended for steam application such as boilers, turbines, steam piping, etc. Please use VpCI®-309 SF in these and other silica sensitive applications.

**FOR INDUSTRIAL USE ONLY**  
**KEEP OUT OF REACH OF CHILDREN**  
**KEEP CONTAINER TIGHTLY CLOSED**  
**NOT FOR INTERNAL CONSUMPTION**  
**CONSULT SAFETY DATA SHEET FOR**  
**MORE INFORMATION**

### LIMITED WARRANTY

All statements, technical information and recommendations contained herein are based on tests Cortec® Corporation believes to be reliable, but the accuracy or completeness thereof is not guaranteed.

Cortec® Corporation warrants Cortec® products will be free from defects when shipped to customer. Cortec® Corporation's obligation under this warranty shall be limited to replacement of product that proves to be defective. To obtain replacement product under this warranty, the customer must notify Cortec® Corporation of the claimed defect within six months after shipment of product to customer. All freight charges for replacement products shall be paid by customer.

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4119 White Bear Parkway, St. Paul, MN 55110 USA  
Phone (651) 429-1100, Fax (651) 429-1122  
Toll Free (800) 4-CORTEC, E-mail [info@cortecvci.com](mailto:info@cortecvci.com)  
[www.cortecvci.com](http://www.cortecvci.com)

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**Valdamark Ltd**  
Unit 13,  
30 The Downs,  
Altrincham, Cheshire, WA14 2PX,  
United Kingdom.  
[info@valdamarkdirect.com](mailto:info@valdamarkdirect.com)  
Tel: +44 (0) 161 706 0388