



CORROSION INHIBITING VpCI™ POWDERS

VpCI™-609/609S Biodegradable Powders

Corrosion Inhibiting Powders for Ferrous Metals



PRODUCT DESCRIPTION

VpCI™-609 is a water-soluble Vapor phase Corrosion Inhibiting (VpCI™) powder for wet or dry corrosion protection of ferrous metals and aluminum. VpCI™-609 is available as VpCI™-609S (with silica).

FEATURES

- Conforms to MIL-I-22110C
- Provides liquid, vapor-phase and interface protection (above the liquid level)
- Creates a monomolecular inhibiting layer on metal surface
- Provides up to 24 months of continuous protection
- Does not contain nitrites, phosphates, or heavy metals

ADVANTAGES

- 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 the opening of an enclosed space, the layer is replenished by continuous vapor redeposition
- Little or no surface preparation is required
- Prevents future corrosion of precoated and painted surfaces
- VpCI™ layer typically does not need to be removed prior to processing or use

- If required, powder is easily removed by air gun or water flush
- Does not increase alkalinity
- Provides economical protection for very large applications

TOXICOLOGICAL TESTING RESULTS (Performed by Nortech A.S. (Norway))*

- Biodegradability: 100% biodegradable in marine environment, -rapidly degradable substance (OECD** 306, BOD 28 Marine test)
- Toxicity: Very low (LD-50 = 5,000 mg oral-rat)
- Bioaccumulation potential: none (OECD Guideline 117)

*Testing performed in accordance with Oslo-Paris commission protocol

**Organization for Economic Co-Operation and Development

TYPICAL USES

- Tubular structures, pipes and vessels
- Internal surfaces of compressors, turbines, engines, tanks, boilers, heat exchangers
- Steam condensate lines, closed circuit heating and cooling systems
- Equipment during and after hydrostatic testing
- Parts, components and completed assemblies during shipping and storage
- Additive to shot-blasting media, wet blasting
- Additive to standing water
- Voids, cavities and tanks

TYPICAL PROPERTIES

Appearance	White crystalline powder
pH	6-7 (1% aqueous solution)
Solubility in water	15%



METALS PROTECTED

- Carbon steel
- Mild steel
- Stainless steel
- Other ferrous metals
- Aluminum

METHOD OF APPLICATION

Apply VpCI™-609 in dry form by dusting, fogging or sprinkling. Apply VpCI™-609 in aqueous form by spray, brush, flush or immersion. After application, simply cover and close or seal the interior cavity or void. Fogging is easily achieved by using a low pressure air hose and sandblast cup. Large, conventional sandblasting systems can also be used.

Note: A specially designed fogging unit is available for rent/purchase from Cortec.

DOSAGE

For powder application with average environmental conditions, use 0.3-0.5 ounce (8.5-14 grams) of VpCI™-609 per 1 cubic foot (28 liters) of enclosed space (300-500 g/m³). The dosage can be increased for more severe conditions. For aqueous applications with average environmental conditions, use 0.25% VpCI™-609 by weight of water. The dosage can be increased for more severe conditions. To improve the wetting of metal surfaces, Cortec® S-5 Wetting Agent can be used at the rate of 0.5% by weight of VpCI™-609 powder.

METHOD OF REMOVAL

When required, VpCI™-609/609S in powder form can be easily 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. If necessary, a simple water rinse or flush will suffice.

PACKAGING AND STORAGE

VpCI™-609/609S powders are available in 5 pound (2.3 kg), 50 pound (23 kg) and 100 pound (45 kg) moisture barrier bags packed in fiber-lined drums. Store in a sealed container in a dry warehouse, and avoid direct exposure to sunlight with temperatures not exceeding 150°F (65°C). Under these conditions, shelf life is up to 24 months.

LIMITATIONS

Do not use on copper, copper-based alloys, and other soft yellow metals.

Note: Regular VpCI™-609 has tendency to clump. For dry fogging application use **VpCI™-609S** (with silica) where acceptable.

FOR INDUSTRIAL USE ONLY

KEEP OUT OF REACH OF CHILDREN

KEEP CONTAINER TIGHTLY CLOSED

NOT FOR INTERNAL CONSUMPTION

CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

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