

Steel Beams—refurbish and protect

Salt Away—Cortec VpCI® CorrVerter Primer—Cortec VpCI®-396 Topcoat



Prior to any metal surface preparation work, use of Salt Away to remove existing salt (sodium chlorides) is highly recommended. Sodium chlorides that remain on metal surfaces can be driven into substrate of metal. Coating over salt/chlorides will result in bubbling of finish coating as salt/chlorides has a strong affinity for water. Water moisture in our humid tropics where nightly condensation appears on many surfaces is one of the cause of bubbling of standard coating finishes. Why? Stagnant moisture film either becomes alkaline from reaction with metal surfaces or picks up carbon dioxide and becomes aggressive as a dilute acid. Cortec VpCI (Vapor Phase Corrosion Inhibitors) protect both anodic and cathodic corrosion cells.

At the start of repairs, spray diluted Salt Away on metal surface and let product run/drip to remove chlorides. Blow dry surfaces with compressed air that has an oil/water inline separator. When returning to work from a long break or lunch, repeat the application of Salt Away and drying procedure. Use of Salt Away mixing unit (SAM) will mix the concentrated Salt Away solution with fresh potable water.

REQUIRED SURFACE PREPARATION

Previous coatings should be removed, as VpCI CorrVerter® is designed to penetrate corrosion, but not other coatings. If VpCI CorrVerter® is being applied over an existing coating, the previous coating should be tested for adhesion and all loose sections should be removed. For best results loose sections of scale and corrosion should be wire brushed or washed with high-pressure water with SALT AWAY to remove excess salt contamination. Remaining scale can be removed with needle gun, wire brush or sanding. Prior to application, use a clean rag with isopropyl alcohol to insure debris/oils are removed from surfaces.

continued page 2

Steel Beams—refurbish and protect—continued page 2

APPLICATION CONDITIONS

- A. Dew Point: Make sure dew point is more than 5°F (2°C) less than air temperature for application.
- B. Application Temperature: The temperature should be above 55°F (12.8°C) and below 100°F (38°C) when applying the coating. Note: The temperature range is for the liquid coating. If the air temperature is greater than 100°F (38°C), or lower than 55°F (12.8°C), measures should be taken to ensure that the temperature of VpCI CorrVerter® and VpCI 396 is within this range. The metal that is being coated needs to maintain a minimum temperature of 55°F (12.8°C), and a maximum temperature of 150°F (66°C).
- C. Mixing: Power agitate to a uniform consistency using a “squirrel cage” type mixer, hand-held drill mixer, or other equivalent method.
- D. VpCI CorrVerter® and VpCI 396 can be applied by roll, brush, spray or dip. Spray is not recommended for the VpCI™ CorrVerter® as it does not allow the to penetrate the corrosion.

SPRAY EQUIPMENT for VpCI-396:

The following Airless Spray Equipment is suggested for application to achieve quality results:

<u>Manufacturer</u>	<u>Gun Model</u>	<u>Tip/Aircap Combination</u>
Graco	205-591	Bulldog
Binks	500	Mercury 5C
DeVibiss	JGN-501	QFA-519

Fluid hose should be 3/8” (0.95 cm) I.D. minimum, but a 1/4” (0.6 cm) I.D. whip end section may be used for ease of application. A maximum length of 100 feet (30.5 m) is suggested. Best results will be obtained using a 0.013”- 0.017” (0.03 cm - 0.04 cm) tip at 1200-1700 psi (83-117 bar). **NOTE:** Nylon or Teflon type packings are available from pump manufacturer and are highly recommended. **NOTE:** Similar equipment may be suitable.

PHYSICAL CHARACTERISTICS

A. Wet and Dry Film Thickness

VpCI CorrVerter®

A wet film thickness of 3.0 to 5.0 mils (75-125 microns) is suggested to achieve a proper dry film thickness and to convert all the corrosion present on the surface. It is recommended that film thickness is monitored in critical areas to make certain a minimum of 2 mils dry film thickness is obtained.

The best way to achieve this is using a wet film gauge to make sure that a wet film thickness of 3.0-5.0 mils (which will yield 2 mils DFT).

For badly corroded surfaces a second coat may be necessary to ensure all corrosion is converted and the surface is properly coated. We recommend a minimum of 3 coats, but not more than 5 coats.

Our experience with CorrVerter in Hawaii shows best success at 4-5 coats. CorrVerter can be diluted 10% with water, but dilution will require an extra coat to be applied. Gauging is not required with extra coatings as the result will exceed manufacture specification but not cause any limitation in coatings performance.

continued page 3

Steel Beams—refurbish and protect—continued page 3

VpCI –396

A wet film thickness (WFT) of 3-4 mils (75-100 microns) is suggested to achieve a proper dry film thickness of 2-3 mils (50-75 microns). It is recommended that film thickness is monitored in critical areas to make certain a minimum of 2-mils and maximum of 3-mils dry film thickness is obtained. The best way to achieve this is using a dry film gauge (either magnetic or electronic). It may also be acceptable to use a wet film gauge to make sure that a wet film thickness of 3-4 mils (75-100 microns) will yield 2-3 mils (50-75 microns) dry film thickness. As with CorrVerter and use in Hawaii we recommend a 4-5 coat minimum for best protection and performance. VpCI 396 will yellow in direct sunlight exposure. The yellowing has no effect on protection or performance. If you desire a topcoat, insure that topcoat is applied within a 2 week period as adhesion can become a problem as the coating ages.

B. Dry Time

At 70°F (21°C) and 50% relative humidity VpCI™ CorrVerter® will become dry to the touch in 45-60 minutes. Allow the VpCI CorrVerter® to dry for 24 hours before top-coating with the VpCI-396.

The relative humidity for the VpCI-396 needs to be between 20-80%.

The VpCI-396 will dry to the touch in 60 minutes.

Notes for Spray Applications

1. Make sure minimum surface preparation conditions are met (as stated in section II).
2. Make sure application equipment is clean, and free of solvents, or other contaminants.
3. Properly mix the VpCI CorrVerter® and VpCI 396 as stated in section Application C.
4. Ensure that the application conditions meet the conditions stated under Applications.
5. For vertical surfaces, a wet film thickness of less than 5 mils is recommended to prevent sagging.
6. If a second application of the VpCI CorrVerter® is necessary, wait 20-30 minutes before applying.
7. If a second application of the VpCI –396 is needed then wait 4 hours.
8. Allow the VpCI CorrVerter® to dry for 24 hours at previously mentioned conditions prior to applying the VpCI –396.

Note: If topcoat with corrosion inhibitors are wanted, we recommend using Cortec VpCI-387.

Cortec VpCI-387 Clear is available only in 5 gallon pails. Cortec VpCI-387 can be tinted with water based tints available at local paint stores.

PRODUCT DESCRIPTION

VpCI CorrVerter® is a water-based rust converter and primer recommended for application to rusty or poorly prepared steel surfaces where further corrosion protection is required and good surface preparation is difficult to achieve. VpCI™ CorrVerter® is formulated to penetrate rust, eliminate further rust, penetrate to the bare metal, and stop further rusting.

VpCI –396 is a high solids, aromatic moisture cure urethane for use on marginally prepared structural steel. VpCI –396 is a direct to metal primer for multimetal protection. For indoor or sheltered outdoor applications. For outdoor application with high UV exposure, VpCI –396 should be top coated with VpCI -387 for best results. VpCI –396 forms a very hard, but flexible coating that cures in the presence of moisture in the air.

Note:

Go to Products Link on our site for details on Cortec Corrverter; VpCI-396, VpCI-387 and Salt Away
Go to Contact Link on our site for industrial sales and further questions.

Solutions for Rust and Corrosion

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