

# **CORTEC RUST REMOVERS**

## **CORTEC VCI-420 & 421 GEL**

VCI-420 and VCI-421 are similar to other rust removers on the market. They are based on phosphoric acid and water. The phosphoric acid reacts with rust (iron oxide), changing to iron phosphate. VCI-420/421 may be more effective than other products because of specific wetting agents and other additives.

Phosphoric acid removes rust fairly rapidly, leaving a black phosphate surface which is a good base for paint adhesion, but has little corrosion resistance. Left unprotected, the area may develop more corrosion after a period of time. It should be further protected. Painting is the normal post treatment.

VCI-420 can be put into a tank and the rusty part immersed. The length of time required for rust removal is dependent on the amount of rust, the type and temperature of the part and material. A higher temperature speeds up the process.

VCI-421 is a gelled version of VCI-420, specially formulated for use on vertical surfaces. More remains on the surface, making it more effective. The gel also keeps the surface wet longer if a longer time of application is needed because the rust film is very heavy.

Concentrated VCI-420/421 may irritate the skin, so gloves and goggles should be worn. As the product is used up, it becomes less irritating.

Life of VCI-420 is directly related to the quantity of rust removed. The spent liquid and sludge is mostly water and iron phosphate, which are not very dangerous. Disposal should be in accordance with local, state and federal regulations.

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## CORTEC VCI-422/423

VCI-422 will remove rust without attacking the base metal. It will leave an almost "white" metal surface even with heavy rust. Light rust stains can often be removed in a few minutes. Medium rust may require a 24 hour treatment, while heavy rust somewhat longer.

VCI-422 has been used to remove corrosion products from stainless steel prior to the application of VCI-386 Clear for protection against atmospheric pollution such as chlorides and sulfates, which can attack stainless steel.

VCI-423 is a gelled version of VCI-422. It is used on vertical surfaces to keep the surface wet longer. It will also keep the surface wet longer on horizontal surfaces for more effective removal of heavy rust.

These products can be put into a tank if you wish to immerse the part. For removal of heavy rust, this may be the best method. Heat will accelerate the rust removal as will mechanical scrubbing.

VCI-422/423 are very safe products, and will not normally cause any problems. However, some people may be unusually sensitive and should use gloves. Goggles should also be worn to keep the product out of the eyes.

After treatment, the surface should be rinsed with clean, drinking quality water. VCI-422/423 does provide flash corrosion protection, however, it does not provide corrosion protection once it is washed off. Therefore, further treatment may be necessary after removal rather quickly. Possibilities for such treatment include: wrapping in a VCI film or bag, oiling or painting of the area.

Life of the solution is dependent on the amount of rust. It can be extended by filtering the solution and adding more concentrate or Cortec S-42. Disposal of the spent solution should be in accordance with local, state and federal regulations. The primary chemical residue is iron.