



## Zerust® VCI Envelopes Provide Dramatically Better Corrosion Protection for Music Strings

Music strings are shipped all around the world and are subjected to humidity, temperature changes and long storage times which can cause corrosion. Strings are made of sensitive steel, phosphorus bronze, brass and copper metals with proprietary coatings and require packaging that integrates corrosion protection. A leading music string manufacturer was using a competitor corrosion inhibitor with reoccurring corrosion issues. When they experienced the loss of an entire shipping container of strings to corrosion they called the Zerust technical services team for help.

Zerust technical services collected samples of the strings and the competitor packaging. Phosphorus bronze and steel strings were placed into a chamber for cyclical humidity testing (IEC 60068-2-30) for 14 days. The results showed Zerust VCI (Volatile Corrosion Inhibitor) paper provided superior protection to the existing packaging. The current envelope failed to protect the strings from blackening and stains and they were brittle and easily broke when handled. The strings protected by Zerust VCI envelopes were in factory new condition and ready for retail. The music string manufacturer converted to using Zerust VCI envelopes and have experienced 100% corrosion-free shipments since implementing them.

## Lab Report Photos



14 days in humidity chamber side by side test results. On left, existing VCI supplier, on right, Zerust VCI Envelope.

## Application Focus

### Who

Leading music string maker

### What

Corrosion protection for music strings in shipping

### Why

Previous corrosion protection was ineffective leading to ruined strings and unhappy customers

### How

Switched to envelope packaging with Zerust VCI protection, eliminating corrosion issues



Zerust VCI Envelopes

## Testimonial

Zerust VCI Envelopes saved us from lost inventory due to corrosion, improved our customer satisfaction and reduced logistics headaches.

- Operations Manager at Leading String Manufacturer



# Zerust®/Excor® Corrosion Solutions

## VCI Kraft Packaging Papers ICT®400 Series

Acid-free, pH neutral, smooth and non-flaking corrosion inhibiting paper and poly paper offer short-term corrosion protection for metal parts. Most paper products are recyclable.\*



## VCI Packaging Films ICT500 Series

Our most widely used series of products. A variety of films offer short or long-term corrosion protection for parts and equipment during storage or shipment. Most film products are recyclable.\*



## Rust Removers and Cleaners ICT600 Series

Highly effective rust removers for light to severe rust removal. ICT600 series rust removers and cleaners offer a range of easy-to-use solutions.

## Liquid Additives and Coatings ICT700 Series

Temporary corrosion protection for parts in-between production processes, during storage, or for added protection to the ICT 500 series products during ocean shipments.

## VCI Vapor Diffusers ICT800 Series

Self-contained, portable capsules and products that diffuse Zerust ICT chemicals to protect metals within enclosures, such as tool boxes, and electrical boxes, etc.

\*Consult your Zerust representative and federal, state and local regulations.

For more information  
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