

## ICT<sup>®</sup>450 VCI Corrugate

### Technical Data Sheet

ZERUST<sup>®</sup>/EXCOR<sup>®</sup> ICT<sup>®</sup>450 Corrugate offers an all-in-one corrosion protection solution for metal parts, combining the mechanical strength of corrugated packaging with the advanced technology of ZERUST<sup>®</sup> Vapor Corrosion Inhibitors (VCI) and contact inhibitors. These invisible, odorless, and non-toxic VCI molecules diffuse from the cardboard and settle onto exposed metal surfaces inside the packaging or enclosure, protecting for up to 6 months<sup>±</sup>. Upon removal from the packaging, the VCI will dissipate from the metal surface, allowing immediate painting, welding, or further processing.

Use ZERUST<sup>®</sup> ICT<sup>®</sup>450 VCI Corrugate on your next packaging project and get corrosion protection and corrugate packaging all in one product. For additional protection in challenging environments, ZERUST<sup>®</sup> VCI Corrugate may be used with ZERUST<sup>®</sup> VCI packaging, rust inhibitors, preventatives, coatings, or VCI diffuser products. Engineered for a broad range of applications, ICT<sup>®</sup>450 VCI Corrugate is available in a multimetal protection formulation and custom sizes, ensuring an ideal packaging solution. Whether in storage or transit, ZERUST<sup>®</sup> ICT<sup>®</sup>450 VCI Corrugate delivers unparalleled performance.

For over 50 years, ZERUST<sup>®</sup> VCI technology has proven its performance and safety with thousands of customers worldwide. It is used to protect valuable metal items for manufacturers in industries such as automotive, agricultural, aerospace, and mining. ZERUST<sup>®</sup>/EXCOR<sup>®</sup> offers on-site support and service in more than 70 countries via a network of 21 joint venture partnerships. Check with your ZERUST<sup>®</sup>/EXCOR<sup>®</sup> representative for a comprehensive corrosion management solution that is most effective for your metal assets.

### Typical Properties

Appearance Natural brown with printing. Custom printing is available upon request. Subject to minimum order quantities.  
Substrates Multimetal protection formulation. Test before use on copper and brass.

***This data sheet provides general guidelines for operation, application, and removal. Please contact your ZERUST<sup>®</sup>/EXCOR<sup>®</sup> account representative for more specific recommendations on your particular operation and conditions.***

### Operating Summary

- Only remove the needed quantity of corrugate from its original packaging when needed. Reseal the other excess corrugate in its original packaging or cover it with a plastic shroud to maintain ZERUST<sup>®</sup> ICT<sup>®</sup>450 Vapor Corrosion Inhibitors (VCI).
- Make sure that the corrugate is clean and free of dirt.
- Fold the corrugate into the box along the pre-scored lines. Make sure NOT to tear or puncture corrugate. Use folded corrugate as soon as possible.
- Tape the corrugated box with packaging tape (waterproof tape recommended).
- Place and secure clean metal parts inside the corrugate. Do not add or use other packaging material (such as plastic bags or kraft paper) to secure the parts unless they are ZERUST<sup>®</sup> products. The use of non-ZERUST<sup>®</sup> products inside the ICT<sup>®</sup>450 Corrugate may negate the effect of the corrosion inhibitors.
  - Always wear clean and dry gloves when handling the metal parts to protect them from corrosion-causing fingerprints.
  - When packing, the temperature of the metal parts should be about the same as the room temperature to avoid condensed moisture.
- Check that parts are secured to avoid damage to the corrugate when shipping.
- Tape shut the corrugated box. (It's recommended that all gaps be sealed with tape to ensure optimum corrosion protection performance).
- If the corrugate box is opened for inspection of parts, reseal immediately after inspection.
- Avoid placing metal surfaces in direct contact with wood or non-VCI cardboard (sources of moisture and acid).

Scan QR for more



product information  
and photos

## Availability

ZERUST®/EXCOR® ICT®450 VCI Corrugate is a made-to-order product available upon request in custom sizes, subject to minimum order quantities. Contact your ZERUST®/EXCOR® representative for ordering information.

## Protection Info‡

Indoor‡ Protects clean metals for up to 6 months‡ when used correctly.  
Outdoor‡ Not recommended

## Storage

- Store in a cool, dry place and away from sunlight in the original packaging for up to 6 months from the date of shipment.

## Disposal

- Check on options for recycling and incineration.
- Dispose of in accordance with local, national, and international regulations.

## Precautions

- Do not use for outdoor protection.
- Safe for people. This product does not pose a health hazard to users due to its classification as an article according to EU REACH, UN GHS, US OSHA HazCom, and CA WHMIS regulations.
- Refer to the Safety Data Sheet (SDS) for more safety information.

### ‡ DECLARATION

Corrosion protection claims are based on Northern Technologies International Corporation (NTIC) internal laboratory testing performed under controlled parameters on contaminate-free substrates. Real-world application corrosion protection duration on different substrates will vary and depends on factors such as, but not limited to, the application or use, environmental / storage conditions, surface cleanliness, type of substrates, and coating thickness (where applicable). The use of the term "Up to" in reference to time is defined as any time duration from zero up to a specified time frame, but in no event beyond the specified time frame. The use of the term "for years" is based on NTIC's experience with its products but is in no way guaranteed. The use of the term "Up to" in reference to volume is defined as any volume from zero up to a specified volume but in no event beyond the specified volume of protection. It is the customer's / user's obligation to evaluate product performance, corrosion protection duration, safety, and suitability for intended use within the scope advised in the data sheet and to comply with all applicable laws and regulations. **LIMITED WARRANTY/DISCLAIMER** Warranty is limited to the replacement of a product that fails to meet specifications. For full warranty and disclaimer information, visit [www.zerust.com/warranty](http://www.zerust.com/warranty).

©2013-2024 Northern Technologies International Corporation (NTIC). All Rights Reserved. NTIC is the owner of the following trademarks: ActivPak®, Cor Tab®, EXCOR®, Flange Saver®, ICT®, Natur-VCI®, NTI®, Plastabs®, Z-CIS®, Zerion®, ZERUST®, 洁乐特®, Z-PAK® and the Color "Yellow". ABRIGO®, UNICO®, and VALENO® are registered trademarks of EXCOR GmbH, a Joint Venture Partner of NTIC.

A product of:  
Northern Technologies  
International Corp  
4201 Woodland Road  
Circle Pines, MN 55014  
USA

Phone. +1 763.225.6600  
Fax. +1 763.225.6645  
sales@zerust.com  
www.zerust.com

Rev A

