

ICT®420-170 VCI Chips

Technical Data Sheet

ZERUST®/EXCOR® ICT®420-170 are acid-free, pH-neutral, and non-abrasive 170# VCI kraft paper sheets cut into 1" x 1" or 2" x 2" VCI chips. Their small, thin shape makes them perfect for protecting critical surfaces within narrow or hard-to-reach areas of parts or equipment, or as a supplement to other ZERUST® VCI packaging products for added protection. ICT®420-170 VCI Chips are easy to use, as they can be dispersed throughout bulk packages of metal parts while tightly sealing the packaging or enclosure to trap the protective vapors inside, providing cost-effective corrosion protection during work-in-progress, shipping, and storage.

The bio-based paper is sourced from responsibly managed forestry product suppliers and is fully recyclable, biodegradable, repulpable, and saturated on both sides with invisible, odorless, and non-toxic ZERUST® Vapor Corrosion Inhibitors (VCI). These VCI molecules diffuse from the chips and settle onto exposed metal surfaces inside the packaging or enclosure. Upon removal from the packaging, the VCI will dissipate from the metal surface, allowing immediate painting, welding, or further processing. For additional protection in challenging environments, ICT®420-170 VCI Chips may be used with ZERUST® VCI poly packaging or rust inhibitors, preventatives, and coating products. Whether in storage or transit, ZERUST®/EXCOR® ICT®420-170 VCI Chips deliver unparalleled performance. ICT®420-170 VCI Chips comply with Global Automotive Declarable Substance, TSCA, REACH, RoHS, and TRGS615 requirements.

For over 50 years, ZERUST® 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®/EXCOR® offers on-site support and service in more than 70 countries via a network of 21 joint venture partnerships. Check with your ZERUST®/EXCOR® representative for a comprehensive corrosion management solution that is most effective for your metal assets.

Typical Properties*

Appearance	1" x 1" or 2" x 2" natural kraft brown VCI kraft paper.
Substrates	Multimetal protection formulation (ferrous, aluminum, brass, copper, and zinc).
Paper weights	170# (276 g/m ²)
Vapor Inhibiting Ability (VIA)	Pass (NACE TM0208)

* NTIC obtains its paper from U.S.-based suppliers and mills certified by the Forest Stewardship Council (FSC). Due to natural variations, the tree fibers and pulps supplied by these mills can differ based on the season and their geographical origins. While we strive to maintain a consistent quality and 'feel' in our VCI paper, the inherent diversity in nature means that the tree fibers may vary, leading to potential variations in the paper from one batch to another. However, we ensure the consistency of two key aspects: the corrosion protection performance and the weight of our paper products.

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

Operating Summary

- Remove the product from the packaging.
- Reseal packaging after use. Products exposed to the environment over prolonged periods of time may become less effective.
- Evenly distribute VCI chips throughout the enclosure to ensure effective corrosion protection. (See **Protection Info** on page 2 for specific protection capabilities.)
- Ensure that the airflow to the enclosure is restricted. It is essential to restrict airflow to the container, as airflow removes the protective vapor barrier from the space faster than it can be released from the VCI Chips.
- When applying VCI Chips within enclosures where the air is replaced regularly, it is recommended to place the VCI Chips close to the source of airflow. For added corrosion protection, consider placing additional VCI Chips near the sensitive metal surface to be protected.
- Upon removal of the VCI Chips or opening of the enclosure, the ZERUST® protective molecules will dissipate from the metal surface in a few hours. Corrosion protection of the metal surface will also cease by this time.
- Avoid placing metal surfaces in direct contact with wood or cardboard (sources of moisture and acid).
- Pack only clean and dry parts. Parts coated with additional oil-based rust preventatives are acceptable.
- 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.

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product information
and photos

Availability

ZERUST®/EXCOR® ICT®420-170 is stocked in 170# 1" x 1" and 2" x 2" VCI Chips. Contact your ZERUST®/EXCOR® representative for ordering information.

Part Number	Size	Paper Weight	Metal Type	Quantity
320-M-00004	1" x 1"	170#	Multimetal	2,500/Bag
320-M-00005	1" x 1"	170#	Multimetal	25,000/Bag
320-M-00007	2" x 2"	170#	Multimetal	10,000/Bag

Protection Info†

Size*	Protection Volume (Up to)†
1" x 1"	0.02648 ft³ (0.00075 m³)† 3/4 Liter†
2" x 2"	0.10594 ft³ (0.003 m³)† 3 Liters†

Storage

- Store in a cool, dry place and away from sunlight in the original packaging.
- Optimal storage temperature is < 85°F (29°C) and 50% RH for up to 1 year from the date of shipment.
- Reseal packaging after use. Products exposed to the environment over prolonged periods of time may become less effective.

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.
- Do not install the VCI Chips where they will be submerged in water.
- Keep away from children. 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.

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