

Z-PAK® VCI Packets Technical Data Sheet

ZERUST®/EXCOR® Z-PAK® is an economical and effective Vapor Corrosion Inhibitor (VCI) diffuser packet that can be used alone or, more typically, with other ZERUST® VCI packaging products to provide robust temporary corrosion protection for ferrous metals during shipment, storage, or work-in-progress. Z-PAK® VCI Packets are easy to use. Simply place it in the desired location and tightly seal the enclosure or packaging to trap the vapors inside.

Z-PAK® Packets diffuse a specially formulated VCI chemistry that quickly settles onto exposed metal surfaces inside the packaging or enclosure. Upon removal from the packaging or enclosure, the VCI will dissipate from the metal surfaces, allowing immediate painting, welding, or further processing. Z-PAK® VCI Packets work fast to protect ferrous metals for up to 6 months[†] in a sealed enclosure during domestic shipments and/or storage or up to 3 months[†] during overseas shipments. Additionally, in certain situations, Z-PAK® Packets may be used for metal components containing limited yellow metal/parts (aluminum, zinc (galvanized steel), copper, brass, or phosphorus bronze) when used as instructed. Consult with your ZERUST®/EXCOR® representative for more information.

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	White non-woven polypropylene blend sachet.
Substrates	Ferrous protection only. Z-PAK® VCI chemistry is designed to be used for ferrous (Carbon Steel, Silicon Steel, Stainless Steel, Cast Iron) metal surfaces. In certain situations, Z-PAK® may be used for metal components containing limited yellow metal/parts (Aluminum, Zinc (Galvanized Steel), Copper, Brass, Phosphorus Bronze). Consult with your ZERUST®/EXCOR® representative before doing so.
Vapor Inhibiting Ability (VIA)	Pass (NACE TM0208)

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

- Do not open the original packaging or remove the Z-PAK® Packets until you are ready to use the Z-PAK® Packets.
- Only remove the required quantity of Z-PAK® Packets from the original packaging. Close the container with the remaining Z-PAK® Packets immediately and ensure the inner plastic bag is properly sealed for storage.
- Unused and/or exposed Z-PAK® Packets should be utilized or placed back into the original container within 1 hour, and the inner plastic bag should be properly sealed for storage.
- Ensure the ferrous metal components needing corrosion protection are clean and dry.
- Exposed Z-PAK® Packets should be utilized or put back in storage within 1 hour.
- Pack and secure the components in an enclosure (ZERUST® ICT® VCI bags, plastic bags, containers, etc.). In addition, good general handling practices should be adopted – see **How to Use ZERUST® VCI Packaging document**.
- Add the appropriate number of Z-PAK® Packets into the enclosure – dispersing them evenly. Avoid direct contact with metal, if possible. See the Protection Info section on page 2 for usage amount recommendations.
- Avoid leaving Z-PAK® Packets in areas where sharp edges may potentially cut or damage the packet during storage and/or shipment.
- Insert additional ZERUST® VCI materials (ICT®510 VCI Poly or ICT®420 VCI Paper) as interleave for added protection in layered packages. Note that interleaved applications require a Z-PAK® Packet placed within each layer with limited access to provide ample VCI protection.
- Seal or close the enclosure to restrict airflow. Whenever possible, airtight enclosures are preferred.

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product information
and photos

Availability

ZERUST®/EXCOR® Z-PAK® VCI Packets are in stock for immediate delivery and sold in cases. Contact your ZERUST®/EXCOR® representative for ordering information.

Part Number	Model	Quantity
375-F-00100	Z-PAK®-01	1,000/Case

Protection Info[‡]

Model	Product Dimensions* W x H	Protection Volume (Up to) [‡]	Protection Radius (Up to) [‡]	Protection Duration (Up to) [‡]
Z-PAK®-01	2 1/8" x 2"	3.5 ft ³ (0.1 m ³) [‡]	1 ft (30 cm) [‡]	Overseas shipments: 3 months [‡] Domestic shipments and/or storage: 6 months [‡]

* Dimensions are +/- 10%

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 2 years from the date of shipment.
- Unused Z-PAK® packets should be immediately placed back into the original container (inner plastic bag) and sealed for storage. Products exposed to the environment over prolonged periods of time may become less effective.

Disposal

- The contents of Z-PAK® Packets do not meet the criteria for hazardous waste according to 40 CFR 261 (no components listed on F, K, P, or U lists; not ignitable, not corrosive, not reactive, and not toxic).
- Z-PAK® Packets may be disposed of in the general solid waste trash. Since Z-PAK® generates ammonia, it is best practice to notify your solid waste hauler, especially if a large volume of unused Z-PAK® Packets needs to be disposed of.
- Since regulations vary by location, ZERUST® advises our customers to review local regulations to ensure proper disposal.

Precautions

- Do not install the packet where it will be submerged in water.
- Z-PAK® users with higher sensitivity to smell may detect the presence of an ammonia-like odor when opening the original container of Z-PAK® Packets. For such users, it is recommended to open the Z-PAK® container in a well-ventilated room before use.
- Avoid placing metal surfaces in direct contact with wood or cardboard (sources of moisture and acid).
- Do not disassemble. Keep away from children.
- 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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