



# ZERUST® Vapor Capsule ZAK-M22

ZERUST®/EXCOR® Vapor Capsule ZAK-M22 diffusers emit Vapor Corrosion Inhibitors (VCI) that protect against the causes of corrosion. The capsules provide targeted corrosion protection in hard-to-reach spaces and work synergistically with other ZERUST® products. Its VCI chemistry works quickly and is effective at neutralizing contaminants. Use to protect electronics, electrical components, and inside enclosures such as musical instrument cases and gun cases.

Each capsule has a unique serial number and QR code printed on the label. This feature, used along with the ZERUST® ZAP App, allows the user to be notified of the initial installation location and replacement schedule. Visit [www.zerust.com/resources/apps](http://www.zerust.com/resources/apps) for more information or to download the App.



Scan the QR code to view more information about the ZERUST® App.

## Benefits

Fast-acting VCI protection

Unique QR code on every capsule and ZERUST® ZAP App allows user to manage deployed capsules

Multimetal protection that neutralizes contaminants

Does not affect the circuit boards or sensitive components\*

Suitable for new equipment and to protect the reliability of existing equipment

## Application Examples

A Vapor Capsule protects an electronics enclosure from corrosion during operation.



Use the custom ZERUST® App that's designed to notify the user of the initial installation location and replacement schedule.



## Application Types

- Storage
- Shipping
- During Operation
- May be used with ZERUST® Packaging

\* When applied in spaces with a volume of less than 17.5 ft<sup>3</sup> (0.5 m<sup>3</sup>), test before use to ensure compatibility with copper and bronze metals.

## Product Information

**Description** ZERUST®/EXCOR® ZAK-M22 Vapor Capsules are VCI (Vapor Corrosion Inhibitor) diffusers.

**Protected Metal Types** Multimetal protection for steel, iron, zinc, and galvanized steel, copper, brass, bronze, aluminum (and alloys), nickel, tin, silver, and solder. Do not overload the system†

**Passed Corrosion Inhibition Tests** DIN 60060-2-30 (Humidity Chamber)  
NACE TM0208 - Vapor Inhibiting Ability (VIA)  
DIN 50018 (Kesternich chamber SO<sub>2</sub> test)

**Storage** Store in a cool, dry place and away from sunlight for up to 2 years from the date of shipment.

† When applied in spaces with a volume of less than 17.5 ft<sup>3</sup> (0.5 m<sup>3</sup>), test before use to ensure compatibility with copper and bronze metals.

## Protection Capabilities\*

ZERUST® Product Name	Normal Environment** (below 0.2 ppm SO <sub>2</sub> )			Aggressive Environment** (at or above 0.2 ppm SO <sub>2</sub> )		
	Volume of Protection (Up To)	Radius of Protection (Up To)	Duration of Protection (Up To)	Volume of Protection (Up To)	Radius of Protection (Up To)	Duration of Protection (Up To)
ZAK-M22	35 ft <sup>3</sup> (1 m <sup>3</sup> )	2 ft (60 cm)	2 years in tightly sealed enclosure	3.5 ft <sup>3</sup> (.1 m <sup>3</sup> )	.2 ft (6 cm)	1 month in tightly sealed enclosure

Operating temperature: Up to 131°F (55°C)

Operating temp max adhesion of tape is 165°F (73°C)

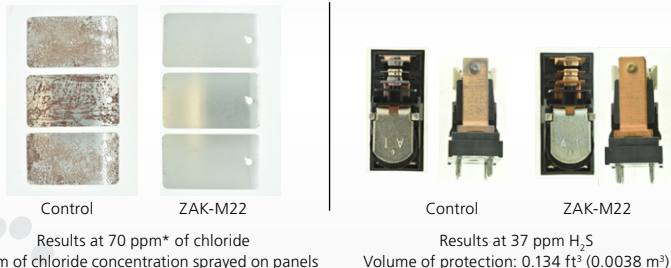
\* Protection ratings are based on the highest average tested protection properties and are not guaranteed. Results may vary according to usage environment and metal surface properties such as contaminants.

\*\*Normal environment (below 0.2 ppm SO<sub>2</sub>) defined as warehouses, light industrial areas, and shipping and storage in sealed packaging or enclosures. An aggressive environment (at or above 0.2 ppm SO<sub>2</sub>) is defined as areas located in the vicinity of salts and acid gases, such as oceans, petrochemical sites, wastewater treatment, and pulp-paper plants or in enclosures that are not well sealed.

Note: For enclosures containing both ferrous (steel, iron, cast) and non-ferrous (aluminum, zinc, copper, brass, etc.) metals, use no more than prescribed. For enclosure containing only ferrous metals, add more capsules for better corrosion protection in aggressive environments.

## Sample of Lab Test Results

ZAK-M22 showed protection against limited HCl, SO<sub>2</sub>, and H<sub>2</sub>S in the environment and chloride contaminants at different levels on the surface of metals. (Test conditions and results available upon request).



### DECLARATION

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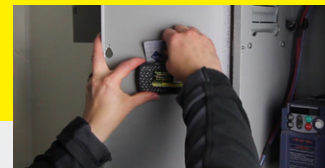
## Availability

ZERUST® ZAK-M22 Vapor Capsules are in stock for immediate delivery. Sold in cases. Made in the USA.

Part Number	Quantity
375-M-00202	10/Case

## Removal

When removing or replacing the capsule, insert a flat scraping object between the tape and surface to cleanly remove.



## Safety

- Do not disassemble. 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 UN GHS, US OSHA HazCom, and CA WHMIS regulations. Check REACH SDS for classification in EU.
- ZERUST® VCI chemistry is safe for sensitive electronics. No galvanic effects, residues, or changes in the properties of metals. The protective molecules dissipate upon opening the enclosure.
- All substances in ZERUST® ZAK-M22 Vapor Capsule are listed by the US Food & Drug Administration (FDA) as Generally Recognized As Safe (GRAS), have an FCN, or are approved as Indirect Food Additives when prescribed conditions are met (21 CFR 172.863, 175.105, 177.1010, 177.1350, 178.2010, 178.3910, 182.3089, 184.1431, 187.3570).

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