



ZERUST® Vapor and Soluble Corrosion Inhibitors (VCI / SCI)

Technical Data Sheet

Product Description

ZERUST® Vapor Corrosion Inhibitors (VCI)

VCI molecules volatilize from their carrier and disperse through enclosed spaces to adsorb onto metal surfaces. They form a thin, invisible film that blocks moisture, oxygen, and other corrosive elements. The film self-replenishes as vapor remains present in the void and dissipates safely when the space is opened.

ZERUST® Soluble Corrosion Inhibitors (SCI)

SCIs dissolve in aqueous media such as hydrotest or lay-up fluids to passivate metal surfaces, buffer pH, and scavenge corrosive ions like chlorides and sulfates. They provide uniform coverage wherever the solution contacts the metal, and can be combined with VCI for hybrid systems.

Typical Applications

ZERUST® Vapor and Soluble Corrosion Inhibitors are used across a wide range of industries and asset types. The following applications represent general uses for VCI and SCI technologies. However, a ZERUST® representative and our technical team can provide expert recommendations on which inhibitor type (VCI or SCI) should be applied, along with guidance on which ZERUST® products from our portfolio containing VCI, SCI, or both are best suited for the project requirements.

- Aboveground storage tank soil-side bottoms and annular spaces
- Pipeline casings and buried vessels
- Hydrotesting and wet lay-up operations
- Preservation of equipment voids and enclosures
- Offshore and onshore structural voids
- Mothballing of spare parts and critical components

Key Advantages

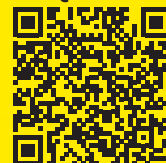
- Dual-Action Protection
- Comprehensive Coverage
- Versatile Application Methods
- Long-Term Protection
- Cost-Effective Solution
- Environmental Compatibility

Operating Summary

ZERUST® Vapor and Soluble Corrosion Inhibitors protect metal surfaces from corrosion caused by moisture, humidity, and water ingress. VCI products are installed inside sealed or semi-sealed voids to release protective vapor, while SCI concentrates are diluted with water and circulated or injected for liquid-phase protection. The combined use of these technologies provides dual-phase protection for both air and fluid environments. Dispose of unused materials in accordance with local regulations.

Please contact a ZERUST® representative for specific dosage, application equipment guidance and recommendations.

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product information

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Typical Properties

Properties*	Details
Appearance	Powder / Liquid / Capsule
Substrate	Ferrous Metals
pH (1% solution)	8 - 9.5
Delivery Options	Powder, Liquid Concentrate, Sachet, Capsule

* Typical values are not meant to be a specification.

Availability

ZERUST® Vapor and Soluble Corrosion Inhibitors (VCI/SCI) are integrated across multiple formulations within the ZERUST® product portfolio. These technologies are not sold individually but are incorporated into solutions engineered for applications such as tank bottom protection, pipeline casing injection systems, hydrotesting, equipment preservation, and enclosed void protection.

The following represents a selection of ZERUST® products that utilize VCI, SCI, or both; however, this list is not exhaustive. Additional formulations and configurations are available depending on specific project requirements. Representative products include ZERUST® Inhibitor Fusion (ZIF) Tape, ZerioGuard™ 5, ZerioGuard™ 8, ZerioGuard™ 12, Zeriol™ Axxanol™ 718-ESS, Zeriol™ Float Coat, Zeriol™ FOD, Zeriol™ FOXL, Zeriol™ MCO, Zeriol™ MOV, Zerion™ FAN-5, Zerion™ FAN-6, Zerion™ FVS, Zerion™ FVS-DB, Zerion™ PGH-300, Zerion™ PGH-400, Zerion™ PPL, Zerion™ TR-70, Zerion™ TR-110, Zerion™ TR-170, Zerios™ WES, ZerioTec™ Fog FV, and ZerioTec™ Fog MV.

For a complete overview of ZERUST® products containing VCI, SCI, or both, please visit www.zerustis.com/catalog.

Storage

Typically, ZERUST® products should be stored in their original sealed containers within a dry, well-ventilated area at ambient temperature. For specific storage requirements and shelf life details, refer to the Technical Data Sheet for the product being used.

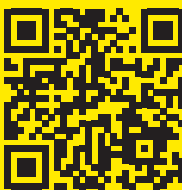
† DECLARATION

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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With over 50 years of experience, ZERUST® Integrity Solutions™, a division of Northern Technologies International Corporation (NTIC), creates unique inhibitor-based corrosion prevention solutions to serve terminals, pipelines, exploration and production, equipment suppliers, transportation sectors, and more.

ZERUST® Integrity Solutions, ZERUST®/EXCOR®, and Natur-Tec® are sister companies under NTIC.

