

CREDENTIALS

40+ years of experience in corrosion prevention.

Client support in 50+ countries.

Chair key task group at NACE International.

MEMBERSHIPS



Zerust Flange Saver®
Zerust ReCAST-R™
2012: Winner of the MP
Readers' Choice NACE
Corrosion Innovation of the
Year award

Zerust® Sump Saver

FOR ETHANOL INDUCED SUMP CORROSION PROBLEMS

The Problem

Ethanol blended fuels have been mandated for use since Dec. 2007. Widespread accepted use occurred in tangent with the mandate. In 2007 and 2008 tank inspectors started reporting excessive corrosion in sumps for underground storage tanks for these ethanol blended fuels.

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Research by the EPA determined that the corrosion was being caused by acids that were created by bacteria that were feeding on ethanol in the sumps. Ethanol vapors, released during routine minor vapor leaks in the sump, combined with moisture to form dilute ethanol, a rich food source for omnipresent acetobacter. Traditional maintenance fixes cannot eliminate the problem.



Sump corrosion caused by Ethanol and Acidic Vapor.

The Solution

Zerust specializes in development and deployment of unique corrosion inhibitors for tough client problems.

For ethanol induced corrosion, Zerust recommends the Sump Saver solution which is implemented in three steps.

Step 1 Preparation:

The sump is inspected by a qualified sump technician for any active fuel leaks, loose fittings or torn boots and these are addressed appropriately prior to application of Sump Saver Kit products. Any liquids standing at the bottom of the sump are removed. Bulk/loose corrosion on the metallic parts in the sump are removed using non-sparking tools as per relevant guidelines. This is done to remove corrosion product and to expose the metal surfaces to be protected. All metallic surfaces including pipes, motor head and fittings must be dry.

Step 2 Zerust Axxanol™ Spray-G Application:

Zerust's Axxanol Spray-G, a special grease with proprietary corrosion inhibitors, is sprayed over the metallic parts, including the sump motor, riser pipe, valves, tubing and pipe connectors. Care is taken to avoid sensors and electrodes. **This is an annual application.**

Step 3 Zerion Sump Saver Application:

Zerust Sump Saver, a unique liquid inhibitor, is sprayed over all the parts inside the sump including over the Spray-G. The product is also applied on the sump walls and non-metallic parts where acid condensate could be present. Any remaining Sump Saver liquid is poured into the floor of the sump. **Step 3 is repeated monthly.**

Annual Cycle:

At the end of the yearly cycle, the Axxanol Spray-G grease should be removed from the sump by wiping with a rag or similar. **Steps 2 and 3 are then repeated as above.**



6 week test sump with NO Zerust inhibitor.



WITH Zerust Sump Saver after 6 weeks.

Sump Saver Benefits

Increase the life of sump assemblies of piping sump equipment of underground storage tanks

Reduce maintenance related down time

Easy to apply system does not require trained personnel

Multi-part solution to deal with unpredictable environment

Protection Type

Sprayable multimetal rust prevention

Protects in extreme conditions

Safe for paint and plastic

Protection Properties

Sump Saver Product: Aqueous and vapor corrosion inhibitors to neutralize acidic species

Spray-G Product: Solvent based corrosion inhibiting sprayable grease creates a protective barrier

Safety & Handling

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work

Dispose of in a safe manner in accordance with local/national regulations

Product in unopened original container prior to use does not meet criteria for hazardous waste according to 40 CFR 261

Avoid release to the environment

Reference Spray-G and Sump Saver SDSs for additional safety & handling information

Storage

Store up to 2yrs above 0oC (32oF)

Keep only in the original container in a cool, well ventilated place

Keep container closed when not in use

How the Sump Saver Starter Kit Works

The Spray-G provides a physical barrier between the metallic parts and the corrosive acids. The initial liquid nature of the spray allows it to spread and cover most of the exposed surfaces. A few hours after the initial application, the Spray-G becomes thick and will hold in place to protect the sump components. In combination with the Sump Saver liquid, the Spray-G will provide protection for up to 1 year.

The Sump Saver™ liquid acts by:

1. Neutralizing acidic species upon contact
2. Filling the sump space with Vapor Corrosion Inhibitors (VCIs) that neutralize contaminants in the hard to get areas that the liquids may not have covered.

Sump Saver is gradually consumed by the ongoing production of acidic species within the sump and is replenished with the monthly reapplication.

NOTE: In cases where the levels of vapor release within the sump are so great and the production of acetic acid is so prolific that corrosion attacks are successful despite the deployment of the Sump Saver solution, Zerust recommends that the components be checked and fixed or replaced if necessary to minimize the leaks that could cause such severe corrosion.

Sump Saver Starter Kit

Zerust provides a starter kit for quick deployment and evaluation of the Sump Saver solution.

The Sump Saver Starter Kit includes the following:

- 1x Hand operated sprayer for Spray-G
- 1x Hand operated sprayer for Sump Saver
- 1x 32oz bottle of Spray-G; enough for 3-4 sumps
- 6x 16oz bottles of the Sump Saver; enough for 1 sump for 6 months



Once a sump has been inspected and cleaned, the kit allows gas station owners and/or maintenance crews to apply the solution and evaluate the efficacy over a 6 month period. The kit comes with detailed handling, application and disposal instructions and can be used even by untrained personnel.

Product Sizes & Specifications

Product Name	Product Number	Description
Sump Saver <i>Single Sump Starter Kit</i> <i>6 month supply</i>	350-M-00031	<i>1x Hand operated sprayer for Spray-G</i> <i>1x Hand operated sprayer for Sump Saver</i> <i>1x 32oz bottle of Spray-G</i> <i>6x 16oz bottles of the Sump Saver</i>
Sump Saver <i>1 Gallon</i>	CUSTOM - Call for Quote and Lead Time	<i>1x 1 gallon bottle of Sump Saver</i>
Sump Saver <i>4 Gallons</i>	CUSTOM - Call for Quote and Lead Time	<i>4x 1 gallon bottles of Sump Saver</i>
Spray-G <i>1 Gallon</i>	CUSTOM - Call for Quote and Lead Time	<i>1x 1 gallon bottle of Spray-G</i>

Order Specifications

The Sump Saver solution components can be ordered for evaluation purposes as a kit, or in bulk as part of ongoing maintenance programs. Please contact your sales representative for the correct product for your application.

Warranty and Disclaimer Information:

We guarantee our products conform to documented quality specifications. Product information subject to change without notice. We make no warranty of any kind expressed or implied as to the effects of use (including, but not limited to, damage or injury). Before use, Buyer/User shall determine suitability of the product for its intended use, and Buyer/User assumes all risk and liability in connection therewith. All statements, technical information and recommendations contained herein are based on testing and experiences NTIC believes to be reliable, but the accuracy or completeness thereof is not guaranteed. Buyer/User agrees that, if product proves to be defective, Seller's obligation shall be to replace or refund the purchase price of such product at Buyer's option. Seller shall not be liable in tort or contract for any loss or damage, incidental or consequential. See www.zerust.com/warranty

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