

ZERUST TFS

FLANGE PROTECTION

*Zerust Flange Saver[®] 2012:
Winner of the MP Readers' Choice NACE
Corrosion Innovation of the Year award*

CORROSION PROTECTION

Flange, valve and welded-joint corrosion costs clients millions annually and the complex geometry of flanges prevents effective surface preparation and coating which can lead to frozen nuts and bolts, weakened weld joints, and loss of containment. Zerust TFS is a transparent UV-resistant film with proven Vapor Corrosion Inhibitors (VCIs) for corrosion protection up to four years, even in severe outdoor exposure.

Recommended Product Applications

Recommended applications for Zerust TFS include, but are not limited to, the following:

- Flanges
- Valves
- Welded-joints
- Offshore Platforms & Rigs
- FPSOs
- Jetties
- Welded-joints

Application Guidelines

Zerust TFS can be easily installed and removed in minutes without special equipment. The appropriate sized Zerust TFS is wrapped around the desired part for protection and is secured using a combination of zip ties, 3M sealing tape, and the adhesive tape layers that come on the Zerust TFS

- Quick and easy installation and replacement
- Minimal surface preparation before installation
- No electrical devices or heating equipment required
- No special training or certification required for installation
- Transparent film allows for visual monitoring of corrosion and/or leaks

For detailed installation instructions please contact us.



Product Description

Zerust TFS is a specially designed cover, containing VCI, which protect joints from corrosion.

- Rugged & transparent UV-resistant film cover designed for severe outdoor exposure.
- Proven Zerust Vapor Corrosion Inhibitor (VCI) in film.
- Easy installation and removal in minutes without special equipment.
- Transparent film allows for visual monitoring of corrosion and/or leaks inside the Flange Saver.
- Provides up to four years of corrosion protection in outdoor and offshore environments.
- Inexpensive, simple, highly effective and versatile.
- Inhibits additional corrosion even after corrosion has started; little/no surface prep required.
- Sized to fit standard flanges; custom sizes may be special ordered.
- Provides corrosion protection for FPSOs, jetties, offshore platforms & rigs, and other applications.



Cost Impact

| Annualized Flange Maintenance Costs | | Indirect Flange Corrosion Costs | |
|-------------------------------------|-------------|---|--|
| Replacement Flange | \$12 | \$ Labor + Time to torque open frozen nuts and bolts \$ Time required to secure hot work permits, purging, certifications, etc. if shearing of flanges is required. \$ Logistics of equipment required for inspection and maintenance in case of flange replacement – especially for offshore facilities \$ Delays in removal/replacement, blinding, etc. of critical equipment \$ Opportunity costs of downtime of pipeline \$ Risks of flange failure, leaks, cleanups, safety, litigation, etc. | |
| Nuts and Bolts | \$12 | | |
| Paint | \$4 | | |
| Prepping/priming/painting/welding | \$5 | | |
| Scheduled Flange Replacement | \$20 | | |
| TOTAL | \$53 | | |

Assumptions:

- ~10 years to flange failure due to crevice corrosion
- Average 6" diameter pipeline and API 6A Class 150 flange pair at cost = \$120
- 8 sets of nuts and bolts for this pipe-to-pipe flange @ \$3 per set, 50% replaced during the life of the flange
- Hourly low skill labor rate = \$20/hour and high skill labor rate = \$50/hour

Availability

Zerust TFS is available in sizes compatible with international standards. Please contact us for the correct product recommendation for your application.

Part No. Please contact your Zerust representative for part numbers.