## RUST-X USA

Anti-Corrosion VCI SHRINK Films



Conforming to EN 13206/en13207 for environmental/weather resistance

& Corrosion Protection as per TI 8135-002





### About us



- Headquartered in California, USA
- One of the prominent Anti Corrosion Products Manufacturer Globally
- Manufacturing & product availability in over 50 countries & all continents
- Worldwide visits within 24-48 hours notice
- Over 100 Corrosion Engineers world-wide
- Supplier to Over 10,000 customers in Automotive, Aerospace and Oil & Gas

## RUST-X USA Product Ranges







## Zorb-It Desiccants







https://www.youtube.com/watch?v=jqQUZZt2ym8

## Facts

- 1000 + Employees in India
- Fully vertically integrated VCI manufacturer
- In house capability -
  - Reactors for making VCI Chemicals
  - Masterbatch manufacturing
  - Blown Film Extrusion Facilities world wide
  - Paper Coating Lines
  - Wide range of RP Oils and Additives













## Global Manufacturing Locations Of RUST-X Products

#### **USA Locations**

Los Angeles CA, Cincinnati OH & Warren MI

#### India Locations

Delhi X 2 Plants Mumbai X 2 Khopoli & Patalganga Ludhiana X 3 Plants Chennai X 1 Plant

#### CANADA

Alberta

#### Mexico

Tecate & Querrataro & Monterray

**Germany** - Dusseldorf

France - Lyon

Italy - Milan (Modena)

China - Suzhou & Yantai

South Africa - Johannesburg

Turkey, Hungary, Poland, Autralia, Ukraine, Brazil, Argentina, Chile, UAE, Saudi Arabia, Oman, Bahrain, Indonesia, Malaysia, Singapore and over 50+Countries

## Clientele





























KCA DEUTAG



















WOODSIDE





























## VCI = VAPOR CORROSION INHIBITORS



**VCI** Films



**VCI** Paper



VCI RP Oil



VCI Emitters & Desiccants



Aluminum + VCI Film

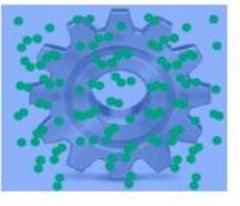
## SMP VCI Technology Speedy Moisture Passivation



VCI Bag is opened



VCI Emissions Start in seconds



20% is evaporated in 6 hours and 80% over



Works upto a distance if 350 mm

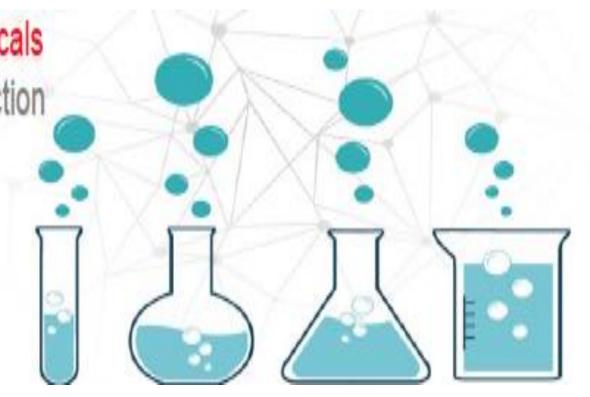


## SMP VCI Technology Speedy Moisture Passivation

## Combination of 5 different chemicals

Speedy Chemical – Faster action

- Longevity Chemical
- 3. Multimetal Chemical
- 4. Film forming Chemical
- 5. Sub Zero Action Chemical

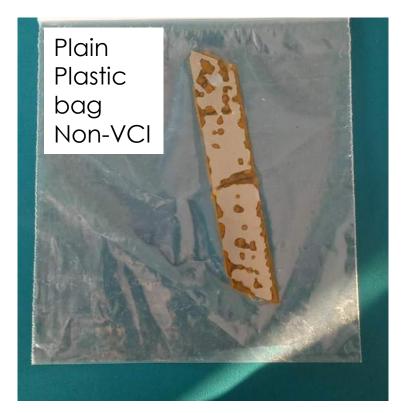


## VCI Effectiveness





## Test 1 : Razor Blade Test



Blank or Non VCI Bag with a wet blade



Fake VCI bag with Wet Blade



RUST-X VCI Bag with a wet blade

# Test 2: Vapor Inhibiting Ability Test as per TL8135 - 0043





**RUST-X** 



Blank



Fake VCI



**Fumeless** 

PE & PP

compatible

## **Key** Features









REACH

ROHS | N

NACE

VIA

Razor Blade

Pass

VIA Pass

TRGS 615 OK

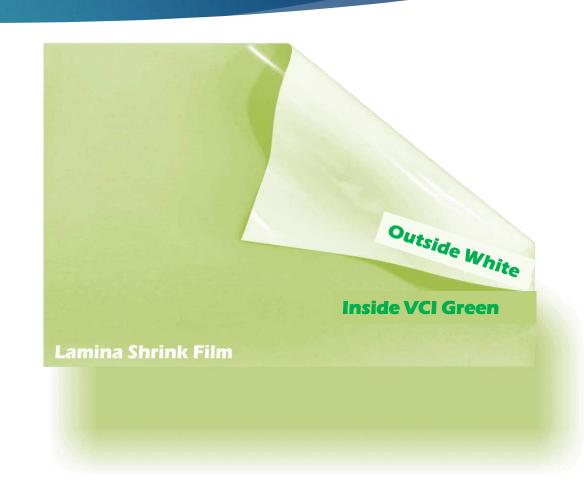
Amine Free

Nitrate Free



# Lamina Shrink Film with VCI conforming to EN 13206/13207 & VCI TL 8135-0043

- Lamina Shrink with VCI Co-Extruded 5 Layer Shrink Film With VCI Porperties on the inside
- Super Sealant Layers that forms a nonleak seal during shrinking
- Outside white inside Green (VCI)
- ► -70 C 100 C Service Temp. range
- Passes TL 8135-0043
- Passes EN 13206/13207 Weathering Test for UV performance



### VCI Shrink Film

- Shrink Film in different colours available
  - Blue
  - White
  - ► Military Green
  - Military Brown



## UV resistance Tests







#### **TEST REPORT**

REVISED

Report No.: MAN:TR:8530004924-1 DATE: 13/04/2017

HI TECH INTERNATIONAL

PLOT NO B 31, BEANT COLONY JAMALPUR

LUDHIANA-141010

INDIA

**CONTACT PERSON**: MR. SIDHARTH SAREEN

THE FOLLOWING SAMPLE(S) WAS/WERE SUBMITTED AND IDENTIFIED BY/ON BEHALF OF THE CUSTOMER AS:

SAMPLE DESCRIPTION THERMAL SHRINK FILM AS PER EN13206/EN13207

COUNTRY OF ORIGIN INDIA

SAMPLE RECD ON 06/03/2017 TESTING PERIOD: 17/03/2017-20/03/2017

MODIFIED DATE 11/04/2017 TEST(S) REQUESTED UV TEST



UV TEST: EN 13206 : 2001

Test method : ISO 4892-2 : 2013 / ISO 527-1&2 : 2012

<u>Test instrument</u>: Xenon arc Weather-o- meter – Atlas Ci 5000.

### VCI Anti Corrosion Properties

AS PER TL 8135-0043

Tested from BFSV Germany





#### Requirements of TL 8135-0043 (Appendix A) for the corrosion protection effect:

| Evaluation of the test ob | jects | Corrosion protection effect |
|---------------------------|-------|-----------------------------|
|                           |       |                             |











(Grade 0)







Slight

(Grade 1)



Middle

(Grade 2)

**Test objects** 

Gute korrosionsschützende Wirkung





Good

(Grade 3)

Table 2: Detailed test results

Rust-X VCI film "RUST-X VCI FILM

Control sample (without VCI)

Protected samples with VCI film

Evaluation



Corrosion protection effect

Grade 3

Good corrosion protection effect

3



## Standard Sizes

- ▶ 6 meter X 33 meter
- ▶ 3 meter X 100 meter

- ► Thickness
  - ▶ 100 micron, 150 micron, 200 micron, 250 micron, 300 micron
  - ▶ 4 mil, 6 mil, 8 mil, 10 mil, 12 mil



Packaging of Shrink Film Rolls in boxes

# Examples of Shrink packaging of Equipment



## 30 M Long Oil & Gas Equipment





## 30 M Long Oil & Gas Equipment

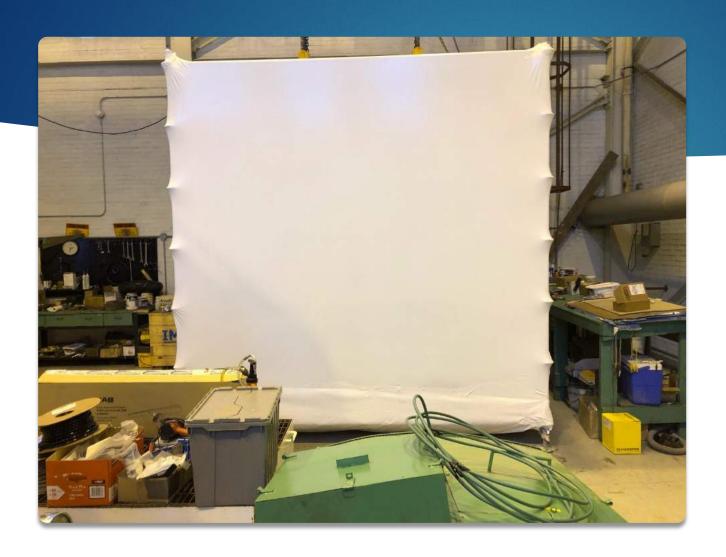




# Yacht Wrapped in Lamina Shrink With ANTI-RODENT TECHNOLOGY to prevent Rats from Entering inside the boats







Oil & Gas
Equipment
Shrink
Wrapped



Shrink Wrapped in -30 C temperatures

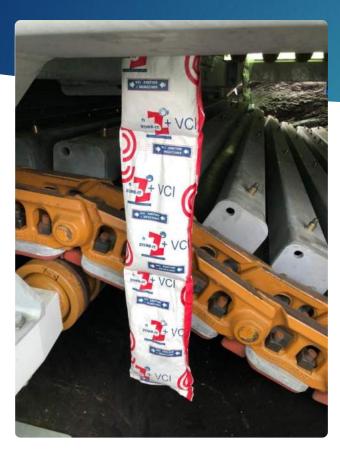


Shrink
Wrapping
in Sub Zero
Open
Storage



## Sub Zero

Open area Shrink Wrappec



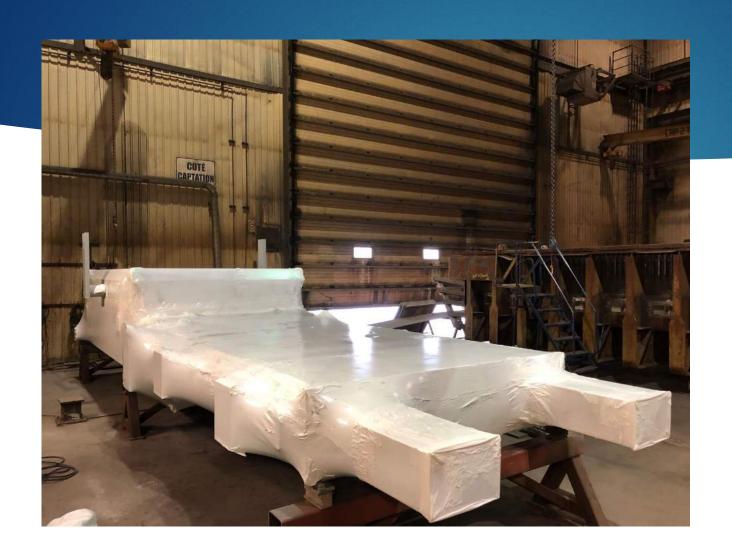


Use of ZORBIT Desiccants to absorb moisture



## Oil & Gas Equipment





Equipement with a lot of sharp edges

# GE Approved Shrink Packaging with Net

- ► Lamina VCI Shrink Bags
- ► RUST-X 145 A EX oil Spray
- Placement of Emitters & Desiccants
- Sealing of the bags
- Heat Shrinking
- Net over the packaging
- Air Vents



## Large Parts in Shrink Packaging

- Lamina VCI Shrink Bags
- ▶ RUST-X 145 A EX oil Spray
- Placement of Emitters & Desiccants
- Sealing of the bags
- Heat Shrinking



## Canadian Air Force









## Canadian Air Force







## ABB Equipment



Shrink Wrapped Machines



# VCI 4500 Emitter + Desiccant Pouch + Lamina Shrink









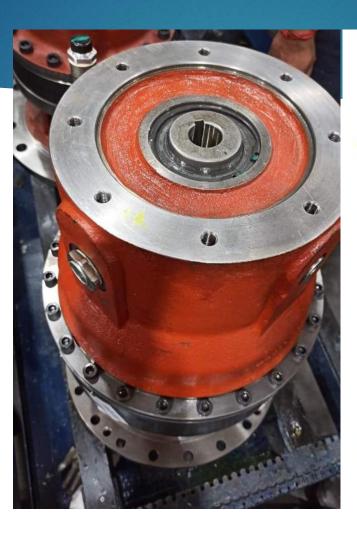
Shrink Zipper Access Door

Construction Applications



# Additional Protection Products MASKING STICKER

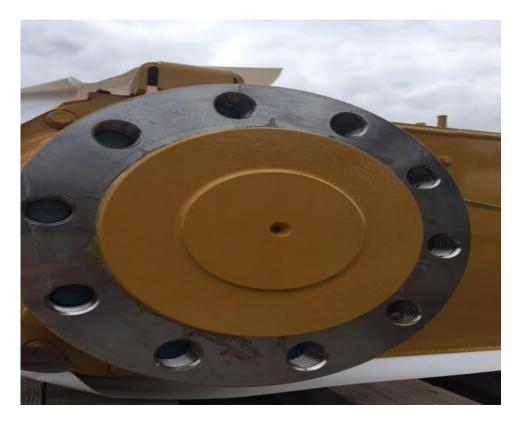
### Masking Sticker





# RUST-X USA RUST-X

#### Example of VCI Masking Sticker







### Masking Film





### Masking Film uses



# VCI Powder for Fogging VCI 4201



#### Pipelines with Powder

- VCI Fogging

   Powder 4201 for
   fogging the
   internals
- Powders can be blown using RUST-X Fogging Buckets by normal blowers and cover all surfaces
- Ideal for small pipes







#### VCI 4201 Fogging Bucket



Check FOGGING VIDFO with this bucket

https://www.youtube.com/watch?v=v8noP0gHoLk

- Plug and play FOGGING bucket
- No need to take out powder
- Just connect with a leaf blower and an outlet hose and start to FOG



## VCI Emitters & Desiccants



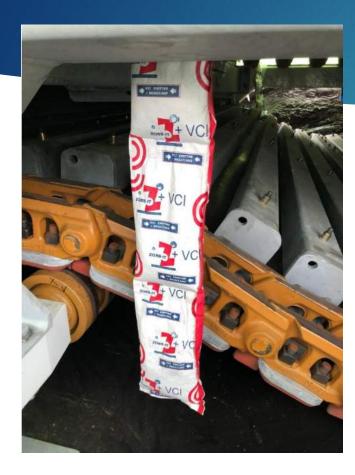


# Corrosion Protection For Electrical Cabinets and Junction Boxes

- VCI emitting devices 5 & 11 for placement in electrical cabinets & with critical metal parts
- VCI molecules released and deposited as invisible multimolecular layer on surface









Use of ZORBIT Desiccants to absorb moisture

### Use Dual Action VCI & DHF Pouch – VCI 4500







### Ammo-guard tablets

Anti-Corrosion tablets for Hollow Equipment



RUST-X 40 Corrosion prevention Spray



# VCIJelly 1369 – RUST Preventive liquid Wet Lubricating



- Applied as a Honey Type Jelly
- Remains liquid on the part
- Can provide excellent 10 year protection after application
- Does not solidify
- Provides good lubrication



# VCI Dry Coat 1368 for Outdoor protection of metals Drying type coating



- Solid Film Rust Preventive with very high salt spray protection
- Excellent protection outdoors
- Removable with a solvent
- Protects in open for long term
- Applied as a Liquid
- Dries as a golden coat

**RUST-X INDIA** 

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