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Quality manufacturers have trusted Daubert
Cromwell products for more than 60 years to protect
their valuable metal parts against corrosion. Today,
as companies seek ways to reduce costs yet
maintain quality in all stages of manufacture, storage
and shipment, Daubert Cromwell offers innovative
solutions to corrosion problems. Through proven
quality and years of exemplary service, the company
has earned its reputation as "The leading name in
corrosion prevention"."

Daubert Cromwell operates from a state-of-the-art manufacturing center conveniently located in suburban Chicago. All manufacturing and shipping functions, plus sales management, customer service, technical and financial offices are headquartered in Alsip, Illinois.

Regional sales managers are strategically located throughout the U.S. In addition, a global sales team coordinates customer requirements in:

- Mexico
- China
- Southeast Asia
- Japan
- India
- Europe
- Australia
- South America and wherever customers need Daubert Cromwell corrosion preventive packaging for their valuable metals.



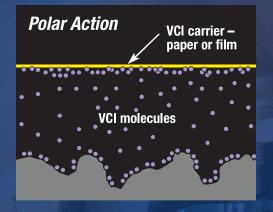


New corporate headquarters and manufacturing facility located in suburban Chicago

#### **HOW VCI PRODUCTS WORK**

When metals are wrapped or packaged in VCI, the chemicals volatilize in the packaging environment and form a protective molecular layer on the surface of the metal. This protective layer prevents moisture, salt, dirt, oxygen and other materials from depositing on the metal and causing corrosion. Simply store or ship metal parts in VCI packaging. When the parts are unwrapped, the protective layer immediately begins to dissipate. The metal parts are clean, corrosion-free and ready to use. No washing, dipping or cleaning is necessary.

- Long lasting, effective protection against corrosion
- Easy, clean, economical application options
- Easy storage
- Lower per unit packaging
- Packaging flexibility
- Reduced processing time





"YOUR ONE SOURCE FOR
EVERY VCI SOLUTION"

## CONTENTS: **Company Profile** How VCI works VCI Papers 4-5 Nox-Rust® Military approved papers Vapor Wrapper® Protek Wrap® · Coppertex® Ferro-Galv<sup>®</sup> • Silver Saver® Silver-Guard™ Uniwrap® MPI Alumitex® Reinforced Papers Coil Wrap Scrim Steel Wrap **VCI Films** Premium Metal-Guard™ Stretch Film Shrink Film Metal-Guard™ Ferro-Film® Military approved Ferro-Film® XP Clear Pak<sup>®</sup> Nox-Rust® Poly Wrap Silver-Guard<sup>™</sup> **VCI Liquids and Powders** Nox-Rust® Evapo-Rust<sup>™</sup> Rust Removing Solution Versil-Pak

11 **VCI Devices** 

- Daubrite® Emitters
- Foam
- Chips

LIMITED WARRANTY

All products manufactured by us are warranted to be first class material and free from defects in material and workmanship.

Liability under this warranty is limited to the net purchase price of any such products proven defective or, at our option, to the repair or replacement of said products upon their return to us transportation prepaid. All claim on defective products must be made in writing within 10 days after receipt of the products in your plant and prior to further processing or combining with other materials and products. We make no warranty, expressed or implied, of merchantability or as to the suitability of any of our products for any particular use, and we shall not be subject to liability from any damages, including special, indirect or consequential damages, resulting from their use in operations not under our direct control. It is the customer's responsibility to determine the suitability of a product for any particular application.

This warranty is exclusive of all other warranties, expressed or implied, and no representative of ours or any other person is authorized to assume for us any other liability in connection with the sales of our products





Consistent quality... exemplary service... innovative solutions, these are the strengths that make Daubert Cromwell industry's first choice for protective packaging.

"Daubert Cromwell will strengthen and build its core competency as a specialist in corrosion prevention packaging for industry with products and services that satisfy the evolving requirements of our global customers."



# CORROSION INHIBITOR PACKAGING PAPERS

#### **Selecting the Right VCI Paper**

Daubert Cromwell offers a wide range of VCI packaging papers to meet the unique anti-corrosion requirements of metal fabricators, suppliers, shippers and end users.

- Using 100% virgin kraft paper
- Odorless, safe, non-toxic, recyclable
- Neutral pH
- VCI protection sets up quickly
- Easy to use

The type of VCI paper you choose depends on the metal being protected. Daubert Cromwell has formulations specifically for:

- Ferrous metals, including those requiring military-specified VCI paper packaging
- Galvanized
- Multi-metals, and ferrous/non-ferrous combinations
- Specialty metals, such as copper, silver and aluminum

As a general rule, use heavier weights of paper to protect large or irregularly shaped equipment and components. Use barrier coated papers, such as waxed or poly coated, to keep out moisture and grease. Laminated or reinforced grades offer heavy-duty protection against corrosion-causing contaminants in the environment, plus resistance to rips and tearing.

#### **Broad Selection**

- · Roll stock, sheeting, bags, envelopes
- Covers, liners, die-cut and fabricated shapes
- Custom cut sheets to eliminate waste and reduce labor/material cost
- Chips, in any size and VCI formulation
- Reinforced and laminated constructions
- Creped

### **Custom Printing**

Daubert Cromwell can custom-print paper with your logo for easy brand identification to your customers. Your logo, instructions, or message appears in crisp, clear detail.





Daubert Cromwell is a U.S. Government approved supplier of products qualified for critical U.S. Military applications.









For complete product information, specific recommendations and selection assistance, call +1-866577-2326, or e-mail kpr@corrosionvci.com

BRAND	PRODUCTS	DESCRIPTION				
Nox-Rust® Vapor Wrapper®	VW35D VW35DH	35 lb./57 gsm natural kraft. <b>Long-term protection of ferrous</b> metals including steel and iron. <b>VW35DH</b> is nitrite-free.				
	VW60D VW60DH	60 lb./98 gsm natural kraft. Provides <b>excellent strength and tear resistance</b> . Ideal for packaging heavier parts. <b>VW60DH</b> is nitrite-free.				
	VW100D	Two 40 lb./65 gsm natural kraft sheets laminated with polyethylene. Strong, tear resistant. <b>Excellent moisture barrier</b> . Nitrite-free.				
	PC55D PC75D	40 lb./65 gsm natural kraft <b>coated with polyethylene</b> . <b>Provides moisture barrier</b> . <b>PC75D</b> is 60 lb./98 gsm for us when greater tear strength and puncture resistance are required. Both are nitrite-free.				
Protek Wrap®	PW30, PW30H, 30F	30 lb./49 gsm natural kraft. General protection for ferrous metals. PW30H and 30F are nitrite-free.				
	PW32, PW32H, 35F	35 lb./57 gsm natural kraft. <b>PW32H</b> and <b>35F</b> are nitrite-free.				
	PW60, PW60H, 60W	60 lb./98 gsm natural kraft. <b>PW60H</b> and <b>60W</b> are nitrite-free.				
	PW33 PW33H	35 lb./57 gsm natural kraft with specially formulated wax for enhanced molding and barrier properties. <b>Ideal for hand-wrapping small parts. PW33H</b> is nitrite-free.				
	40PCF 60PCF	40 lb./65 gsm natural kraft coated with polyethylene for moisture barrier protection and package strength. <b>60PCF</b> is 60 lb./98 gsm. Both are nitrite-free.				
Ferro-Galv <sup>®</sup>	PW30FG PW35FG PW40FG PW60FG	30 lb./49 gsm natural kraft <b>specially formulated for galvanized metal applications</b> . Also available in 35 lb., 40 lb., and 60 lb. natural kraft papers.				
Military	VW35H 4060	35 lb./57 gsm natural kraft. Light duty class 3, style A, form b. Nitrite-free. Also available as 4060.				
Grade Papers (MIL-PRF-3420)	VW35HC	35 lb./57 gsm natural kraft. Light duty class 3, style B, form b. Nitrite-free. NSN 8135-00-810-0481.				
	VW60H VW60HC VW70H 7090	60 lb./98 gsm natural kraft. <b>Medium duty class 2, style A, form b.</b> NSN 8135-00-664-4012 <b>VW60HC</b> is 60 lb./98 gsm creped, <b>medium duty class 2, style B, form b; VW70H</b> is 70 lb./114 gsm, <b>heavy-duty class 1, style A, form b.</b> Nitrite-free. NSN 8135-00-664-4010. Also available as <b>7090</b> .				
Coppertex®	СРТХ	35 lb./57 gsm natural kraft. <b>Protects copper, brass, bronze, and other copper alloys.</b> Use as a wrap and for interleaving. <b>CPTX60</b> is a 60 lb./98 gsm sheet.				
Silver Saver <sup>®</sup> Silver-Guard <sup>™</sup>	Silver Saver Silver-Guard	40 lb./65 gsm bleached kraft. <b>Prevents tarnish</b> on silver, gold and noble metals. Nitrite-free. <b>SS60</b> is a 50 lb./81 gsm sheet. <b>Silver-Guard Anti-Tarnish Paper</b> is poly-coated.				
Alumitex®	Alumitex	35 lb./57 gsm neutral natural kraft, unprinted, provides contact corrosion protection to ferrous and many non-ferrous metals including aluminum, galvanized steel and lead alloys. Protects from water spotting and corrosion when in contact with metal. <b>Nitrite-free</b> .				
Uniwrap® MPI	UW30MPI UW35MPI UW40MPI UW60MPI	30 lb./49 gsm natural kraft. Multi-purpose corrosion inhibitor for ferrous/non-ferrous metals and combinations of metals, including cadmium and zinc galvanized steel. Also available in 35 lb., 40 lb., 60 lb. papers, chips and other substrates.				
	UW33MPI	35 lb./57 gsm natural kraft, wax coated, provides excellent moldability and barrier properties.				
	UW200	35 lb./57 gsm natural kraft, multi-purpose corrosion inhibitor for a combination of ferrous/non-ferrous metals. Nitrite-free.				
	40PCMPI 60PCMPI	40 lb./65 gsm natural kraft <b>coated with polyethylene</b> for moisture barrier protection and package strength. <b>60PCMPI</b> is 60 lb./98 gsm natural kraft, poly-coated.				
Reinforced Papers	UW94MPI Woven	40 lb./65 gsm natural kraft polyethylene laminated to woven polyethylene fabric and coated with Uniwrap MPI multi-metal protection. Provides maximum strength and tear resistance in heavy duty applications. <b>Excellent coil wrap.</b>				
	PC50MPI Scrim PC50H Scrim	50 lb./81 gsm natural kraft with LDPE reinforced with tri-directional scrim. Designed as <b>sheeting and interleaving between heavy steel rolls and pallets. PC50H</b> is nitrite-free.				
	Steelwrap MPI	40 lb./65 gsm natural kraft treated one side, laminated with reinforcement and polyethylene to a 50 lb./81 gsm natural kraft. Provides heavy duty moisture resistance and strength for wrapping steel coils.				
	Woven Ferro-Galv	40 lb./65 gsm natural kraft laminated to woven polyethylene/polypropylene, VCI treated. Provides maximum strength and tear resistance.				

# CORROSION INHIBITOR PACKAGING FILMS

Daubert Cromwell films exceed all the rigorous demands for corrosion protection in a lean global manufacturing environment. The proprietary formulation of corrosion inhibitors is integrally blended into the film, not superficially applied. The VCI volatilizes inside the packaging environment, protecting the metal with an invisible, effective, barrier that prevents moisture, salt, oxygen, dirt, and other corrosion-causing materials from depositing directly on the surface.

Daubert Cromwell uses transparent colors that allow for easy visual inspection and identification of parts. The easy-to-use, safe, effective packaging is good for long-term storage, export shipments, in-process assembly, and more.

- 1-8 mil thickness options
- Formulations to meet unique applications and fit into any program budget.
- Odorless, safe, non-toxic, recyclable.
- Heat sealable, tear-resistant, moisture-resistant.
- · Nitrite-free formulations.

- Available in rolls; shrouds; flat, zipper and gusseted bags; gusseted liners; stretch film; shrink film; bonnets; custom types and fabrications.
- Ideal for large and roughly handled assemblies, frames, stampings, doors, etc.
- · RoHS certified (by independent labs).
- Approved as military packaging.



VCI films offer the handling ease of polyethylene with the corrosion protection of Daubert Cromwell's proven chemistry.

#### **Anti-Tarnish Film**

Packaging and storing precious silver in see-through, reclosable Silver-Guard<sup>™</sup> film and bags is the convenient, effective way to prevent tarnish.

#### **Broad Selection**

All Daubert Cromwell VCI films are available in stock and custom sizes to meet your specific application:

- Flat bags
- Pre-opened bags on a roll
- Perforated, loose and zippered bags
- Shrouds

- Tubing
- Sheeting
- Gusset bags (popular large sizes are in stock)
- Fabricated bags

#### **Specialty Film Products:**

Call Daubert Cromwell about more product options and custom film products, including:

- High strength, puncture-resistant, tear-resistant films
- ESD and anti-stat films

- VCI-lined fabric bags and shrouds
- Bonnets and covers
- · Custom colors





Standard film is tinted a unique shade of blue to identify it as a quality product of Daubert Cromwell.















### Anti-Tarnish Solutions

The Silver-Guard brand family includes Anti-Tarnish Blocks for preserving jewelry and collectibles inside display cases; and as SG paper, a bleached kraft substrate, poly coated.

# **EVAPO-RUST**™ **RUST REMOVING SOLUTION**

EVAPO-RUST, new from Daubert Cromwell, is a biodegradable, reusable rust remover proven effective on all types of mild steel and iron. EVAPO-RUST is water-based. It is non-corrosive to steel and does not harm brass, copper, aluminum, gold, lead, titanium, steel, cast iron, solder points, vinyl, plastic, rubber, silicone, glass, cork, or wood.

### Award-winning, biodegradable, non-acidic soak solution

#### **Typical Applications:**

- Engines
- Gears, Bearings
- Automotive
- Machine Shops
- Manufacturing
- Tools, Spare Parts

#### **Features:**

- Non-hazardous
- Reusable
- No solvents
- · Ready to use
- Non-toxic
- Water-based

Sold in 1 gallon, 5 gallon and 55 gallon quantities.









# CORROSION PREVENTIVE LIQUIDS AND POWDERS

#### **Nox-Rust® Corrosion Preventive Liquids**

Selecting the proper Nox-Rust liquid depends on a number of conditions:

- Outdoor or indoor use
- · Duration of use
- Type of metal to protect
- Method of application
- Removal

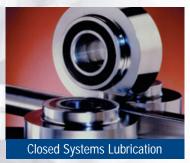
#### **Typical Applications:**

- · Lay-up and preservation
- Final rinse additive
- Cleaning agent
- Edge coat for coils and sheet stock
- Closed systems (boilers, tanks, pipes, piping)
- Unpainted metal parts
- Seasonal equipment (lawnmowers, snowblowers)
- Metal processing lubricants

#### **Nox-Rust Powders**

- Safe and environmentally friendly. Does not contain phosphates, heavy metals or nitrites.
- · Silica-free.
- Water-soluble.
- Typically does not require any special surface preparation prior to equipment shutdown.
- No need to remove before restarting equipment.
- · Use wet or dry.
- Ideal for extended periods of equipment inactivity, during storage or lay-up, during and after hydrostatic testing.







PRODUCT	METAL PROTECTION	DESCRIPTION
3100†	Steel; compatible with non-ferrous metals.	Amber oil dries as a firm, waxy film that can be handled after 3–6 hours. Coating sets up in 12–24 hours. Remove with solvent, vapor degreaser or steam.
5100	Steel; compatible with non-ferrous metals.	Outdoor corrosion protection. Dries as a black, dry, firm film. Remove with solvent/alkaline cleaner. Conforms to Mil-PRF-16173E, Grade 1, Class 1.
5200†	Steel; compatible with non-ferrous metals.	Apply on exposed metals, unpainted metal parts. The brown, grease-like film dries as a semi-film coating in 12-24 hours. Protection lasts 3-6 months on equipment stored outdoors, up to 5 years if stored indoors. Remove with solvent/alkaline cleaner or an emulsion cleaner.
5300†	Steel; compatible with non-ferrous metals.	Brown, oily film displaces water and saline solutions to keep corrosion from forming on metal surfaces inside closed systems. Completely miscible with lubricating oils.
8500	Steel; compatible with non-ferrous metals.	Hard acrylic emulsion film. Water-based, clear. Dries as a tack-free exterior coating, will not pick up dust or dirt. Non-staining. May be removed with soap and water for up to one hour after applying.
9900	Steel and other metals in closed systems; compatible with copper, brass.	Environmentally safe water-based coating with corrosion protection. Low VOC with no solvents, petroleum oils or harmful chemicals. Can be diluted with water. Dries to a firm, tacky film that is not water soluble. Compatible with copper and brass.
1100	Steel, iron, zinc, aluminum.	A lubricating oil and corrosion preventive to protect metals in closed systems. Prevents rust caused by condensation build-up inside equipment during lay-up and preservation. Removal not required.
1101†	Steel, iron, zinc, aluminum.	VCI oil in concentrate form. Corrosion protection lasts up to 1 year.
1200	Steel and other metals in closed systems; compatible with copper, brass.	Environmentally safe, silica-free water solution for closed systems. Apply water-soluble liquid by fog or spray. Silica-free liquid leaves no residue. Does not contain phosphates, heavy metals or nitrites. Preserves equipment and piping systems that need to undergo hydrostatic testing prior to shipping or storage. No special surface preparation required prior to equipment shutdown.
9800	Steel, iron, zinc, aluminum.	Water-soluble VCI liquid to apply required by fog or spray into closed systems. Clear, amber liquid is ready to use. Moisture-absorbing, fingerprint removing. Removal not required.
4101	Outdoor storage and transport protection for steel, zinc.	Protects in areas where acid fumes are present, such as found in pickling operations. Prevents corrosion from forming on steel parts and equipment stored in humid conditions. Non-staining. Removable with petroleum solvent, caustic cleaner, steam.
5400†	Cold rolled steel; sheet metal stamping; automotive parts.	Multi-metal inhibitor for general industrial use. Used as a wash, it leaves behind a lubricant and corrosion preventive film. Will not affect priming, painting, sealing, welding or cleaning operations. Easy to remove by conventional cleaning methods. Approved for use in automotive manufacturing.
7100†	Steel; compatible with brass, aluminum, copper.	Leaves a sparkling luster on treated metal. Removes water after using an aqueous cutting oil. Non-staining. Won't clog stamping machines. Repels water from metal surfaces. Dries as a transparent, non-discernible film. Removal not required.
7800	Steel; metalworking, precision parts.	Ideal lubricant for high precision equipment and parts. Compatible with barium lube grease. Excellent lubricating oil for assembly parts.
9300	Steel	Final rinse additive. Retards corrosion during shipment and storage of machined parts, tools, treated steel and assemblies. Water-displacing.
	Steel	

Sold in 5-gallon pails and 55-gallon drums.  $\dagger Also$  sold in 11 oz. aerosals.

POWDERS Nox-Rust®						
1000SF	Ferrous	Silica-free, water soluble powder for protecting equipment during storage or lay-up or hydrostatic testing. Environmentally friendly; does not contain phosphates, heavy metals or nitrites. Apply by dusting, fogging, or dissolve in water. No need to remove before restarting the unit after shut-down.				
1000SFG	Ferrous	Finely ground version of 1000SF. Use in applications where a fine powder is needed.				
1010SFG	Best for copper and brass	Silica-free, water soluble, finely ground powder. Use wet or dry. Compatible with copper, brass and galvanized steel. Does not need to be removed prior to equipment restart.				

## **VERSIL-PAK**

Versil-Pak is a flexible, greaseproof, waterproof barrier wrap for protecting underground piping in corrosive or severe environments. It works as a total barrier against high moisture, acidity, bacterial attack or galvanic attack, which contribute to pipeline corrosion. Versil-Pak locks out soil, grease, dust, and contaminants.

Versil-Pak is made with a carefully selected fabric saturated and coated with a high adhesion adhesive wax, as well as a high barrier plastic film. It is designed to combine high tensile strength, good moldability, excellent dead-fold, and high dielectric strength. It conforms to nearly any industrial surface, including hard-to-reach welds and threads, straps, yokes, joints, and valves.

It is ideal for use as a tight wrap around underground piping, pumps and irregular shapes on oil field machinery, large electric motors, and wherever buried equipment needs strong barrier and dielectric protection.

Two types of Versil-Pak pipe wrap meet the requirements of military specification MIL-B-121.







PRODUCT	DESCRIPTION
#1	Heavy weight woven cotton fabric coated both sides with highly formulated adhesive wax.
#3-1	Medium weight open mesh cotton fabric coated 1 side with high adhesion wax, laminated to barrier film.
#3-2	Medium weight cotton fabric coated 2 sides with high adhesion wax, laminated to barrier film.
#4	Heavy mesh cotton fabric coated with high adhesion wax and laminated to barrier film.
#5-1	Polyester high-strength fabric, waxed 1 side, laminated to barrier film and wax coated.  MIL-B-121 Type 1, Grade C, Class 1
#5-2	Polyester high-strength fabric, waxed 2 sides, laminated to barrier film and wax coated. MIL-B-121 Type 1, Grade C, Class 2

Sold in 36" x 50 yd. and 36" x 100 yd. rolls.

# **DAUBRITE® EMITTERS**

Daubrite emitters are corrosion-preventive devices designed for use inside packaging environments and enclosed spaces:

- Electronics and telecom equipment
   Tool boxes
- Utility boxes
- Engine compartments
- Mechanical controls
- Gun cabinets

- Shipping containers and pallets
- Exposed wire in junction boxes, control panels

#### Wherever corrosion can attack and damage exposed metal

Each Daubrite device emits protective vapors into the space to form an invisible layer on the surface of the metal and prevent moisture, salt, dirt, oxygen and other contaminants from depositing on it, causing corrosion. They are specially formulated to be effective on steel and multi-metal parts.

Emitters are safe, economical, easy to use, and the corrosion protection lasts for years, even in the presence of moisture.

Choose from a variety of styles:

#### **Daubrite Disks**

- Thin, lightweight disks can be positioned inside tight or restrictive spaces.
- Adhesive tape on the back sticks to metal cabinets, containers and walls.
- Daubrite 5 protects 5 cu. ft. for up to 24 months\*
  - NSN 6850-01-406-2060
- Daubrite 10 protects 10 cu. ft. for up to 24 months\*
  - NSN 6850-01-406-9025
- Disks also sold in individual in 4" x 4" pouches, without double-stick tape. \*Maximum protection when used in a dry, non-aerated environment.

#### **Daubrite Packets**

- Sturdy, tear-resistant construction.
- · Lightweight, economical.
- Protects even in the presence of moisture.
- Each Daubrite 1 protects metals in 1 cu. ft. of enclosed space.

#### **Daubrite Foam**

- Provides cushioning for delicate and sensitive components.
- Soft and abrasion resistant, won't harm polished finishes.
- Available in rolls, 10" x 10" squares; individually wrapped, adhesive-backed pieces; cut-to-length pieces; special constructions; closed cell foams and laminations.

#### **VCI Chips**

30 pt. chipboard coated with Daubert Cromwell corrosion inhibitor formulations and cut in convenient 1" x 1", 2" x 2" and pieces.

- Nox-Rust® Vapor Wrappor chips for protecting ion, steel, cast iron, and ferrous metals.
- Uniwrap® MPI chips for ferrous/non-ferrous metals and combinations of metals.
- 1" x 1" chip protects 25 cu. in.; 2" x 2" chip protects 100 cu. in.









PRODUCT	PROTECTS	UNITS/PKG.	SIZE	DESCRIPTION
Daubrite 1 Packet	1 cu. ft.	250	1 1/2" x 3" Packet, White	White packets with blue print.
Daubrite 3F Foam	1 cu. ft.	50	1" x 3" Foam, Blue	Adhesive-backed VCI foam, individually wrapped in clear poly.
Daubrite Foam Open Cell Foam	8 cu. ft.	250	10" x 10" x 1/4"	Cut squares of blue VCI foam for cushioning polished metal.
Daubrite 5 Emitter Pouch	5 cu. ft.	50	4" x 4" x 1/4"	5 cu. ft. disk emitter individually sealed in 4" x 4" pouch.
Daubrite 5 Disk	5 cu. ft.	50	2.19" Round x .16"	Self-stick VCI emitter, white, labeled, packed 50 per case.
Daubrite 10 Disk	10 cu. ft.	50	2.19" Round x .25"	Self-stick VCI emitter, white, labeled, packed 50 per case.





PRODUCT • PERFORMANCE • QUALITY



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