Cor-Ban® 23 Instruction Manual

Safety Steps To Follow Prior To Applying Cor-Ban® 23:

Always refer to the safety data sheet (SDS) prior to applying **Cor-Ban® 23** if you have any safety or regulatory questions about this product.

Always wear gloves, protective eyewear, and protective clothing to prevent **Cor-Ban® 23** from making contact with the skin and eye.

Make sure there is proper airflow in the area where **Cor-Ban® 23** will be applied and wear the proper respiration devices to prevent the Inhalation of fumes especially if the ventilation in the area where **Cor-Ban® 23** is applied is insufficient and if **Cor-Ban® 23** is atomized.

Make sure there are no sparks, open flames, or other combustion sources in the area where **Cor-Ban® 23** will be applied.

Procedures To Follow Prior To Applying Cor-Ban® 23:

Make sure that primers are cured prior to applying **Cor-Ban® 23**.

Make sure that any sealants that are applied in a given area are cured according to the recommendations and instructions of the manufacturer prior to applying **Cor-Ban® 23**.

Vacuum and wipe surfaces so that moisture and other foreign material that is on them can be removed.

Vacuum and/or wipe surfaces as necessary to remove moisture and other excessive foreign material from surfaces that will be coated with **Cor-Ban® 23**. Solvents that can be used for cleaning those surfaces include:

* **Sur-Prep 3167**
* **Sur-Prep 3160**
* **D-5640NS / ZC-640**

Do not use Isopropyl alcohol and acetone to wipe and clean the surface.

If the sprayed form of **Cor-Ban® 23** shows fisheyes, separations, or anything that prevents it from being homogeneous and free of voids, then the surface is not clean and needs to be vacuumed and/or wiped again.

Cor-Ban® 23 Product Information and Benefits:

Cor-Ban® 23 is a non-decorative high penetrating and water displacing corrosion inhibiting compound (CIC) with a light reddish-pink salmon tint. **Cor-Ban® 23** has a very low dry flim weight that does not crack nor flake in temperatures as low as **-65°F (-54°C)**. **Cor-Ban® 23** also has a fast drying and non-tacky film that is detectable and non-sagging. **Cor-Ban® 23** needs **<0.3 Mil (8 microns)** to surpass its specification and can withstand salt spray for **>3000 hours**. **Cor-Ban® 23** has a low toxicity level and is free of chromates and heavy metals.

Cor-Ban® 23 Instruction Manual

Masking Procedures To Follow Prior To Applying Cor-Ban® 23:

Mask areas that will not to be coated, such as:

* Electrical Connectors
* Pins and Joints In Sliding Surface Contact
* Control Cables
* Pulley and Quadrant Cable Grooves
* Bushing and Bearings For All Types, which includes lined Teflon
* Silicone or Rubber Seals
* High Temperature Areas
* Wire Bundles
* Lubricated Surfaces (i.e Hydraulic Actuator Pistons)
* Drain Valves
* Oxygen System Components (i.e. Bottles, Pressure Metering and Indicating Equipment and Connections)

Methods For Applying Cor-Ban® 23:

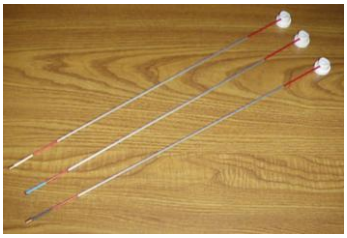
Use the following equipment for applying **Cor-Ban® 23**.

*HVLP Guns
*Airless Spray Equipment
*Aerosol Cans
***Formit®** Extension Wands-For use with all **Zip-Chem®** aerosols to reach difficult to access areas, such as stinger edges.
***Zip-Chem® Aerosol Trigger Sprayer**-For use with any **Zip-Chem®** Aerosol can
*Bulk Application Equipment

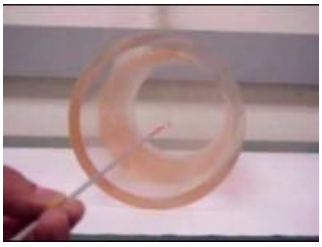
HLVP Gun

Formit® 360˚ Spray (White Tube), Fan Spray Spray (Blue Tube), 180˚ Spray (Black Tube) Wands

*__Formit®__ 360˚ Spray (White Tube) Wand →
*__Formit®__ Fan Spray (Blue Tube) Wand →
*__Formit®__ 180˚ Spray (Black Tube) Wand →



*__Formit®__ 360˚ Spray Application Video



*__Formit®__ Fan Spray Application Video

*__Formit®__ 180˚ Spray Application Video

Zip-Chem® Aerosol Trigger Sprayer

Cor-Ban® 23 Instruction Manual

Methods For Applying Cor-Ban® 23 (Continued From Page 2):

1.) HVLP Spray Gun Setup

HVLP Spray Gun

A.) Set the air pressure. This is very important because if there is too much pressure, then the texture and spray of **Cor-Ban® 23** will be dry. Too little pressure however, results in a poor atomization and orange peeling of **Cor-Ban® 23**.

B.) If you see texture in the spray of **Cor-Ban® 23**, then increase the air pressure of your HVLP gun. If you see an overspray cloud of **Cor-Ban® 23**, then decrease the air pressure slightly. The proper spray pattern for **Cor-Ban® 23** should be a **slightly wet pass** with **no flooding or sagging** because thinly applied products like **Cor-Ban® 23** can run very fast.

C.) One pattern that should be used when using the HVLP gun to apply **Cor-Ban® 23** is the **fan pattern** because it uses a full wide fan spray which provides better consistency and leveling when applying **Cor-Ban® 23** with the HVLP spray guns.

D.) The air pressure when the trigger is pulled for the gun should be **20–30 PSI** even though most guns specify **10 PSI** at the air cap.

E.) Always set the pressure with the trigger fully pulled because the pressure drops under flow.

F.) Close off the air and fluid adjustment knobs.

G.) Slowly open the air adjustment knob with the trigger pulled.

H.) Open the fluid adjustment knob slowly until you see a fine mist from the air cap.

I.) Continue to fine tune the settings until the desired spray pattern is achieved.

2.) Air Assisted Spray Gun Setup

Airverter Spray Gun

A.) Determine the tip size for the gun. This is very important especially for a thin material**,** such as **Cor-Ban® 23** including thin coatings, such as clears and sealers.

Note: Do not increase the gun tip size especially to **.015 " or more** when applying **Cor-Ban® 23** because the applied material will exhibit the following characteristics below.

*Too much **Cor-Ban® 23** being applied
***Cor-Ban® 23** runs
*Orange peel in the **Cor-Ban® 23**
*An overspray cloud in the applied **Cor-Ban® 23**

B.) For pressure settings, use the lowest pressure possible so that **Cor-Ban® 23** can be spray applied as a clean fan with the width of the spray being shaped like a fan. A good starting point for the pressure of the air assisted spray gun should be around **900-1200 PSI**.

C.) Slowly increase the pressure of the gun until the fan spray pattern of **Cor-Ban® 23** is fully developed and even and there are no fingers or tails on the edges of the spray equipment. If you hear a harsh hissing noise or see fogging in the spraying of the **Cor-Ban® 23**, then the pressure of the air assisted spray gun is too high. None of these observations should occur because thin materials like **Cor-Ban® 23** atomize very easily.

D.) Set the pump ratio of the equipment to a range of **20:1 to 30:1**.

E.) Setup the following parts for the airless spray equipment below.

*Displacement Pump With A Positive Piston Type
*Stainless Steel Filter With A High Pressure With **200-300** mesh element

Cor-Ban® 23 Instruction Manual

Methods For Applying Cor-Ban® 23 (Continued From Page 3):

Air Assisted Spray Gun Setup (Continued From Page 3)

F.) Maintain your distance of the gun from the surface as the distances between air assisted spray guns and other spray methods can vary. A good distance to follow for air assisted spray guns is about **12" or more**. If you spray apply **Cor-Ban® 23** at a distance closer than **12"**, then there will be a heavy buildup of **Cor-Ban® 23**, tiger stripping of material from the surface where the **Cor-Ban® 23** was applied, and a variation in the gloss of the **Cor-Ban® 23**.

G.) Consider the passing speed of **Cor-Ban® 23** because the output of **Cor-Ban® 23** from air assisted spray guns can vary between other spray methods. Therefore, you may need to move faster or slower than other spray methods, such as HVLP guns.

H.) The **Cor-Ban® 23** should be spray applied as a **smooth continual pass** with a **50% overlap**.

I.) The table below lists some differences between the HVLP spray method and the air assisted spray gun methods.

HVLP	Air Assisted Spray Gun
Soft spray of **Cor-Ban® 23**	More aggressive fan spray of **Cor-Ban® 23**
Slow **Cor-Ban® 23** output	Fast output of **Cor-Ban® 23**
Very forgiving when applying **Cor-Ban® 23**	**Cor-Ban® 23** can run quickly
Less overspray bounce of **Cor-Ban® 23**	More fogging potential for **Cor-Ban® 23** than with HVLP spray method

3.) Airless Spray Setup

Airless Spray Equipment

A.) Determine the tip size for the gun. This is very important especially for a thin material, such as **Cor-Ban® 23** including thin coatings, such as clears and sealers.

Note: Do not increase the gun tip size especially to **.015 " or more** when applying **Cor-Ban® 23** because the applied material will exhibit the following characteristics below.

*Too much **Cor-Ban® 23** being applied
***Cor-Ban® 23** runs
*Orange peel in the **Cor-Ban® 23**
*An overspray cloud in the applied **Cor-Ban® 23**

B.) For pressure settings, use the lowest pressure possible so that **Cor-Ban® 23** can be spray applied as a clean fan with the width of the spray being shaped like a fan. The setup of airless spray equipment varies based on the size and type of gun that is being used but a good starting point for the pressure of the airless spray gun should be around **900-1200 PSI**.

C.) Slowly increase the pressure of the gun until the fan spray pattern of **Cor-Ban® 23** is fully developed and even and there are no fingers or tails on the edges of the spray equipment. If you hear a harsh hissing noise or see fogging in the spraying of the **Cor-Ban® 23** , then the pressure of the airless spray gun is too high. None of these observations should occur because thin materials like **Cor-Ban® 23** atomize very easily.

D.) Set the pump ratio of the equipment to a range of **20:1 to 30:1**.

E.) Setup the following parts for the airless spray equipment below.

*Displacement Pump With A Positive Piston Type
*Stainless Steel Filter With A High Pressure With **200-300** mesh element

F.) Maintain your distance of the gun from the surface as the distances between airless spray guns and other spray methods can vary. A good distance to follow for airless spray guns is about **12" or more**. If you spray apply **Cor-Ban® 23** at a distance closer than **12"**, then there will be a heavy buildup of **Cor-Ban® 23**, tiger stripping of material from the surface where the **Cor-Ban® 23** was applied, and a variation in the gloss of the **Cor-Ban® 23**.

Cor-Ban® 23 Instruction Manual

Methods For Applying Cor-Ban® 23 (Continued From Page 4):

Airless Spray Setup (Continued From Page 4)

G.) Consider the passing speed of **Cor-Ban® 23** because the output of **Cor-Ban® 23** from airless spray guns can vary between other spray methods. Therefore, you may need to move faster or slower than other spray methods, such as HVLP guns.

H.) The **Cor-Ban® 23** should be spray applied as a **smooth continual pass** with a **50% overlap**.

I.) The table below lists some differences between the HVLP spray method and the airless spray gun methods.

HVLP	Airless Spray Gun
Soft spray of **Cor-Ban® 23**	More aggressive fan spray of **Cor-Ban® 23**
Slow **Cor-Ban® 23** output	Fast output of **Cor-Ban® 23**
Very forgiving when applying **Cor-Ban® 23**	**Cor-Ban® 23** can run quickly
Less overspray bounce of **Cor-Ban® 23**	More fogging potential for **Cor-Ban® 23** than with HVLP spray method

4.) Electro-Static Spray Gun Setup

Electro-Static Spray Gun

A.) Minimize the flow of **Cor-Ban® 23** for the required coating speed and film thickness.

B.) Minimizing the target distance of spraying **Cor-Ban® 23**.

C.) Ensure that the **Cor-Ban® 23** to be sprayed has a very high resistivity of at least **1 mega-ohm**.

D.) Attach charging unit to the gun and object to be sprayed with **Cor-Ban® 23**.

E.) Gradually increase in-line air pressure so that the spray provides proper **Cor-Ban® 23** build at the required coating speed and ensure that the pressure does not exceed **100 psi**.

F.) Fluid pressure is typically **400-800 psi** so make sure it is set to that psi range.

G.) Turn on charging unit and begin spraying **Cor-Ban® 23**.

It is important to ensure that the HVLP, air assisted, airless, or electrostatic paint gun for applying **Cor-Ban® 23** are properly setup for the following reasons below.

*Decrease odor, fogging, and mist from the application of **Cor-Ban® 23**
*Increase the transfer efficiency of the **Cor-Ban® 23** from the equipment to the area it needs to be applied to
*Ensure that **Cor-Ban® 23** will be applied according to how it was designed to be applied with respect to **optimum weight to performance balance**

Cor-Ban® 23 Instruction Manual

Areas Where Cor-Ban® 23 Should Be Applied:

Cor-Ban® 23 should be applied on:

* Upper Edge Floor Beams
* Wheel Wells
* Pressure Deck
* Center Wing Sections
* Interior Structure

Tips For Applying Cor-Ban® 23:

1.) Focus the application process of **Cor-Ban® 23** on all faying surfaces to ensure joint penetration.

2.) Once **Cor-Ban® 23** has been focused on faying surfaces, then coat the entire area before moving on to the next section.

3.) Inspect the surface for proper coating under stringers, formers, and other structures that are not in the line of sight.

The applied **Cor-Ban® 23** coating should be continuous and free of voids. Runs drips, sags, etc, are allowed provided that the drain holes and cross drains for where **Cor-Ban® 23** should drain out of are not blocked. If the drain holes or cross drains become blocked, then wipe up the excess **Cor-Ban® 23** using clean, dry gauze or rags.

The **Cor-Ban® 23** material will exhibit slight sags or wavy material lines on inclined surfaces in some situations. Immediate attention with a paint brush, however, will eliminate thick runs and sags. Extremely thick areas or puddles need to be wiped up quickly using solvents that are listed below in the removal instructions.

Cor-Ban® 23 Instruction Manual

Tips For Drying Cor-Ban® 23:

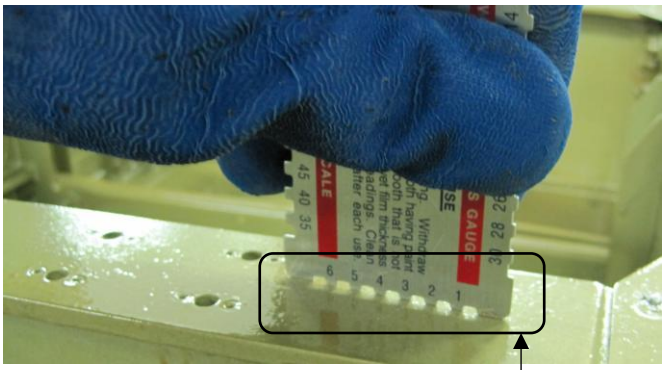
Cor-Ban® 23 typically will dry to a hard, tack free film in **45 minutes to 2 hours**. These dry times should be accurate provided that adequate ventilation was utilized and that the **Cor-Ban® 23** material was applied within the thickness range that was called out in the paragraph for the thickness that the dry material of **Cor-Ban® 23** should be applied at under **Tips For Measuring The Thickness of Cor-Ban® 23** section on the next page. The speed at which **Cor-Ban® 23** dries and cures at is also influenced by:

* Temperature
* Humidity
* Ventilation

In some areas of application, the **Cor-Ban® 23** coating should be cured sufficiently to prevent it from being transferred if it comes into contact with products and surfaces, such as insulation blankets.

Thickness For Cor-Ban® 23 Including Tips For Measuring That Thickness:

The application thickness of **Cor-Ban® 23** should be approximately **0.75 to 1.0 mils (19-25 microns) wet** and **0.50 mils (13 microns) dry**. For measuring the wet film thickness of **Cor-Ban® 23**, use protection for your hand so that you can push **Zip-Chem®** 's **Wet Film Thickness Gauge** as shown below into the **Cor-Ban® 23** material via hand after the **Cor-Ban® 23** has been allowed to flow for a few minutes.



The thickness of the **Cor-Ban® 23** can be determined by the visible tracks in the wet film that are left by the gauge fingers of the **Wet Film Thickness Gauge**. The dry film thickness of **Cor-Ban® 23** may be verified using paint thickness instruments.

Cor-Ban® 23 Instruction Manual

Removing Cor-Ban® 23:

Cor-Ban® 23 can be removed with an aliphatic naphtha based wipe solvent or its equivalents. **Cor-Ban® 23** can also be removed with corrosion preventive compound/corrosion inhibiting compound removers, such as:

* **Sur-Prep® 3160**
* **Sur-Prep® 3167**
* **D-5640NS/ZC-640**
* **Zip-Strip™ 125M**

Cured **Cor-Ban® 23** can be removed with:

* **Sur-Prep® 3160**
* **Sur-Prep® 3167**
* **Zip-Strip™ 125M**

See next pages for a demonstration of cured **Cor-Ban® 23** being removed with one of these CIC removers above.

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Removing Cured Cor-Ban® 23:

Steps for removing cured Cor-Ban® 23 using Sur-Prep® 3160, Sur-Prep® 3167, or D-5640NS/ZC-640

1.) Identify the area that needs the **Cor-Ban® 23** to be removed from.

2.) Spray the solvent, such as the **Sur-Prep® 3160, Sur-Prep® 3167,** or **D-5640NS/ZC-640** .

3.) Soak a rag with the solvent mentioned above.

4.) Wipe the area that was treated with the solvent with the rag that was soaked with the solvent.

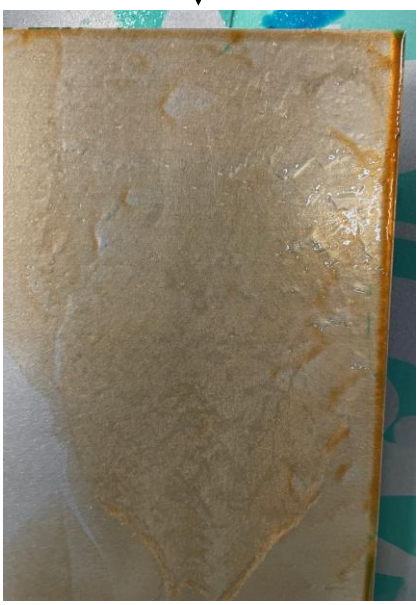
5.) Continue wiping until the area is clean

Cor-Ban® 23 Instruction Manual

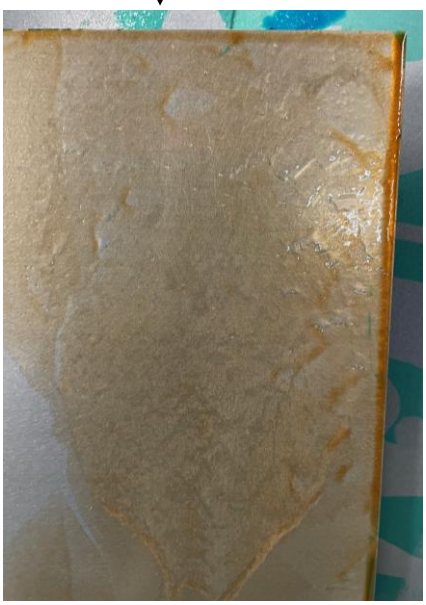
Removing Cured Cor-Ban® 23 (Continued From Page 9):

Removing Cor-Ban® 23 using Zip-Strip™ 125M

1.) Identify the area that needs the **Cor-Ban® 23** to be removed from.



2.) Spray the area with **Zip-Strip™ 125M**



3.) Allow **Zip-Strip™ 125M** to dwell on the area for **15 minutes or longer** depending on the tenacity of the CIC film.

4.) Rinse the area with water or take a water soaked rag and wipe up the area until it is clean.

Cor-Ban® 23 Instruction Manual

Cor-Ban® 23 Product Packaging Part Numbers, and Other Materials To Purchase:

Cor-Ban® 23
*Case of 12 of 16 fl oz (473 mL) Aerosols-**008017**
*Case of 12 each Quart (946 mL)-**010097**
*Case of 4 each Gallon (4 each of 3.8 Liter) Cans-**009401**
*5 Gallon (18.9 Liter) Pail-**008015**
*55 Gallon (208 Liter) Drum-**008016**
* Specialized forms of packaging available upon request

Zip-Strip™ 125M
*Case of 12 of 16 fl oz (473 mL) Aerosols-**102614**
*Case of 4 each Gallon (4 each of 3.8 Liter) Cans-**102608**
*5 Gallon (18.9 Liter) Pails-**102609**
*55 Gallon (208 Liter) Drum-**102610**
*Specialized forms of packaging available upon request

D-5640NS/ZC-640
*Case of 12 of 16 fl oz (473 mL) Aerosols **(D-5640NS)-002070**
*Case of 4 each Gallon (4 each of 3.8 Liter) Cans **(ZC-640)-009430**
*5 Gallon (18.9 Liter) Pails **(ZC-640)-002155**
*55 Gallon (208 Liter) Drum **(ZC-640)-008181**
*Special forms of packaging available upon request **(ZC-640)**

Sur-Prep® 3160
*Case of 12 of 16 fl oz (473 mL) Aerosols-**010938**
*Case of 4 each Gallon (4 each of 3.8 Liter) Cans-**008578**
*5 Gallon (18.9 Liter) Pails-**008579**
*55 Gallon (208 Liter) Drum-**008580**
*Case of 6 Canisters of Towelettes-**100026**
*Case of 120 Individual Towelettes-**011844**
*Specialized forms of packaging available upon request

Sur-Prep® 3167
*Case of 12 of 16 fl oz (473 mL) Aerosols-**103765**
*Case of 4 each Gallon (4 each of 3.8 Liter) Cans-**103762**
*5 Gallon (18.9 Liter) Pails-**103763**
*55 Gallon (208 Liter) Drum-**103764**
*Specialized forms of packaging available upon request

Wet Film Thickness Gauge
***100266**

Zip-Chem® Aerosol Trigger Sprayer
***010040**

Formit® Wands (12 Assemblies Per Package)
***Formit®-18-Fan-006224**
***Formit®-18-180-006226**
***Formit®-18-360-006227**
***Formit®-18-STD-FOG-008352**
***Formit®-18-90-FOG-008353**
***Formit®-29-360-101321**
***Formit®-36-360-009131**
***Formit®-48-360 with metal sleeve-009132**
***Formit®-48-360 without metal sleeve-100424**
***Formit®-48-Fan-008460**
***Formit® Sample Pack (3 each of Formit®-18-Fan, Formit®-18-180, Formit®-18-360, Formit®-18-STD-FOG-100107**

Bulk Application Equipment	Gloves	Protective Clothing	Respiration Devices	Spray Equipment	Protective Eyewear
Ventilation Equipment	Curing Devices	Masking Tape	Vacuum	Paint Thickness Instruments	Wiping Devices

Aliphatic naphtha based wipe solvents or equivalents

Cor-Ban® 23 Instruction Manual

Cor-Ban® 23 Product Pictures, Zip-Chem® Product Packaging Part Numbers, and Other Materials To Purchase (Continued From Page 11):

← ***Cor-Ban® 23**
1 Gallon (3.8 Liter) Can

← ***Cor-Ban® 23**
Quart (946mL) Unit

← ***Cor-Ban 23** 16 fl oz (473 mL) Aerosol Can
*NSN 8030-01-531-7361

Formit® NSN's: 4730-01-612-9914, 4730-01-661-8773 (**Formit®-18-Fan**); 6850-01-492-2942 (**Formit®-18-360**); 4730-01-632-0156 (**Formit®-18-STD-FOG**); 1560-01-658-8943 (with metal sleeve (**Formit®-48-360**); 4730-01-659-5461 (without metal sleeve) (**Formit®-48-360**); 4730-01-632-0157 (**Formit®-48-Fan**)

Sur-Prep® 3160 NSN: 6850-01-633-9843 (16 fl oz (473 mL) Aerosol)

D-5640NS NSN: 8030-01-597-6958 (16 fl oz (473 mL) Aerosol)

Zip-Strip™ 125M NSN's: 6850-01-695-8514 (5 Gallon (18.9 Liter) Pail), 6850-01-707-8887 (16 fl. oz (473 mL) Aerosol)

For application questions regarding **Cor-Ban® 23**, contact **Zip-Chem® Aviation Products** at (1) 408 782 2335 or zipchem@addevmaterials.com.

ZIP® CHEM Part of & ADDEV MATERIALS