# Section 4.0: Membrane Application

## 4.04 Precidium™ Membrane Application

**Pot Life:**

7 Seconds

**Flash times:**

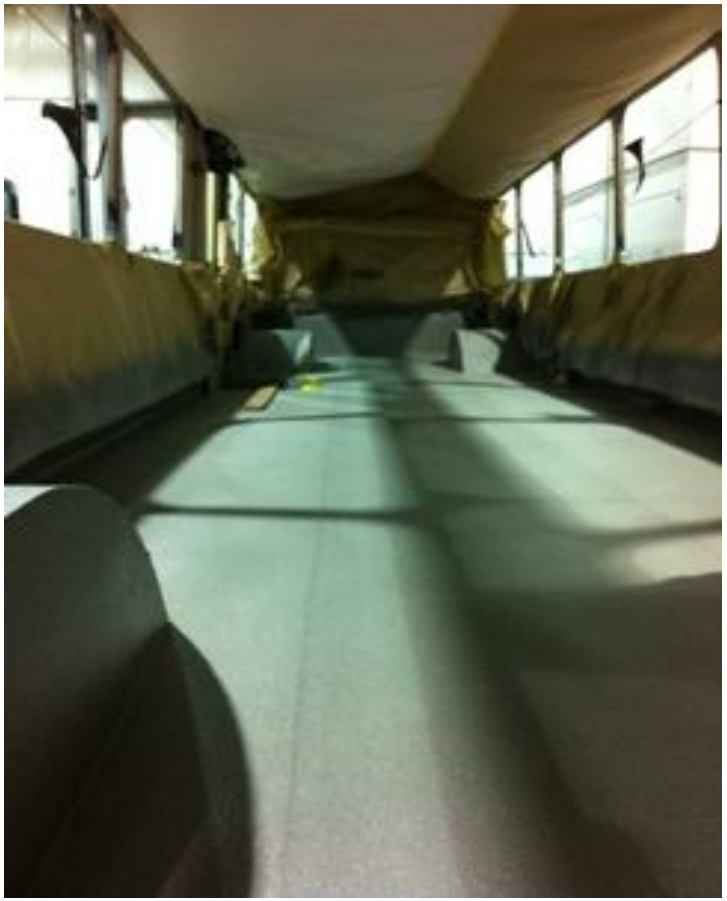
Has a 20 second tack free time.

Has a 30 minute recoat window, after 30 minutes it will not adhere to itself.

After 30 minutes the membrane is set up to work on.

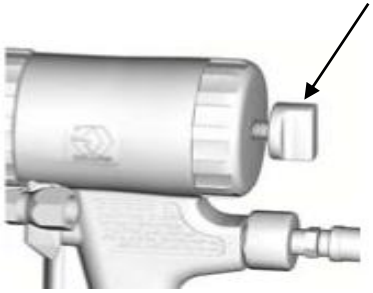
**Dry Film Thickness:**

100-125 mils

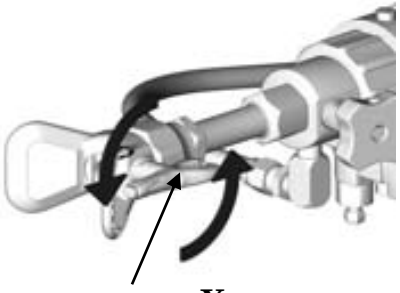


# Spray Gun Setup

**11. Disengage piston safety lock**



**12. Turn RAC tip (X) to spray position.**




**13. Test spray onto cardboard. Adjust pressure and temperature to get desired results.**

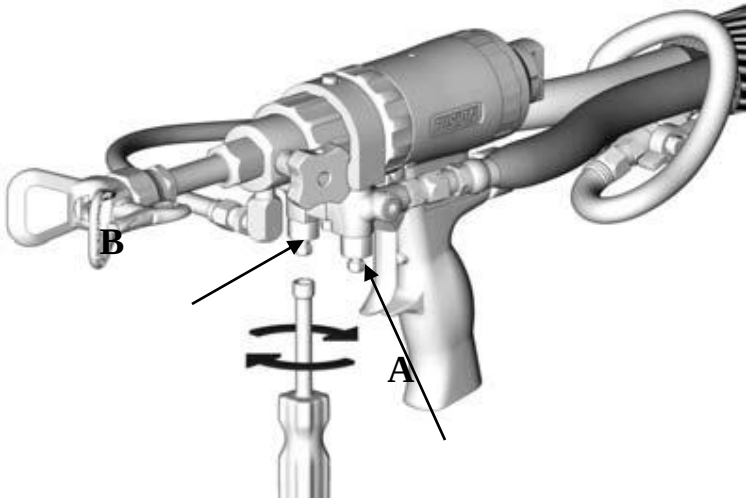
**14. Apply layer of lubricant over front of gun and lock ring, or use gun cover to prevent overspray buildup and ease disassembly. Gun is ready to spray.**

# Application Equipment & Settings

## Spray Gun Setup

**To avoid getting mixed coating material in the solvent purge valve and line**

- **Pressurize the solvent line before triggering the gun.**
- **Have an adequate solvent supply before spraying.**
- **Keep air purge out of solvent hose.**
- **Install an accessory check valve at purge valve inlet.**
- **Never trigger gun with solvent valve open.**



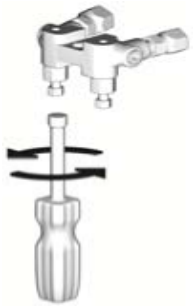

**9. Turn on proportional.**

**10. Open B (RESIN) fluid valve. Then open A (ISO) fluid valve.**

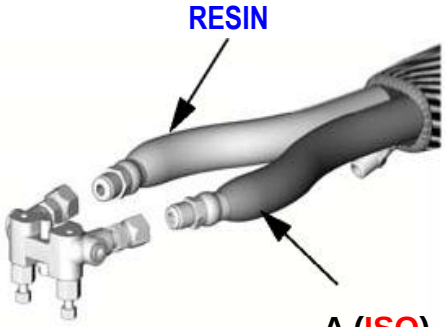
# Application Equipment & Settings

## Spray Gun Setup

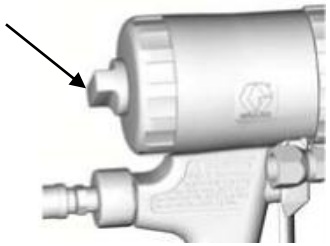
1. Close fluid valves A and B



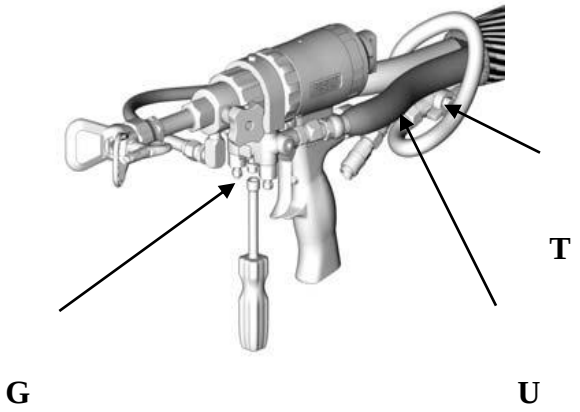
2. Connect A (ISO) and B (RESIN) fluid hoses to fluid manifold.




3. Engage piston safety lock.

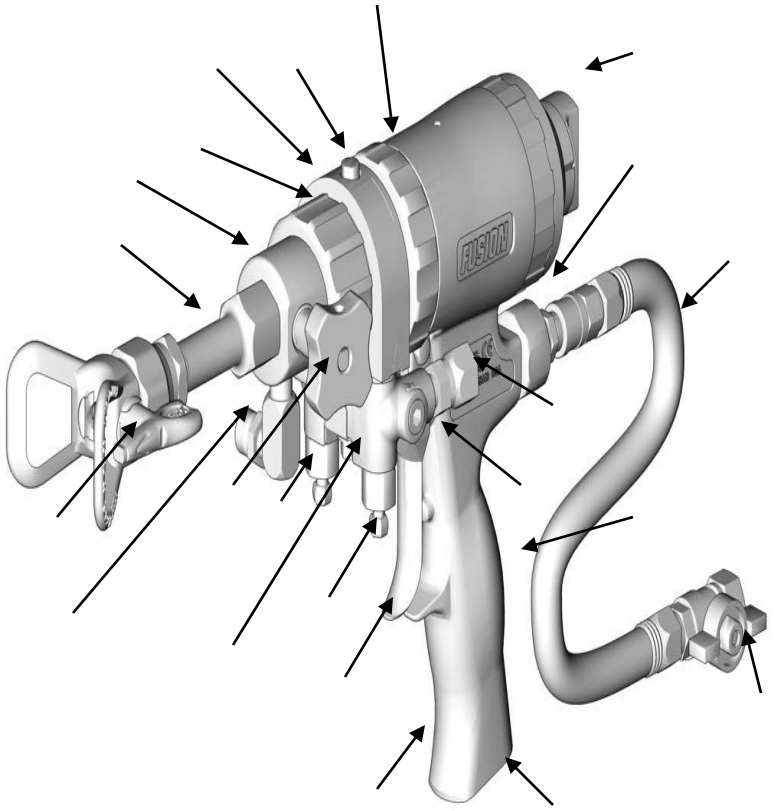


4. Connect gun air whip hose (T) and air valve (U*) to main air hose. Attach fluid manifold (G) to gun.



# Application Equipment & Settings A

Key:
A A Side Fluid Valve (ISO)
B B Side Fluid Valve (RESIN)
C Air Cap
D Air Line Quick Coupler
E Muffler
F Fluid Housing
G Gun Fluid Manifold
H Handle
J Optional Air Inlet
K Cleanoff Air Valve
L Piston Safety Lock
M Solvent Purge Assembly
N Optional Fluid Inlets (A Side Shown)
P Lock Ring
R Fluid Inlet Swivels (A Side Shown)
S Trigger
T Gun Air Whip Hose
U Air Valve
V Solvent Purge Valve
W Static Mixer
X RAC tip
Y Solvent Fluid Inlet

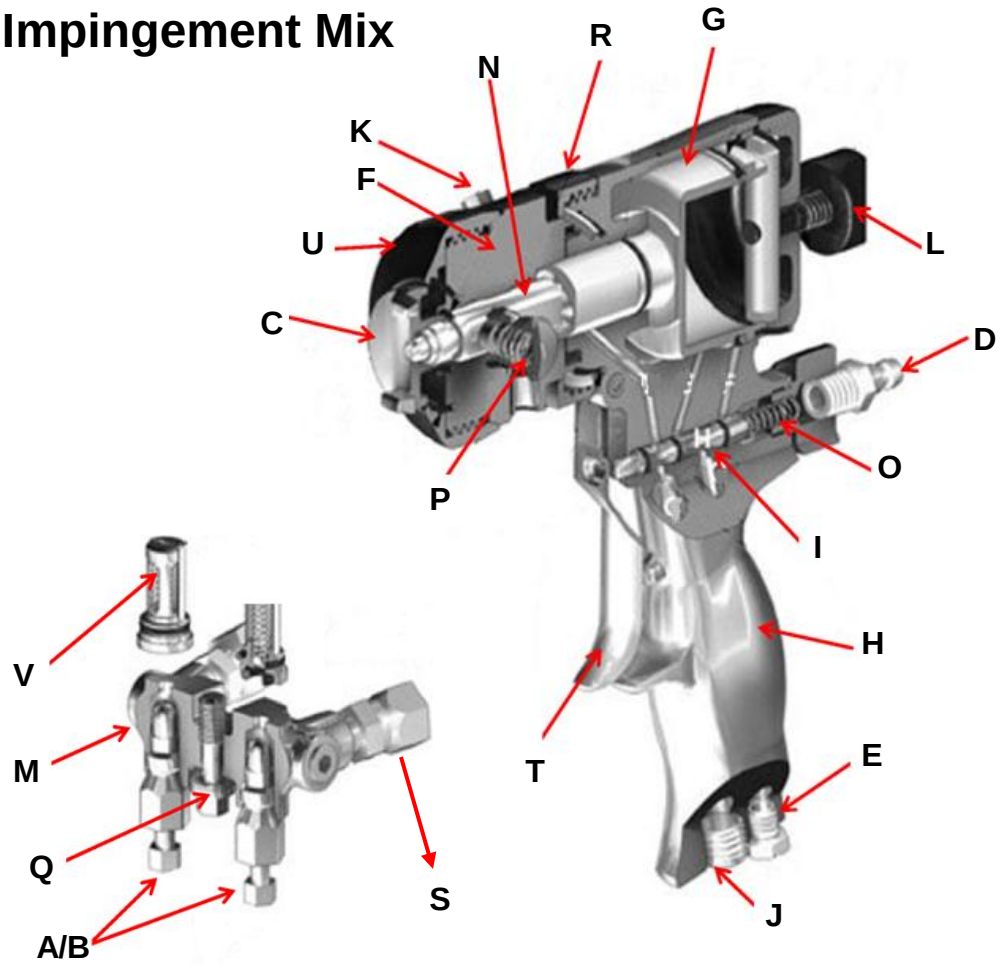


# Section 8.0: Application Equipment & Settings

## 8.09 Plural Component , Impingement Mix Air Purge Spray Gun

**Key:**

**A** - A Side Fluid Valve **(ISO)**
**B** - B Side Fluid Valve **(RESIN)**
**C** - Air Cap
**D** - Air Line Quick Coupler
**E -** Muffler
**F -** Fluid Housing
**G -** Piston
**H -** Handle
**I** - Spool Valve
**J -** Optional Air Inlet
**K -** Clean off Air Valve
**L -** Piston Safety Lock
**M** - Gun Fluid Manifold
**N** - Mix Chamber
**O** - Spring
**P-** ISO Side Seal Cartridge
**Q -** Mounting Bolt
**R -** Lock Ring
**S -** Fluid Inlet Swivels (A Side Shown)
**T -** Trigger
**U** - Front Retaining Ring
**V** - Check Valve/Filter

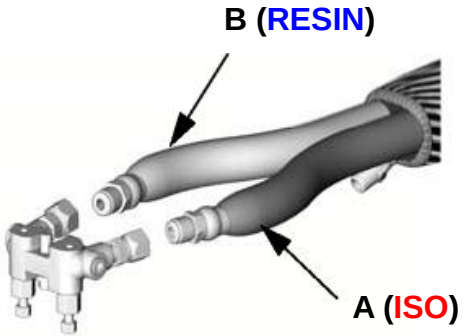


# Section 8.0: Application Equipment & Settings

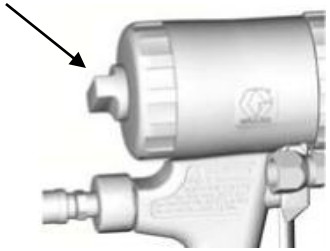
## 8.10 Spray Gun Setup

**1**. Close fluid valves A and B

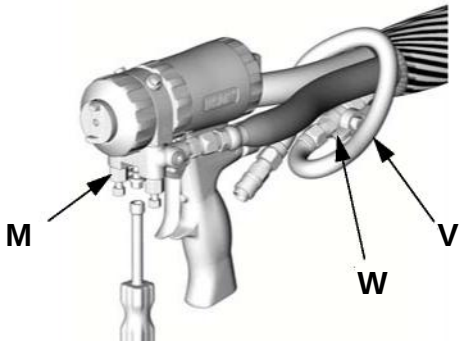
**2.** Connect A (ISO) and B (RESIN) fluid hoses to fluid manifold.




**3.** Engage piston safety lock.



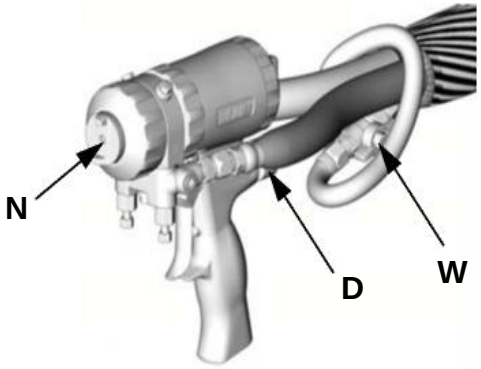
**4**. Connect gun air whip hose (V) and air valve (W*) to main air hose. Attach fluid manifold (M) to gun.



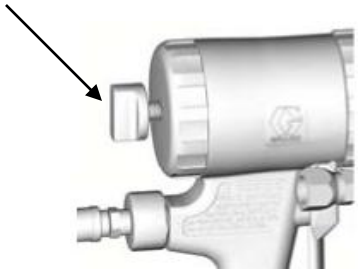
# Section 8.0: Application Equipment & Settings

## 8.11 Spray Gun Setup

**1**. Connect quick coupler (D). Turn on air. Open air valve (W*). Air should flow from nozzle (N).

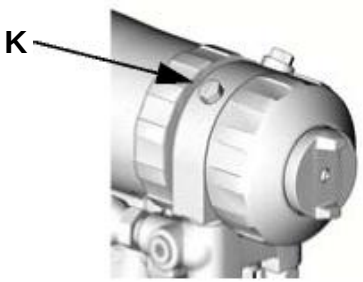



**2.** Disengage piston safety lock.



**3**. Trigger gun to check for full mix chamber travel. Front of air cap (C) should be approximately flush with front retaining ring (U).


**4**. Open clean off air valve (k) ¼- ½ turn and trigger gun to check air is flowing.



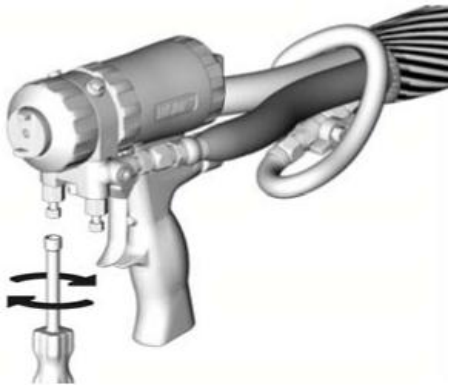
# Section 8.0: Application Equipment & Settings

## 8.12 Spray Gun Setup

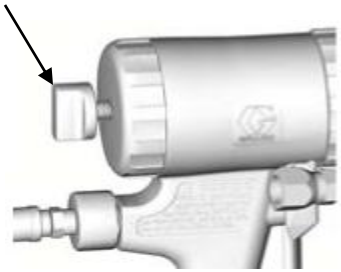
**1.** Engage piston safety lock.

**2.** Turn on proportioner.

**3.** Open B (RESIN) fluid valve (about three half turns). Then open A (ISO) fluid valve.



**4.** Disengage piston safety lock.



**5**. Test spray onto cardboard. Adjust pressure and temperature to get desired results.

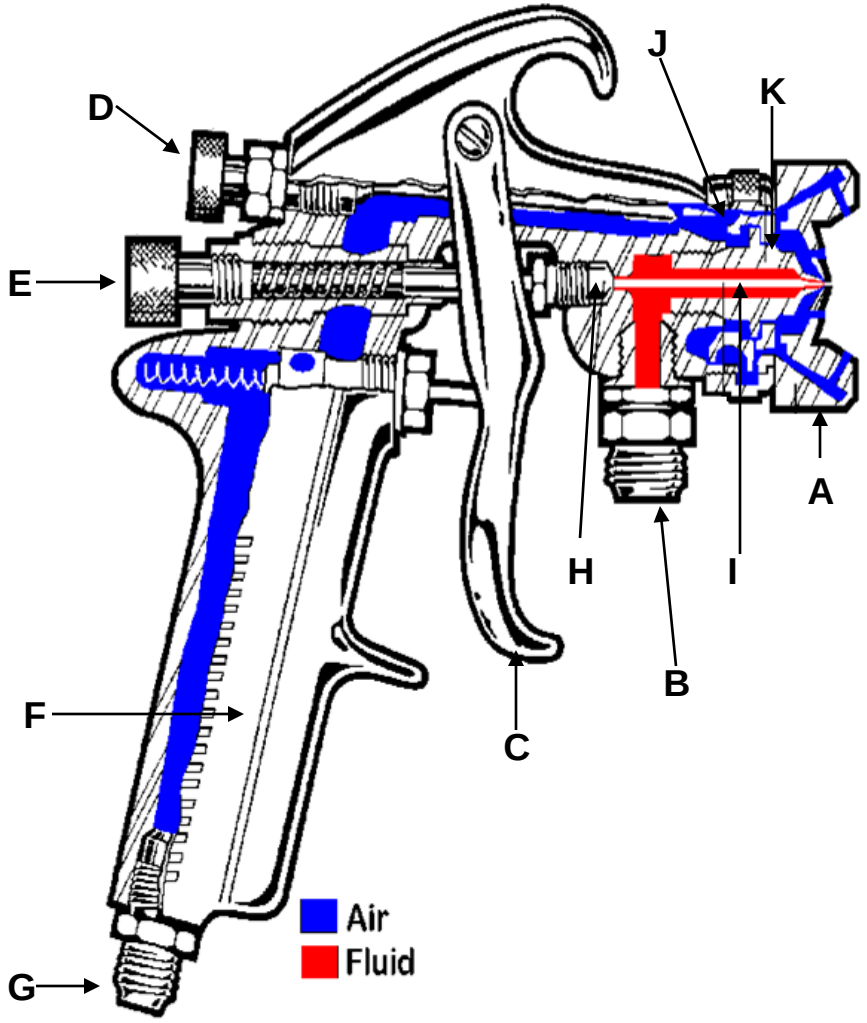
**6**. Apply layer of lubricant over front of gun and lock ring, or use gun cover to prevent overspray buildup and ease disassembly. Gun is ready to spray.

# Section 8.0: Application Equipment & Settings

## 8.13 Component Identification

**Conventional Spray Gun**

A – Air Cap
B – Fluid Inlet
C – Trigger
D – Pattern Control Knob
E – Fluid Control Knob
F – Handle
G – Air Inlet
H – Needle Packing
I – Fluid Needle
J – Baffle
K – Fluid Tip



# Section 9.0: Post Spray Clean Up

## 9.01 Preparation of Floor

1. Generally the floor should have 16 to 24 hours cure time before clean up is started.
2. Prior to foot traffic, protect center aisle with a roll of paper.
3. Everyone should be in socks or wearing Tyvek boot covers.
4. When the material is “green” it can be chemically stained, so it is important that **NO FOOD or BEVERAGES** are taken into the car during this curing time (up to one week).

# Section 9.0: Post Spray Clean Up

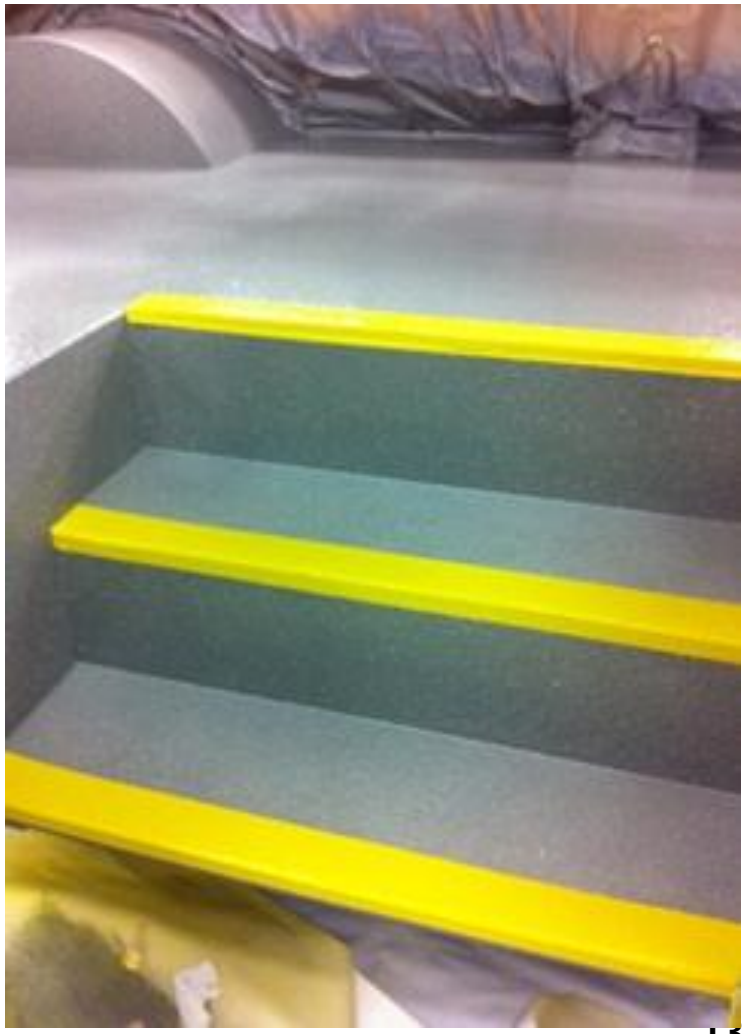
## 9.02 Removal of Wire Trim

1. First remove all wire trim, the angle the wire trim is pulled is important because this cuts the coating at the same angle.
2. The wire is pulled with a pair of pliers; it is possible to break the wire. If the wire breaks it is important to find the broken end and keep pulling that end. If the other end is pulled instead it is possible to pull the wire out instead of cutting the coating.
3. The floor should be inspected to ensure the Precidium™ Transit Floor terminates at the desired area. If the wire trim moved from the desired termination point during application it should be repaired before proceeding to next step.

# Section 9.0: Post Spray Clean Up

## 9.03 Removal of Paper/Plastic, Others

1. Once all wire trim is pulled and floor is inspected, remove all masking tape, paper, foil and plastic wrap.
2. Any residue that is left from masking tape should be scraped and wiped off.
3. Any termination points that are not determined with wire tape should be inspected. If these areas will have a joint that needs to sit flush to the substrate, trimming is required. This can be done with a sharp utility knife. It is important that this is done when the material is “green’’. After 72 hours the material becomes hard and difficult to cut.
4. If any overspray did get underneath the plastic wrap, it must be removed.
5. Any loose debris left on the floor should be swept or vacuumed.



# Section 10.0: Partial Surface Repair

# Section 10.0: Partial Surface Repair

## 10.04 Precidium™ 2100 Repair Membrane Mix Ratio

**Mix Ratio: 2:1 by volume**

**2 part Precidium™ 2100 Resin**

**1 part Precidium™ 2100 ISO**


# Section 10.0: Partial Surface Repair

## Precidium™ 2100 Repair Membrane Application


### 10.05 Application:

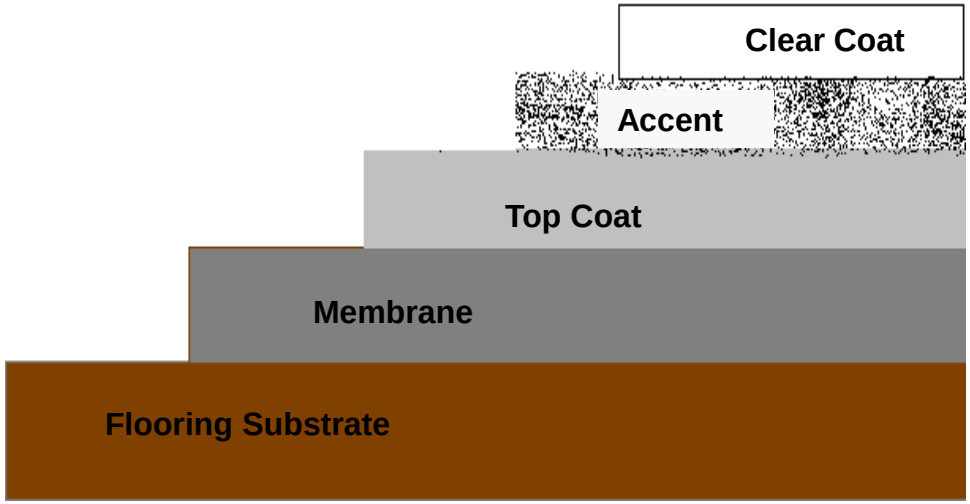
1. Mix **ISO** and **Resin** thoroughly, taking care to avoid incorporating any air.
2. Mixing the **ISO** and **Resin** should not take more than 1-1/2 minutes total.
3. Precidium™ 2100 has a 20-minute pot life and must be used within this time.
4. Pour enough Precidium™ 2100 to ensure the repair is slightly lower than the rest of the floor to ensure a level finish when the topcoat, accent and clear coat are applied.
5. Apply topcoat when membrane is tack free, finger can be held to film with moderate pressure for 15 seconds; after 15 seconds the finger should lift without any resistance and does not leave an impression.

# Section 10.0: Partial Surface Repair

## Precidium™ 2100 Repair Membrane

### 10.06 Membrane Repair

1. Follow Topcoat application as per Section 5.
2. Follow Accent Color application as per Section 6.
3. Follow Clear Coat application as per Section 7.
4. Once the final coat of clear is cured (16 hours) you may begin clean up. Follow clean up process as per Section 9.



# Section 10.0: Partial Surface Repair

## 10.07 Repairs

## 10.08 Blister Repair

A. While installing the Precidium™ Transit Floor, blisters can occur. It is important that one understands the type of blister and what the cause is. After these two variables have been determined one must learn the proper repair technique. It is important to remember that there are different types of blisters and each type has different causes. For evaluation of each blister it must be cut open and examined carefully.

## 10.09 Contaminated Substrate

A. A contaminated substrate is the most common cause of blisters. Within this type of blister there are several causes. **Note: These blisters almost always have a smooth finish on the bottom of the blister.**

**10.10 Moisture/Solvent Blistering:** This is when moisture is on the surface of the substrate or in the substrate that is to be coated. The exothermic reaction of the Precidium™ Base Coat curing, heats the moisture/solvent. This rise in temperature causes expansion and off-gassing of moisture/solvent. This causes ballooning and pinholing of the coating.

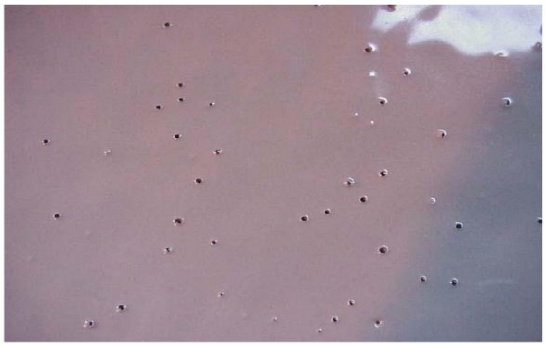


**Figure 1 Ballooning and Pinholing**

## 10.11 Solution:

The repair for this issue is to sand down all balloon ridges and fill the void with **Precidium™ 2100.** Be sure to work material in the voids with a hand trowel with multiple passes from multiple directions.

# Section 10.0 Partial Surface Repair

**10.12 Prevention:** Ensure substrate is allowed to dry for a minimum of 16 hours after it has been solvent wiped. Also ensure the applicator is not perspiring on the subfloor during application.

**10.13 Rust, Dirt, Corrosion, etc.:** This type of blistering is better described as delamination, but at first glance it can look like a blister. The basic mechanism seen is the elastomeric floor coating is applied to a separated substrate that is not the subfloor. This other substrate (rust, dirt, etc.) has very little too no adhesion to the surface. When the surface is heated by the exotherm of the coating being applied, the primer which could not adhere to the subfloor will delaminate. This can be caused by any substrate contamination. This type of blistering is the most preventable, by using good surface preparation techniques.

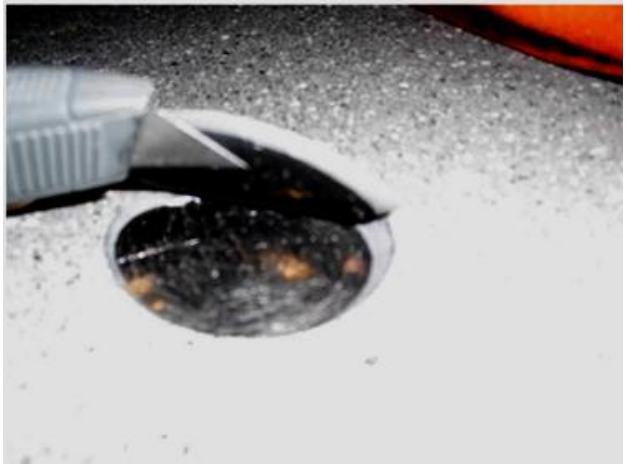


**Figure 2: Delamination caused by Rust**

**10.14 Solution:** Cut open the blister at the outer diameter. This cut should make a beveled edge. Clean out the containments, scuff and solvent wipe. Pour **Precidium™ 2100** into blister, close blister and hold down with a weight. Any excess **Precidium™ 2100** coming out of the seams can be wiped. After a minimum of 12 hours the weights can be removed. If this is done after the **Precidium™ Top Coat**, the Top Coat should be reapplied.

**10.15 Prevention:** This is easily prevented by always ensuring the surface is clean of all rust, dirt, residue and any other contamination.

# Section 10.0: Partial Surface Repair

**10.22 Base Coat not applied in the Primer Coat's recoat window.** Two scenarios can occur, first, if the primer is recoated too soon or second, if the primer is recoated too late. When the primer is recoated too soon one common problem seen is the primer is tacky and traffic on the floor incorporates foreign contaminates which could cause an irregular surface profile. The primer must be recoated within 16 hours to achieve optimum adhesion. When this window has passed there is a greater chance for the floor to delaminate from the primer.

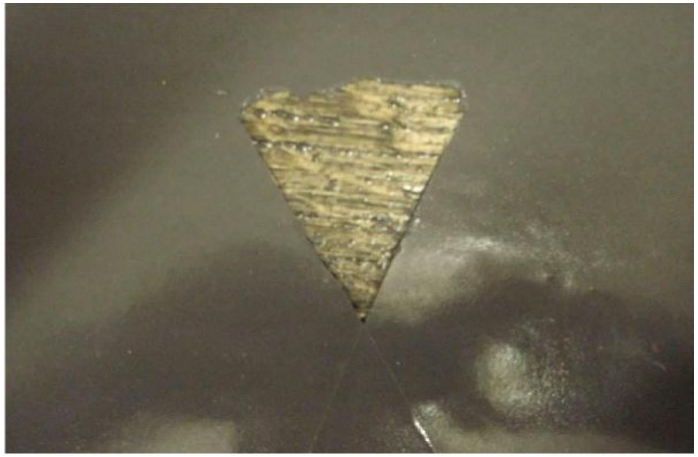


**Figure 3 Delamination of Base Coat from Primer**

**10.23 Solution:** Scuff and solvent wipe the primer. Mix and fill delaminated area with **Precidium™ 2100**. If the primer was recoated after a long period of time (>48 hours) then general adhesion to the floor would be poor. Reapplication of the base coat might be the best solution.

**10.24 Prevention:** If the window for recoat has passed 16 hours the floor should be scuffed, and solvent wiped, after which the floor can be primed again.

# Section 10.0: Partial Surface Repair

### 10.25 ISO/Rich Blister

These blisters are caused during application. Generally there will be a spike or drop in pressure on one component during application. A proficient applicator will feel this while spraying and can identify the area where this happened. When this pressure change occurs the material is mixed **off ratio.** When this happens a blister is formed. Resin Rich blisters will be gummy and wet underneath the blister. This material will always remain in a liquid/gel state.

**Figure 4 Resin Rich Blister, Wet and Gummy to touch**

**10.26 Solution:** Cut out blister and dispose. Clean substrate by scuffing and solvent wiping, then level off the blister with **Precidium™ 2100**.

**10.27 Prevention:** Always ensure that the screens in the gun and equipment are cleaned. Ensure the mix module is drilled out regularly during application.

# Section 10.0: Partial Surface Repair

## 10.28 ISO Rich Blisters

Will be rough and scaly. This material will eventually cure from moisture in the atmosphere and substrate.

**Figure 5 ISO Rich Blister, Rough and Scaly appearance**

**10.29 Solution:** Cut out blister and dispose. Clean substrate by scuffing and solvent wiping, then level off the blister with **Precidium™ 2100**. If it was only slightly off ratio it is possible the ISO has already cured. If this is the case the blister can be cleaned, scuffed and solvent wiped, after which **Precidium™ 2100** can be poured into the blister and held down with a weight until cured (min. 12 hours).

**Prevention:** Always ensure that the screens in the gun and equipment are cleaned. Ensure the mix module is drilled out regularly during application.

## 10.30 Surface Profile

A. After the **Precidium™ Base Coat** is applied, the floor is thoroughly inspected for irregularities in the surface profile. This includes high/low ridges, any particles coated, voids, cracks, and shadows. This is more of an aesthetic finish.

## 10.31 High/Low Profile

A. Any areas that have any sprayed particles or high spots can be sanded flush with a palm sander. This is done to the **Precidium™ Base Coat**, before the **Precidium™ Splash Accent** Colors are applied.

# Section 10.0: Partial Surface Repair

## 10.32 Particles, Shadows, Cracks, and Voids

Any particles that were sprayed on the floor should be noticeable. These should be removed and repaired in between passes of the **Precidium™ Base Coat.**

If improper spray technique is used when spraying cove bases around the seats a shadow can form. This will appear as a crack. This is preventable by spraying as close to 90 degrees from vertical surface as possible. This is repaired by cutting smooth with a utility knife and if necessary spraying more **Precidium™ Base Coat.**

Any cracks and voids that are not prepared properly will be apparent after the floor is sprayed with the **Precidium™ Base Coat**.

## 10.33 Unwanted Termination Point

A. If the wire trim tape shifted before the **Precidium™ Base Coat** is sprayed, the termination will vary from the desired point. This normally will be 0-1 inch inside the desired termination point. This is repaired with filling the spot with polyurethane caulking. After the caulk cures overnight the **Precidium™ Color Coat, Splash Accent Coats,** and **Top Coat** are reapplied. This is done without masking any defined lines, it is to be feathered in so no transition can be seen.

## 10.34 Inconsistent Splash Accent Colors

If the Splash Accent Colors are noticeably inconsistent in the car, remediation is possible. It should be known that Splash Accent Colors do have a range of tolerance for the amount of given texture. This tolerance is in place for two reasons: 1. Human error, a person can only apply floor within such a tolerance of consistency; 2. Ability to hide dirt and spills on floor. The more random the texture is of the Splash Accent Colors the better the floor can hide dirt and residue.

If a spot was missed during the application, it can be touched up with a second pass in the desired area.

If an area is too heavy with Splash Accents and unacceptable it can be masked off without a define line. Then the **Precidium™ Color Coat** is applied, followed by the **Precidium™ Splash Accent Coats**.

# Section 10.0: Partial Surface Repair

**10.35 Post Installation Damage**

A. Due to the work that still has to be done in the car, post installation damage can happen, and can be easily repaired. Fixing the damage is done using the above techniques followed by reapplying the **Precidium™ Color Coat**, **Precidium™ Splash Accent Coats** and **Precidium™ Top Coat**.

**10.36 Chemical Damage**

A. During the first week of curing, the **Precidium™ Top Coat** is more susceptible to staining. If a chemical stain is found, the top can be scrubbed with a Scotch-Brite pad. Following removal of the stain, the **Precidium™ Top Coat** can be reapplied.

**10.37 Physical Damage**

Each instance of physical damage will have a specific repair. Large areas of damage will have to be removed, filled with **Precidium™ 2100**, sanded flush, and the **Precidium™ Color Coat, Splash Accents**, and **Top Coat** re-applied.

Medium areas of damage could possibly be just scuffed, solvent wiped, filled with **Precidium™ Color Coat**. Depending on the size, they may also be sprayed with the **Precidium™ Splash Accents**, and **Top Coat**.

Small areas of damage can possibly just be filled with **Precidium™ Top Coat**.