

## Safety Steps and Procedures To Follow Prior To Applying Sur-Prep® 5680:

Always refer to the safety data sheet (SDS) and technical data sheet (TDS), and label prior to applying **Sur-Prep® 5680** if you have any questions.

Always wear gloves, protective clothing, and protective eyewear to prevent **Sur-Prep® 5680** from contacting the skin and eyes.

Have wiping devices and spill containment vessels available to collect any **Sur-Prep® 5680** that may get spilled.

## Sur-Prep® 5680 Features and Benefits:

**Sur-Prep® 5680** is a non-ozone depleting and non-flammable contact cleaner and defluxer that evaporates quickly and has low toxicity levels.

**Sur-Prep® 5680** solubilizes a wide range of soils and surface contaminants including fluorinated greases and soils and cleans resin solder flux residues.

**Sur-Prep® 5680** has a very low surface residue along with a low odor and a low GWP and is ideal for use as a defluxer.

## Areas Where Sur-Prep® 5680 Should Be Applied To:

**Sur-Prep® 5680** should be applied on electronic components and energized circuits

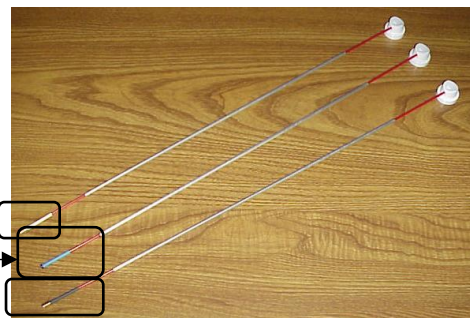
## Methods For Applying Sur-Prep® 5680:

**Sur-Prep® 5680** can also be applied on FEP/PFA, Nylon, Polyester, Polyethylene, Polypropylene, and Teflon plastics as well as Kalrez, Parafleur, PTFE w/ EPDM, PTFE w/ Neoprene, and Ryton elastomers.

**Sur-Prep® 5680** can be sprayed into problem areas to loosen, lift, and flush away heavy deposits of oils, greases, and rosin solder flux residues.

Use the following methods for applying **Sur-Prep® 5680**:

- \*Bulk Application Equipment
- \*Spray Equipment
- \*Aerosol Cans
- \***Formit®** Extension Wands-For use with all **Zip-Chem®** aerosols to reach difficult to access areas, such as stringer edges.
- \***Zip-Chem®** Aerosol Trigger Sprayer For Use With Any **Zip-Chem®** Aerosol



\***Formit® 360° Spray (White Tube) Wand**

\***Formit® Fan Spray Spray (Blue Tube) Wand**

\***Formit® 180° Spray (Black Tube) Wands**

**Formit® 360° Spray** Demonstration Video



**Formit® Fan Spray** Demonstration Video



**Formit® 180° Spray** Demonstration Video



**Zip-Chem® Aerosol Trigger Sprayer**

## Methods For Applying Sur-Prep® 5680 (Continued From Page 1):

### 1.) HVLP Spray Gun Setup

- A.) Set the air pressure. This is very important because if there is too much pressure, then the texture and spray of **Sur-Prep® 5680** will be dry. Too little pressure however, results in a poor atomization and orange peeling of **Sur-Prep® 5680**.
- B.) If you see texture in the spray of **Sur-Prep® 5680**, then increase the air pressure of your **HVLP gun**. If you see an overspray cloud of **Sur-Prep® 5680**, then decrease the air pressure slightly. The proper spray pattern for **Sur-Prep® 5680** should be a **slightly wet pass** with **no flooding or sagging** because thinly applied products like **Sur-Prep® 5680** can run very fast.
- C.) One pattern that should be used when using the **HVLP gun** to apply **Sur-Prep® 5680** is the **fan pattern** because it uses a **full wide fan spray** which provides better consistency and leveling when applying **Sur-Prep® 5680** 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.

HVLP Spray Gun



### 2.) Air Assisted Spray Gun Setup

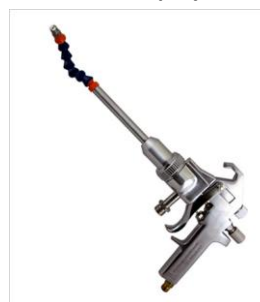
- A.) Determine the tip size for the gun. This is very important especially for a thin material, such as **Sur-Prep® 5680**.

**Note:** Do not increase the gun tip size especially to **.015 " or more** when applying **Sur-Prep® 5680** because the applied material will exhibit the following characteristics below.

- \*Too much **Sur-Prep® 5680** being applied
- \***Sur-Prep® 5680** runs
- \*Orange peel in the **Sur-Prep® 5680**
- \*An overspray cloud in the applied **Sur-Prep® 5680**

- B.) For pressure settings, use the lowest pressure possible so that **Sur-Prep® 5680** can be spray applied as a **clean fan** with the width of the spray being shaped like a **fan**. The setup of **air assisted spray gun** varies based on the size and type of gun that is being used but 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 **Sur-Prep® 5680** 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 **Sur-Prep® 5680**, then the pressure of the **air assisted spray gun** is too high. None of these observations should occur because thin materials like **Sur-Prep® 5680** atomize very easily.
- D.) Set the pump ratio of the equipment to a range of **70:1 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**

Airverter Spray Gun



## Methods For Applying Sur-Prep® 5680 (Continued From Page 2):

### Air Assisted Spray Gun Setup (Continued From Page 2)

- 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 **Sur-Prep® 5680** at a distance closer than **12"**, then there will be a heavy buildup of **Sur-Prep® 5680**, tiger stripping of material from the surface where the **Sur-Prep® 5680** was applied and a variation in the gloss of the **Sur-Prep® 5680**.
- G.) Consider the passing speed of **Sur-Prep® 5680** because the output of **Sur-Prep® 5680** 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 **Sur-Prep® 5680** 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 <b>Sur-Prep® 5680</b>	More aggressive fan spray of <b>Sur-Prep® 5680</b>
Slow <b>Sur-Prep® 5680</b> output	Fast output of <b>Sur-Prep® 5680</b>
Very forgiving when applying <b>Sur-Prep® 5680</b>	<b>Sur-Prep® 5680</b> can run quickly
Less overspray bounce of <b>Sur-Prep® 5680</b>	More fogging potential for <b>Sur-Prep® 5680</b> than with <b>HVLP</b> spray method

### 3.) Airless Spray Setup

- A.) Determine the tip size for the gun. This is very important especially for a thin material, such as **Sur-Prep® 5680**.

**Note:** Do not increase the gun tip size especially to **.015 " or more** when applying **Sur-Prep® 5680** because the applied material will exhibit the following characteristics below.

- \*Too much **Sur-Prep® 5680** being applied
- \***Sur-Prep® 5680** runs
- \*Orange peel in the **Sur-Prep® 5680**
- \*An overspray cloud in the applied **Sur-Prep® 5680**

Airless Spray Equipment



- B.) For pressure settings, use the lowest pressure possible so that **Sur-Prep® 5680** 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 **Sur-Prep® 5680** 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 **Sur-Prep® 5680**, then the pressure of the airless spray gun is too high. None of these observations should occur because thin materials like **Sur-Prep® 5680** atomize very easily.
- D.) Set the pump ratio of the equipment to a range of **70:1 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 **Sur-Prep® 5680** at a distance closer than **12"**, then there will be a heavy buildup of **Sur-Prep® 5680**, tiger stripping of material from the surface where the **Sur-Prep® 5680** was applied, and a variation in the gloss of the **Sur-Prep® 5680**.

## Methods For Applying Sur-Prep® 5680 (Continued From Page 3):

### Airless Spray Setup (Continued From Page 3)

G.) Consider the passing speed of **Sur-Prep® 5680** because the output of **Sur-Prep® 5680** 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 **Sur-Prep® 5680** 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 <b>Sur-Prep® 5680</b>	More aggressive fan spray of <b>Sur-Prep® 5680</b>
Slow <b>Sur-Prep® 5680</b> output	Fast output of <b>Sur-Prep® 5680</b>
Very forgiving when applying <b>Sur-Prep® 5680</b>	<b>Sur-Prep® 5680</b> can run quickly
Less overspray bounce of <b>Sur-Prep® 5680</b>	More fogging potential for <b>Sur-Prep® 5680</b> than with <b>HVLP</b> spray method

### 4.) Sur-Prep® 5680 5 Gallon (18.9 Liter) Cart Sprayer Setup

A.) Determine the tip size for the gun. This is very important especially for a thin material such as **Sur-Prep® 5680** including thin coatings, such as clears and sealers.

**Note:** Do not increase the gun tip size especially to **.015 " or more** when applying **Sur-Prep® 5680** because the applied material will exhibit the following characteristics below.

- \*Too much **Sur-Prep® 5680** being applied
- \***Sur-Prep® 5680** runs
- \*Orange peel in the **Sur-Prep® 5680**
- \*An overspray cloud in the applied **Sur-Prep® 5680**

B.) For pressure settings, use the lowest pressure possible so that **Sur-Prep® 5680** can be spray applied as a **clean fan** with the width of the spray being shaped like a **fan**. The setup of **5 Gallon (18.9 Liter) Cart Sprayer** varies based on the size and type of gun that is being used but a good starting point for the pressure of the **5 Gallon (18.9 Liter) Cart Sprayer** should be around **900-1200 PSI**.

C.) Slowly increase the pressure of the gun until the **fan spray** pattern of **Sur-Prep® 5680** 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 **Sur-Prep® 5680**, then the pressure of the gun is too high. None of these observations should occur because thin materials like **Sur-Prep® 5680** 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 **5 Gallon (18.9 Liter) Cart Sprayer** 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 **5 Gallon (18.9 Liter) Cart Sprayers** and other spray methods can vary. A good distance to follow for airless spray guns is about **12" or more**. If you spray apply **Sur-Prep® 5680** at a distance closer than **12"**, then there will be a heavy buildup of **Sur-Prep® 5680**, tiger stripping of material from the surface where the **Sur-Prep® 5680** was applied, and a variation in the gloss of the **Sur-Prep® 5680**.

G.) Consider the passing speed of **Sur-Prep® 5680** because the output of **Sur-Prep® 5680** from **5 Gallon (18.9 Liter) Cart Sprayers** 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 **Sur-Prep® 5680** should be spray applied as a **smooth continual pass** with a **50% overlap**.

## Methods For Applying Sur-Prep® 5680 (Continued From Page 4):

### Sur-Prep® 5680 5 Gallon (18.9 Liter) Cart Sprayer Setup (Continued From Page 4)

I.) The table below lists some differences between the HVLP spray method and the 5 Gallon (18.9 Liter) Cart Sprayer spray methods.

HVLP	Sur-Prep® 5680 5 Gallon (18.9 Liter) Cart Sprayer
Soft spray of Sur-Prep® 5680	More aggressive fan spray of Sur-Prep® 5680
Slow Sur-Prep® 5680 output	Fast output of Sur-Prep® 5680
Very forgiving when applying Sur-Prep® 5680	Sur-Prep® 5680 can run quickly
Less overspray bounce of Sur-Prep® 5680	More fogging potential for Sur-Prep® 5680 than with HVLP spray method

### 5.) Electro-Static Spray Gun Setup

### Electro-Static Spray Gun

- A.) Minimize the flow of Sur-Prep® 5680 for the required coating speed and film thickness.
- B.) Minimizing the target distance of spraying Sur-Prep® 5680.
- C.) Ensure that the Sur-Prep® 5680 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 Sur-Prep® 5680.
- E.) Gradually increase in-line air pressure so that the spray provides proper Sur-Prep® 5680 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 Sur-Prep® 5680.



It is important to ensure that the HVLP, air assisted, airless, 5 Gallon (18.9 Liter) Cart Sprayer, or electrostatic paint gun for applying Sur-Prep® 5680 are properly setup for the following reasons below.

- \*Decrease odor, fogging, and mist from the application of Sur-Prep® 5680
- \*Increase the transfer efficiency of the Sur-Prep® 5680 from the equipment to the area it needs to be applied to
- \*Ensure that Sur-Prep® 5680 will be applied according to how it was designed to be applied with respect to optimum weight to performance balance

## Sur-Prep® 5680 Compatibility On Elastomers and Plastics:

Listed below is the plastics and elastomers that Sur-Prep® 5680 is and is not compatible with.

#### Plastics

ABS: **Incompatible**  
 Acrylic (PMMA): **Incompatible**  
 FEP/PFA: **Compatible**  
 Nylon: **Compatible**  
 Polyacrylate: **Incompatible**  
 Polycarbonate: **Incompatible**  
 Polyester: **Compatible**  
 Polyethylene: **Compatible**  
 Polypropylene: **Compatible**  
 Polystyrene: **Incompatible**  
 Teflon: **Compatible**

#### Elastomers

Buna N: **Incompatible (Reversible Swelling Upon Exposure)**  
 EPDM Rubber: **Incompatible (Reversible Swelling Upon Exposure)**  
 Fluorosilicone: **Incompatible**  
 Hypalon: **Incompatible (Reversible Swelling Upon Exposure)**  
 Kalrez: **Compatible**  
 Parafluor: **Compatible**  
 PTFE w/ EPDM: **Compatible**  
 PTFE w/ Neoprene: **Compatible**  
 Rytan: **Compatible**  
 Silicone: **Incompatible (Reversible Swelling Upon Exposure)**  
 Viton: **Incompatible (Reversible Swelling Upon Exposure)**

## Sur-Prep® 5680 Effectiveness In Removing Loctite 5910:

Sur-Prep® 5680 is effective in breaking down certain compounds so that they can be scraped off, such as Loctite 5910.

1.) Spray panel with Loctite 5910. Below is the panel that was sprayed with Loctite 5910 before Sur-Prep® 5680 was applied to it.



2.) Spray panel with Sur-Prep® 5680 and let it dwell for 10-15 seconds. After the Sur-Prep® 5680 dwells for for 10-15 seconds, scrape the Loctite 5910. As you can see below, the Loctite 5910 is starting to peel off of the panel on the first scraping.



3.) Picture of Loctite 5910 coated panel after it was sprayed with additional Sur-Prep® 5680 and after additional scraping. As you can see below, the majority of the Loctite 5910 has been removed from the panel where a lot of bare metal is being exposed.



Below is a demonstration of Loctite 5910 being scraped from a panel after the substrate was sprayed with Sur-Prep® 5680.



## Sur-Prep® 5680 Product Packaging Pictures and Other Materials To Purchase:

### Sur-Prep® 5680

- \*Case of 12 of 16 fl oz (473 mL) Aerosols-**106592**
- \*Case of 4 each Gallon (4 each of 7.8 Liter) Cans-**106593**
- \*5 Gallon (18.9 Liter) Pails-**106594**
- \*55 Gallon (208 Liter) Drums-**106595**
- \*Special packaging upon request

### Zip-Chem® Aerosol Trigger Sprayer

\* **010040**

Protective Eyewear | Gloves | Bulk Application Equipment

Spray Equipment | Scraping Equipment | Wiping Devices

Spill Containment Vessel

### 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® Sample Pack (3 each of Formit®-18-Fan, Formit®-18-180 Formit®-18-360, Formit®-18-STD-FOG-100107)

Formit® NSN's: 4730-01-612-9914, NSN: 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), 4730-01-659-5461(without metal sleeve) (Formit®-48-360); 4730-01-632-0157 (Formit®-48-Fan)



← Sur-Prep® 5680 1 Gallon (3.8 Liter) Can    Sur-Prep® 5680 16 fl oz (473 mL) Can →



For application questions regarding Sur-Prep® 5680, contact Zip-Chem® Aviation Products at (1) 408 782 2335 or [zipchem@addevmaterials.com](mailto:zipchem@addevmaterials.com).