Calla® 301A Instruction Manual

Safety Steps and Procedures To Follow Prior To Applying Calla® 301A:

Always refer to the safety data sheet (SDS), technical data sheet (TDS), and label prior to applying **Calla® 301A** if you have any questions about the product.

Always wear gloves, protective clothing, and protective eyewear to prevent **Calla® 301A** from making contact with the skin and eyes.

Calla® 301A Product Information and Benefits:

Calla® 301A is approved to the **US EPA Safer Choice*** program and is a uniquely formulated all purpose and heavy duty cleaner and degreasing compound that is non-flammable, non-corrosive, contains no irritating vapors, and is not categorized as a biocide.

Calla® 301A removes grease, oils, carbon, hydraulic fluid, dirt, and many soils that resist other cleaners.

Calla® 301A solubilizes and lifts a wide variety of contaminants without the use of abrasives or harsh solvents.

Calla® 301A does not harm acrylic paint or other paints used on equipment, machines, or automobiles (if used as directed).

Calla® 301A does not harm aluminum, magnesium, all structural metals, copper, steel, other metals, quality paints, primers, wiring on motors, and acrylic plastics.

Calla® 301A rinses easily and leaves no residue or stain even if it dries on the surface.

EPA certification does not constitute endorsement of this product. The **Safer Choice** label or **Design for the Environment** logo signifies that the **product**'s formula, as **Zip-Chem®** has represented it to the **EPA**, contains ingredients that meet stringent **EPA** criteria for effects on human health and the environment. **EPA** relies solely on **Zip-Chem®**, its integrity and good faith, for information on the **product**'s composition, ingredients, and attributes. **EPA** has not independently identified, that is, via chemical analysis, the ingredients in the **product formula**, nor evaluated any of **Zip-Chem®** 's non-ingredient claims. **EPA** provides its evaluation only as to the **product**'s human health and environmental characteristics, as specified in the **Safer Choice** and **Design for the Environment Standard** and based on currently available information and scientific understanding.

Areas Where Calla® 301A Can Be Applied:

Calla® 301A is intended to be used on aircraft, equipment, machines, automobiles, aluminum, magnesium, all structural metals, copper, steel, other metals, quality paints, primers, wiring on motors, acrylic plastics, acrylic paints, or other paints.

Procedure For Dilluting The Concentrate Version of Calla® 301A:

Use **Calla® 301A** at different dilutions based upon the amount of soil and grease that needs to be removed but typical dilutions are **20:1**.

For stubborn soils, a concentration of **10:1** is typically used but heavily soiled areas may need concentrations of **4:1**.

Methods For Applying Calla® 301A:

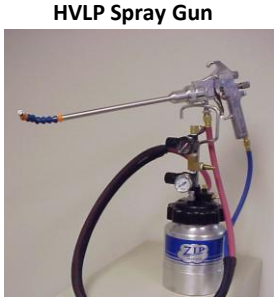
Calla® 301A can be applied via spray and bulk application equipment as shown below and on the next 4 pages.

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 **Calla® 301A** will be dry. Too little pressure however, results in a poor atomization and orange peeling of **Calla® 301A**.

B.) If you see texture in the spray of **Calla® 301A**, then increase the air pressure of your **HVLP gun**. If you see an overspray cloud of **Calla® 301A**, then decrease the air pressure slightly. The proper spray pattern for **Calla® 301A** should be a **slightly wet pass** with **no flooding or sagging** because thinly applied products like **Calla® 301A** can run very fast.

HVLP Spray Gun



Methods For Applying Calla® 301A (Continued From Page 1):

HVLP Spray Gun Setup (Continued From Page 1)

C.) One pattern that should be used when using the **HVLP gun** to apply **Calla® 301A** is the **fan pattern** because it uses a **full wide fan spray** which provides better consistency and leveling when applying **Calla® 301A** 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 **Calla® 301A**.

Note: Do not increase the gun tip size especially to **.015 " or more** when applying **Calla® 301A** because the applied material will exhibit the following characteristics below.

*Too much **Calla® 301A** being applied
***Calla® 301A** runs
*Orange peel in the **Calla® 301A**
*An overspray cloud in the applied **Calla® 301A**

B.) For pressure settings, use the lowest pressure possible so that **Calla® 301A** 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 **Calla® 301A** 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 **Calla® 301A**, then the pressure of the **air assisted spray gun** is too high. None of these observations should occur because thin materials like **Calla® 301A** atomize very easily.

D.) Set the pump ratio of the equipment to a range of **60:1 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 **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 **Calla® 301A** at a distance closer than **12"**, then there will be a heavy buildup of **Calla® 301A**, tiger stripping of material from the surface where the **Calla® 301A** was applied and a variation in the gloss of the **Calla® 301A**.

G.) Consider the passing speed of **Calla® 301A** because the output of **Calla® 301A** 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 **Calla® 301A** should be spray applied as a **smooth continual pass** with a **50% overlap**.

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Methods For Applying Calla® 301A (Continued From Page 2):

Air Assisted Spray Gun Setup (Continued From Page 2)

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 **Calla® 301A**	More aggressive fan spray of **Calla® 301A**
Slow **Calla® 301A** output	Fast output of **Calla® 301A**
Very forgiving when applying **Calla® 301A**	**Calla® 301A** can run quickly
Less overspray bounce of **Calla® 301A**	More fogging potential for **Calla® 301A** 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 **Calla® 301A**.

Note: Do not increase the gun tip size especially to **.015 " or more** when applying **Calla® 301A** because the applied material will exhibit the following characteristics below.

*Too much **Calla® 301A** being applied
***Calla® 301A** runs
*Orange peel in the **Calla® 301A**
*An overspray cloud in the applied **Calla® 301A**

B.) For pressure settings, use the lowest pressure possible so that **Calla® 301A** 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 **Calla® 301A** 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 **Calla® 301A**, then the pressure of the airless spray gun is too high. None of these observations should occur because thin materials like **Calla® 301A** atomize very easily.

D.) Set the pump ratio of the equipment to a range of **60:1 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 **Calla® 301A** at a distance closer than **12"**, then there will be a heavy buildup of **Calla® 301A**, tiger stripping of material from the surface where the **Calla® 301A** was applied, and a variation in the gloss of the **Calla® 301A**.

G.) Consider the passing speed of **Calla® 301A** because the output of **Calla® 301A** 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 **Calla® 301A** should be spray applied as a **smooth continual pass** with a **50% overlap**.

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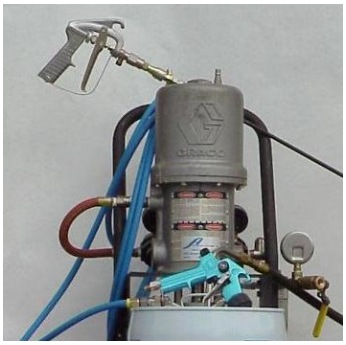
Methods For Applying Calla® 301A (Continued From Page 3):

Airless Spray Setup (Continued From Page 3)

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 **Calla® 301A**	More aggressive fan spray of **Calla® 301A**
Slow **Calla® 301A** output	Fast output of **Calla® 301A**
Very forgiving when applying **Calla® 301A**	**Calla® 301A** can run quickly
Less overspray bounce of **Calla® 301A**	More fogging potential for **Calla® 301A** than with **HVLP** spray method

4.) Calla® 301A 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 **Calla® 301A** including thin coatings, such as clears and sealers.

Note: Do not increase the gun tip size especially to **.015 " or more** when applying **Calla® 301A** because the applied material will exhibit the following characteristics below.

*Too much **Calla® 301A** being applied
***Calla® 301A** runs
*Orange peel in the **Calla® 301A**
*An overspray cloud in the applied **Calla® 301A**

B.) For pressure settings, use the lowest pressure possible so that **Calla® 301A** 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 **Calla® 301A** 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 **Calla® 301A**, then the pressure of the gun is too high. None of these observations should occur because thin materials like **Calla® 301A** 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 **Calla® 301A** at a distance closer than **12"**, then there will be a heavy buildup of **Calla® 301A**, tiger stripping of material from the surface where the **Calla® 301A** was applied, and a variation in the gloss of the **Calla® 301A**.

G.) Consider the passing speed of **Calla® 301A** because the output of **Calla® 301A** 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 **Calla® 301A** should be spray applied as a **smooth continual pass** with a **50% overlap**.

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Methods For Applying Calla® 301A (Continued From Page 4):

Calla® 301A 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	Calla® 301A 5 Gallon (18.9 Liter) Cart Sprayer
Soft spray of **Calla® 301A**	More aggressive fan spray of **Calla® 301A**
Slow **Calla® 301A** output	Fast output of **Calla® 301A**
Very forgiving when applying **Calla® 301A**	**Calla® 301A** can run quickly
Less overspray bounce of **Calla® 301A**	More fogging potential for **Calla® 301A** than with **HVLP** spray method

5.) Electro-Static Spray Gun Setup

Electro-Static Spray Gun

A.) Minimize the flow of **Calla® 301A** for the required coating speed and film thickness.

B.) Minimizing the target distance of spraying **Calla® 301A**.

C.) Ensure that the **Calla® 301A** 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 **Calla® 301A**.

E.) Gradually increase in-line air pressure so that the spray provides proper **Calla® 301A** 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 **Calla® 301A**.

It is important to ensure that the **HVLP**, **air assisted**, **airless**, **5 Gallon (18.9 Liter) Cart Sprayer**, or **electrostatic paint gun** for applying **Calla® 301A** are properly setup for the following reasons below.

*Decrease odor, fogging, and mist from the application of **Calla® 301A**
*Increase the transfer efficiency of the **Calla® 301A** from the equipment to the area it needs to be applied to
*Ensure that **Calla® 301A** will be applied according to how it was designed to be applied with respect to **optimum weight to performance balance**

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Calla® 301A Product Pictures and Zip-Chem® Product Packaging Part Numbers:

Calla® 301A
Ready For Use (4:1 Dilution)
*22 fl oz (651 mL) Spray Bottles-**100453**
Concentrate
*Case of 4 of 1 Gallon (4 each of 3.8 Liter) Bottles-**011866**
*5 Gallon (18.9 Liter) Pails-**011865**
*55 Gallon (208 Liter) Drum-**011864**
*330 Gallon (1249 Liter) Tote-**100142**
*Special packaging upon request

Gloves
Protective Eyewear
Protective Clothing

NSN: 6850-01-159-8533 (55 Gallon (208 Liter) Drum)

22 fl oz (651 mL) Spray Bottle

For application questions regarding **Calla® 301A**, contact **Zip-Chem® Aviation Products** at **(1) 408 782 2335** or **zipchem@addevmaterials.com**.