

D-5035NS/ZC-035 Instruction Manual

Safety Steps and Procedures To Follow Prior To Applying D-5035NS/ZC-035:

Always refer to the **safety data sheet (SDS)**, **technical data sheet (TDS)**, and **label** prior to applying **D-5035NS/ZC-035** if you have any questions regarding product.

Always wear gloves, protective clothing, and protective eyewear to prevent **D-5035NS/ZC-035** from making contact with the skin and eyes.

Always ensure that there is a proper ventilation in the area where **D-5035NS/ZC-035** will be applied and wear a proper mask to prevent the inhalation of fumes from **D-5035NS/ZC-035**.

Make sure there are no sparks, open flames, or other combustion sources in the area where **D-5035NS/ZC-035** will be applied.

Ensure that any primers and other coatings are cured before applying **D-5035NS/ZC-035**.

Prior to applying **D-5035NS/ZC-035**, always cure sealants according to the instructions established by the manufacturer.

Have adequate lighting to see where **D-5035NS/ZC-035** is being applied and to inspect areas for contamination or rework prior to applying **D-5035NS/ZC-035**.

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

Clean surfaces with the following aliphatic naphtha based wipe solvents, such as **Sur-Prep® 3160**, **Sur-Prep® 3167**, and **D-5640NS/ZC-640**.



If the sprayed form of **D-5035NS/ZC-035** 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.



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D-5035NS/ZC-035 Product Information and Benefits:

D-5035NS/ZC-035 provides a firm and waxy coating that is easily removed with petroleum solvents, provides long term protection against corrosion, and provides **over 1300 hours** of protection on steel in a salt fog environment

D-5035NS/ZC-035 withstands **continuous temperatures** up to **350°F (177°C)**, with a **short term exposure** up to **430°F (221°C)**.

D-5035NS/ZC-035 neutralizes acid, dampens metal, displaces moisture, and provides adhesion.

D-5035NS/ZC-035 is free of heavy metals and chromates and has a low toxicity level.

D-5035NS/ZC-035 Appearance Standards:

D-5035NS/ZC-035 is a heat resistant corrosion preventive for high temperature areas with a dry film thickness of **1.0 mil (25 microns)** that provides a transparent coating and can be measured with film thickness instruments.

Masking Procedures To Follow Prior To Applying D-5035NS/ZC-035:

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)



Procedures For Applying D-5035NS/ZC-035:

Inspect the surface for proper coating under stringers, formers, and other structures that are not in the line of sight and use adequate lighting devices if necessary.

Use for the initial protection during shipment and storage and for in-service treatment of critical areas

Areas Where D-5035NS/ZC-035 Should Be Applied:

D-5035NS/ZC-035 should be applied on:

- *Metal

Methods For Applying D-5035NS/ZC-035:

D-5035NS comes in aerosol packaging and can be applied via the following methods:

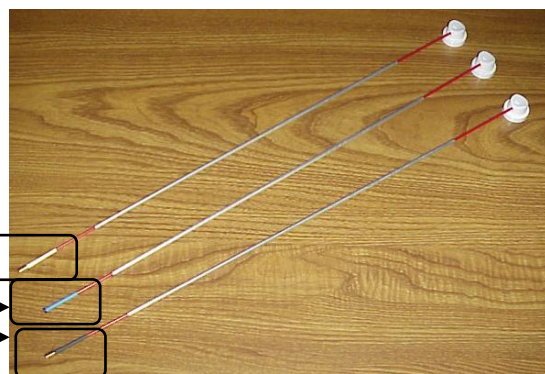
- *Spraying
- ***Formit®** Extension Wands-For use with all **Zip-Chem®** aerosols to reach difficult to access areas, such as stringer edges
- ***Zip-Chem®** Aerosol Trigger Sprayer-For use with any **Zip-Chem®** Aerosol can

Zip-Chem® Aerosol Trigger Sprayer



Methods For Applying D-5035NS/ZC-035: (Continued From Page 2):

- * Formit® 360° Spray (White Tube) Wand
- * Formit® Fan Spray 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



ZC-035 is the bulk form of **D-5035NS** and can be applied via bulk and spray application equipment.

Please reach out to a **Zip-Chem®** application expert for tips on how to properly apply **D-5035NS/ZC-035**.

1.) HVLP Spray Gun Setup

- A.)** Determine the tip size for the gun. The recommended tip size for the gun should be **1.0 mm to 1.5 mm**.
- B.)** Set the **air pressure**. This is very important because **D-5035NS/ZC-035** is applied **thin** so **too much pressure** will result in a **dry spray** and texture of **D-5035NS/ZC-035** while **too little pressure** will result in a **poor atomization** and **orange peeling** of **D-5035NS/ZC-035**.
- C.)** If you see texture in the spray of **D-5035NS/ZC-035**, then increase the **air pressure** of your **HVLP gun**. If you see an **overspray cloud** of **D-5035NS/ZC-035**, then decrease the **air pressure** slightly. The proper spray pattern for **D-5035NS/ZC-035** should be a **slightly wet pass** with **no flooding or sagging** because **thinly applied products** like **D-5035NS/ZC-035** can run very fast.
- D.)** One pattern that should be used when using the **HVLP gun** to apply **D-5035NS/ZC-035** is the **fan pattern** because it uses a **full wide fan spray** which provides better consistency and leveling when applying **D-5035NS/ZC-035** with the **HVLP spray guns**.
- E.)** 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**.

HVLP Spray Gun



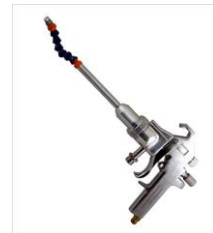
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Methods For Applying D-5035NS/ZC-035: (Continued From Page 3):

HVLP Spray Gun Setup (Continued From Page 3):

- F.) Always set the pressure with the **trigger fully pulled** because the **pressure drops under flow**.
- G.) Close off the **air** and **fluid adjustment knobs**.
- H.) Slowly open the **air adjustment knob** with the **trigger pulled**.
- I.) Open the **fluid adjustment knob** slowly until you see a **fine mist** from the **air cap**.
- J.) Continue to fine tune the settings until the desired spray pattern is achieved.

Airverter HVLP Spray Gun



2.) Air Assisted Spray Gun Setup

- A.) Determine the tip size for the gun. The recommended tip size for the gun should be **1.0 mm to 1.5 mm**.
- B.) For **pressure settings**, use the **lowest pressure** possible so that **D-5035NS/ZC-035** can be spray applied as a **clean fan** with the width of the spray being shaped like a **fan**.
- C.) Slowly increase the **pressure** to the gun until the **fan spray pattern** of **D-5035NS/ZC-035** 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 **D-5035NS/ZC-035**, then the **pressure** of the **air assisted spray gun** is **too high**. None of these observations should occur because **thin materials** like **D-5035NS/ZC-035** **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 **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 **D-5035NS/ZC-035** at a distance closer than **12"**, then there will be a heavy buildup of **D-5035NS/ZC-035**, tiger stripping of material from the surface where the **D-5035NS/ZC-035** was applied, and a variation in the gloss of the **D-5035NS/ZC-035**.
- G.) Consider the passing speed of **D-5035NS/ZC-035** because the output of **D-5035NS/ZC-035** 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 **D-5035NS/ZC-035** should be spray applied as a **smooth continual pass** with a **50% overlap**.



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Methods For Applying D-5035NS/ZC-035: (Continued From Page 4):

3.) Airless Spray Setup

Airless Spray Equipment



- A.) Determine the tip size for the gun. The recommended tip size for the gun should be **1.0 mm to 1.5 mm**.
- B.) For **pressure settings**, use the **lowest pressure** possible so that **D-5035NS/ZC-035** 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** to the gun until the **fan spray** pattern of **D-5035NS/ZC-035** 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 **D-5035NS/ZC-035**, then the **pressure** of the **airless spray gun** is **too high**. None of these observations should occur because thin materials like **D-5035NS/ZC-035** 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 **D-5035NS/ZC-035** at a distance closer than **12"**, then there will be a heavy buildup of **D-5035NS/ZC-035**, tiger stripping of material from the surface where the **D-5035NS/ZC-035** was applied, and a variation in the gloss of the **D-5035NS/ZC-035**.
- G.) Consider the passing speed of **D-5035NS/ZC-035** because the output of **D-5035NS/ZC-035** 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 **D-5035NS/ZC-035** should be spray applied as a **smooth continual pass** with a **50% overlap**.

4.) D-5035NS/ZC-035 5 Gallon (18.9 Liter) Cart Sprayer Setup

- A.) Determine the tip size for the gun. The recommended tip size for the gun should be **1.0 mm to 1.5 mm**.
- B.) For **pressure settings**, use the **lowest pressure** possible so that **D-5035NS/ZC-035** can be spray applied as a **clean fan** with the width of the spray being shaped like a **fan**.
- C.) Slowly increase the **pressure** to the gun until the **fan spray** pattern of **D-5035NS/ZC-035** 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 **D-5035NS/ZC-035**, then the **pressure** of the **5 Gallon (18.9 Liter) Cart Sprayer** is **too high**. None of these observations should occur because thin materials like **D-5035NS/ZC-035** 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



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Methods For Applying D-5035NS/ZC-035: (Continued From Page 5):

D-5035NS/ZC-035 5 Gallon (18.9 Liter) Cart Sprayer Setup (Continued From Page 5)

- F.) Maintain your distance of the gun from the surface as the distances between **5 Gallon (18.9 Liter) Cart Sprayer** and other spray methods can vary. A good distance to follow for **5 Gallon (18.9 Liter) Cart Sprayers** is about **12" or more**. If you spray apply **D-5035NS/ZC-035** at a distance closer than **12"**, then there will be a heavy buildup of **D-5035NS/ZC-035**, tiger stripping of material from the surface where the **D-5035NS/ZC-035** was applied, and a variation in the output of **D-5035NS/ZC-035**.
- G.) Consider the passing speed of **D-5035NS/ZC-035** because the output of **D-5035NS/ZC-035** 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 **D-5035NS/ZC-035** should be spray applied as a **smooth continual pass** with a **50% overlap**.

5.) Electro-Static Spray Gun Setup

Electro-Static Spray Gun

- A.) Minimize the flow of **D-5035NS/ZC-035** for the required **coating speed** and **film thickness**.
- B.) Minimizing the target distance of spraying **D-5035NS/ZC-035**.
- C.) Ensure that the **D-5035NS/ZC-035** 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 **D-5035NS/ZC-035**.
- E.) Gradually increase in-line **air pressure** so that the spray provides proper **D-5035NS/ZC-035** 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 **D-5035NS/ZC-035**.



D-5035NS/ZC-035 Product Pictures and Zip-Chem® Product Packaging Part Numbers:

D-5035NS/ZC-035

- *Case of 12 of 16 fl oz (473 mL) Aerosols (**D-5035NS**)-**002052**
- *Case of 7 each Gallon (4 each of 3.8L) Cans (**ZC-035**)-**002115**
- *5 Gallon (18.9 Liter) Pails (**ZC-035**)-**002116**
- *55 Gallon (208 Liter) Drum (**ZC-035**)-**002117**
- *Specialized forms of packaging available upon request

D-5640NS/ZC-640

- *Case of 12 of 16 fl oz (473 mL) Aerosols-**002070**
- *Case of 7 each Gallon (4 each of 3.8L) Cans-**009430**
- *5 Gallon (18.9 Liter) Pails-**002155**
- *55 Gallon (208 Liter) Drum-**108181**
- *Specialized forms of packaging available upon request

Zip-Chem® Aerosol Trigger Sprayer

- ***010040**

Sur-Prep® 3160

- *Case of 12 of 16 fl oz (473 mL) Aerosols-**010938**
- *Case of 7 each Gallon (4 each of 3.8L) Cans-**008578**
- *5 Gallon (18.9 Liter) Pails-**008579**
- *55 Gallon (208 Liter) Drum-**008580**
- *Case of 6 Canisters of Towelettes-**100026**
- *Case of 100 Individual Towelettes-**011844**
- *Specialized packaging forms for customers

Sur-Prep® 3167

- *Case of 12 of 16 fl oz (473 mL) Aerosols-**103765**
- *Case of 7 each Gallon (4 each of 3.8L) Cans-**103762**
- *5 Gallon (18.9 Liter) Pails-**103763**
- *55 Gallon (208 Liter) Drum-**103764**
- *Specialized forms of packaging available upon request



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D-5035NS/ZC-035 Product Pictures and Zip-Chem® Product Packaging Part Numbers (Continued From Page 6):

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)

Tin Foil	Gloves	Protective Eyewear	Protective Clothing	Vacuum	Proper Mask	Spill Containment Vessels
Wiping Devices	Curing Equipment	Inspecting Equipment	Spray Equipment	Equipment For Applying ZC-035		
Film Thickness Instruments	Lighting Equipment	Aliphatic Naphtha Based Wipe Solvents	Masking Tape			
Cloths, Rags, Towels, and other proper wiping devices			Spill Containment Vessels and other proper devices for collecting material spills and overruns			



*16 Fluid Ounce (473 mL) Aerosol
(NSN: 8030-01-686-7249)



*1 Gallon (3.8 Liter)
Cans

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)

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)

For application questions regarding D-5035NS/ZC-035, contact Zip-Chem® Aviation Products at (1) 408 782 2335 or zipchem@addevmaterials.com.