



**SHIP 2 SHORE**<sup>®</sup>  
CORROSION PREVENTIVE SOLUTIONS

# APPLICATION GUIDE

**Tough on Rust!**  
**Gentle on the Environment.**<sup>®</sup>

1(888)-617-7558

[www.ship-2-shore.com](http://www.ship-2-shore.com)

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## Personal Protective Equipment

For additional information, please refer to the product safety data sheet.



### Eye/Face Protection:

Wear safety glasses. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/ CSA-Z94.3 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.

### Hand Protection:

Wear protective gloves. For occasional contact wear standard disposable nitrile or Viton gloves. For extended exposure wear Neoprene gloves.

### Skin and Body Protection:

Wear protective Clothing.

### Respiratory Protection:

Not normally required. In confined spaces an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4, with organic vapor cartridge, or self-contained breathing apparatus may be required.

### Hearing Protection

If power tools are used during surface preparation, hearing protection may be required or advisable.

## General Information

**DO NOT DILUTE S2S PRODUCTS.  
SHAKE OR STIR BEFORE USE.  
CAN BE APPLIED TO DAMP, RUSTED  
OR PAINTED SURFACES.  
NO SANDBLASTING REQUIRED.**

## How much Product will I need?

To help determine how much product you will need, see the chart below. Keep in mind that the figures shown are only estimates; the amount of product needed will vary according to the type and condition of the metal surface. Old and porous metal will often require extra due the tendency of S2S products to penetrate deep.

	Coating Thickness	Coverage
Corrosion Shield	1-4 Mils	200 sq ft/gal
HD Corrosion Shield	13-20 Mils	100 sq ft/gal
Anchor Chain Corrosion Control	2-10 Mils	150 sq ft/gal
Bridge & Steel Corrosion Control	2-10 Mils	150 sq ft/gal
Automotive Rust Proofing	2-10 Mils	150 sq ft/gal
Wire Rope Corrosion Control	1-4 Mils	200 sq ft/gal
Void & Rudder Float Coat	1-4 Mils	200 sq ft/gal

## Surface Preparation

S2S products work by polar bonding to metal and penetrating deep, even over existing rust and paint. Minimal surface preparation is therefore required. Simply remove all debris, dirt, soap and degreaser from surface of metal. To ensure long lasting protection of corroded or previously coated surfaces, preparation in accordance with SSPC-SP 2 (hand tools) or SSPC-SP 3 (power tools) may be used for removal of all or most loose corrosion.

## Applying by Brush

Before application, ensure the surface is clean and free of debris

- For best results, apply when temperatures are 5°C - 37°C (41°F - 99°F)
- Apply a thicker coat over known problem areas, edges, cracks, and welds
- Extremely old, porous metal may require a thicker than normal coat due to the tendency of S2S products to penetrate deep

A popular method for applying S2S Corrosion Shield and S2S HD Corrosion Shield by brush is by using the Medmix Coating Dispenser and Flex Hose Brush System.

## The Medmix Coating Dispenser and Flex Hose Brush Application System

S2S Corrosion Shield and S2S HD Corrosion Shield are now sold in a convenient 2-component cartridge system ( 750 ml x 750 ml) for use with a Medmix DM 1500-01 Spray Coating Dispenser (commonly known as "Sulzer gun") and Medmix Flex Hose Brush. This application system is easy-to-use, lightweight and portable. The Flex Hose Brush allows you to reach into difficult spaces and coat complex shapes. For best results, apply when temperatures are 5°C - 37°C (41°F - 99°F).

The Medmix DM 1500-01 Spray Coating Dispenser and Medmix FHB 01-15-05 Flex Hose Brush Short Handle can now be purchased through S2S. To learn more, phone 1-888-617-7558, email [sales@ship-2-shore.com](mailto:sales@ship-2-shore.com) or contact an S2S distributor.

## Tips for Spraying S2S Products

Any spray application method appropriate for wet coatings is acceptable for S2S wet film products.

### Airless Sprayer

Always follow the directions provided by the manufacturer of the airless equipment. Following are some additional tips when applying S2S wet film products:

- Airless sprayer must be able to flow at least 1 gallon per minute
- Airless tips can range from a 315 to 521, based on temperature
- For best results, apply when temperatures are between 5°C - 37°C (41°F - 99°F)
- In colder temperatures, band heaters with insulated lines must be used
- In order to minimize overspray, always have the nozzle of the gun at a 90° angle
- To reach desired thickness, make 2-3 passes
- Apply a thicker coat over known problem areas and bottom quarter of interior hull walls
- Extremely old, porous metal may require a thicker than normal coat due to the tendency of S2S products to penetrate deep

### Using a Pressure Pot Sprayer

Always follow the directions provided by the manufacturer of the equipment. Following are some helpful tips when applying S2S wet film products:

- When applying material in low temperature (approximately 5°C or 41°F), or when applying high viscosity material, an airless spray pump is recommended.
- Adjust pot pressure and atomizing pressure as necessary to produce a well atomized pattern.

- For best results, always keep the air pressure as low as practical but adequate to push the material through the hose to the gun and atomize the material.
- In temperatures below 5°C (41°F), heaters will need to be used in order to obtain adequate flow
- In order to minimize overspray, always have the nozzle of the gun at a 90° angle
- To reach desired thickness, 2-3 passes may be required.
- Apply a thicker coat over known problem areas and bottom quarter of interior hull walls
- Extremely old, porous metal may require a thicker than normal coat due to the tendency of S2S products to penetrate deep

## Clean-up and Storage after Spraying

- Pour all remaining S2S product back into container and cover.
- Use warm water and a small amount of dishwashing detergent to thoroughly clean spray equipment. Rinse with clean water prior to putting equipment away to remove any detergent residue.
- If spray equipment will be used for another application of S2S products, a thorough cleaning of the lines is not necessary.
- If spray equipment will be going into storage, clean thoroughly and allow soapy water to remain in lines in order to avoid clogging.

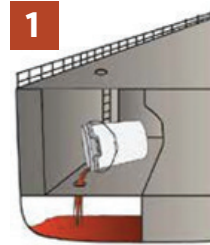
## Applying by Roller

- For best results, apply when temperatures are between 5°C - 37°C (41°F - 99°F)
- Use a high-quality roller
- Apply a thicker coat over known problem areas
- Extremely old, porous metal may require a thicker than normal coat due to the tendency of S2S products to penetrate deep

## How to Float Coat Void Spaces, Tanks and Rudders

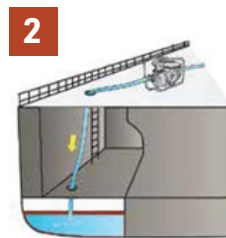
Use S2S Void & Rudder Float Coat. The float coat procedure will yield 100% coverage of all contacted surfaces in one operation.

For small tanks and rudders, the fill and drain procedure may be used, eliminating the need to add water.



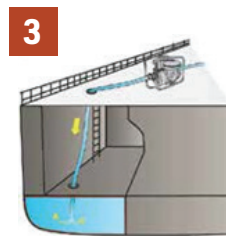
### Measure & Pour Product

Calculate product requirements. Each gallon will coat 200 sq ft. Add 20% to final calculation. A pail coats 1000 sq ft, a drum coats 10,000 sq ft.



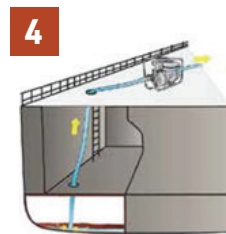
### Gently & Slowly Pump in Water

Place pump hose at floor of tank and slowly fill with water. Note: Product is lighter than water and will float on top and polar bond to the metal as it rises.



### Fill Void Area to the Top of Space

When the water and Product reaches the top, turn off the pump and allow to settle, ideally for 24 hours. This will allow the product to clearly separate from the water.



### Gently & Slowly Pump Water Out

Slowly pump the water out from the bottom. Use a screen to filter out rust flakes. The last portion of discharge should be captured and disposed of according to local, municipal and federal regulations.



## Float Coat Procedure for Units with Heavy Rust Scale

- Proceed as above but allow more time and volume of product to soak into the rust scale. A second up and down cycle may be prudent.
- Note: Over time, rust scale will delaminate and begin falling off, which may cause clogging of pump screens.
- Note: The product that is left sitting in the bottom of the unit will seep and cover bare spots that may develop as minor rust scales detach and fall off. In this manner, self-healing will continuously occur.

## Applying by Dunking

This method is sometimes used on anchor chains and wire ropes.

- For best results, apply when temperatures are between 5°C - 37°C (41°F - 99°F)
- Use a crane to hoist chain or wire rope and slowly lower into tank
- Extremely old, porous metal may need to soak for several hours due to the tendency of S2S products to penetrate deep into the metal

## HELPFUL TIPS

For long lasting protection of bolts, flanges, pipes and pipelines, choose S2S HD Corrosion Shield or S2S PLID Wrap Anti-Corrosion Tape.

### Tips for applying HD Corrosion Shield to bolts, flanges, pipes and pipelines

- Apply a heavy coat of product to the face of the flanges to be mated.
- Apply in the flange bolt holes and on the flange around the holes where the bolt head and washers will seat.
- Thoroughly coat all bolts, including under the heads, and install through holes in flanges.

- Coat any washers, making sure to get under the nuts and install nuts.
- Once completed as above, it is good practice to apply a coat of HD Corrosion Shield to the entire exterior of the flange assembly.
- Note: Torque specifications will need to be adjusted for lubricated bolts.
- S2S products work well as an assembly lube on O-rings and others requiring an assembly lube.
- Note: If the piping has a CP system installed, a check to be sure the current is passing through the joint is necessary; if it is not passing through, a jumper may need to be installed.
- If the entire pipeline is coated with S2S, the cathodic protection load will be significantly reduced or eliminated.

### Tips for applying S2S Anchor Chain Corrosion Control

- Use a crane to hoist chain above a tank and slowly lower the chain as the links are coated.
- Lay chain out on a plastic sheet covering the ground. Brush or spray one side of chain, then flip to coat opposite side.
- Spray a heavy, even coat while the chain is retracting into the chain locker or while the chain is sitting in the chain locker.
- Spray a heavy, even coat between the hawes pipe and the windlass system as the chain is being retracted.

### Tips for protecting electrical and electronics from rust and corrosion

- Apply S2S Di-Electric directly to circuit boards
- Ensure power is off before applying to wires and breakers
- If untreated electronics are accidentally submerged in water, keep in water until able to treat with Di-Electric, then remove electronics from water and spray with product until thoroughly coated. This will displace moisture and salt, keeping the item rust free.

### Tips for using S2S Wire Rope Corrosion Control

- S2S Wire Rope Corrosion Control penetrates deep thoroughly coating the inner fibres and keeping the rope lubricated and flexible.
- Spray on during wire rope retraction
- In very harsh environments, apply a top-coating of HD Corrosion Shield
- When not in use or during the off season, wire ropes and cables may be left soaking in tank so they are well-protected and ready to use when needed.

## Protecting Cars, Trucks and Heavy Equipment from Rust and Corrosion

- Use S2S Automotive Rust Proofing. Creeps into hard to reach areas to provide an even, lubricating film that resists splash and spray
- Apply to wires and battery terminals.
- No curing time.
- For best results, apply annually.

## Removal of S2S Products

S2S products do not typically need to be removed. However, when desired:

- Use a high pH detergent to break the polar bond.
- Pressure washing without use of high pH detergent will not remove the products.

## Applying PLID Wrap anti-corrosion tape

- PLID Wrap anti-corrosion tape is infused with HD Corrosion Shield.
- PLID Wrap can be used alone or, in harsher environments, with an undercoating of Corrosion Shield
- No major surface preparation is required.
- Simply remove any loose rust scale and heavy debris. No need to sandblast. PLID Wrap can be applied over existing rust and paint.
- Wrap the metal structure with PLID Wrap the correct side down (see image), ensuring tape is in constant contact with surface
- Use a 30% overlap
- PLID Wrap tape can also be cut and inserted into openings to mitigate water ingress
- If pipe will be buried underground, apply an extra outer protective layer (sold separately).

## HOW TO APPLY PLID WRAP TAPE

