

Surface Preparation

Application surfaces must be structurally sound, and the overall structural integrity of the asset is critical to the overall success of any coating or overlay. Some surface damage such as deterioration, cracks and spalls can occasionally be repaired, but CRS does not provide structural improvement or enhancement.

CRS has been formulated to penetrate into tightly adhered intact rust, and bond with the substrate surface. Other materials (such as petro-chemicals) which could interfere with this process, must be removed. Remove any loose, soft, or contaminated materials from the area that will be repaired/resurfaced.

A comprehensive prep system for CRS will include the following program: Remove all loose debris using a hand pump or spray on a degreaser over the entire area, let sit for 5 minutes (allowing degreaser to sit for longer will NOT increase effectiveness), and then completely rinse 2 times. Let dry for 30 minutes before any further application. With extreme surface dirt or oil, you may have to apply a second time. You must repeat this process until the substrate is free of any petro-chemical substances. Your goal for an optimal coating job is to aim for a final total thickness of 2 mils DFT.

General Application Notes

CRS can be applied using a sprayer, brush, trowel or roller depending upon the application tools available, substrate, volume of surface to cover, vertical or horizontal surface, hard to reach areas or unique thickness requirements. Please review the above information regarding a thoroughly cleaned substrate. A light application of water could be applied to the area in hot conditions but if sprayed it is NOT mandatory due to the effects of a high volume, low pressure sprayer (15-80psi) rebound or splash back should be minimal.

With any application method, to avoid mud cracking, do not use too much material on a single coating. Instead, use less material across 2 layers, and make sure the previous layer properly dries before adding a new layer.

Edges:

Ensure proper coverage on edges, as during normal hydrolysis induced cure, the material may become thinner than expected. Brush edges or corners before spraying the surface to ensure enough material is in contact with the substrate.

Application Instructions

CRS - Corrosion Retardant Solution

7/08/2019 Version 1.4



Airless Spray Application

Line pressure should be 1,800 to 2,200 lbs

Spray tip sizes that can be used: 311 - 617

Use a line size of 1/4 inch at your spray gun with an in-line filter

When spraying, hold your spray gun 12-24 inches from the substrate at a 90-degree angle to achieve minimum over-spray.

First pass: Spray 1-1.5 wet mils (max) all in one direction, for instance "East-West." Allow at a minimum 10-15 minutes for this pass to dry.

Second pass: Spray another 1-1.5 wet mils (max) in an alternate direction, for instance "North- South." Dry film thickness when both applications are done should be as close to 2 mils as possible.

Do not over build each spray application exceeding recommended wet film thickness of 2-2.5 mils or else material will run.

Conventional Spray Application

We only recommend using quality conventional spray guns from brands like: Binks, DeVilbiss, etc.

Spray pot pressure: 20-40 lbs

Spray air pressure: 40-60 lbs - adjust to your environmental conditions

When spraying, hold your spray gun 12-18 inches from substrate at a 90-degree angle to achieve minimum over-spray.

First pass: Spray 1.5-2.0 wet mils (max) all in one direction, for instance "East-West." Allow at a minimum 10-15 minutes for this pass to dry.

Second pass: Spray another 1.5-2.5 wet mils (max) in an alternate direction, for instance "North- South." Dry film thickness when both applications are done should be between 1.5 to 2.5 mils. Do not over build each spray application exceeding recommended wet film thickness of 1.5-2.5 mils or else material will run.

All spraying equipment must be cleaned. If there is any break in the spraying procedure, water should be immediately used to clean the nozzle and hose. For any CRS that has started to dry, use common solvents like paint thinner to clean.

YOUR EQUIPMENT MAY BE PERMANENTLY DAMAGED IF NOT CLEANED WITH PLENTY OF FRESH, CLEAN WATER DURING ANY INTERRUPTION IN SPRAYING.

Application (continued)

Brush, Roller or Trowel Application:

The applicator should treat the brushing or rolling of CRS the same as a latex paint when it comes to consistency when mixed properly. When brushing on a vertical surface, start from the bottom-up, there should be virtually no liquid running down the substrate.

Brush marks may be visible after the first brush or roller pass, but after a second pass the surface will be smoother. Brushed or Rolled surfaces will not have as glossy a surface as a sprayed application. Continue to agitate the CRS solution during application. Let each coat dry completely before applying a second coat.

Edges:

Ensure proper coverage on edges, as during normal hydrolysis induced cure, the material may become thinner than expected. Brush edges or corners before spraying the surface to ensure enough material is in contact with the substrate.

Refer to our Material Safety Data Sheet (MSDS) regarding regulatory compliance, safety, hazards, spill procedures and disposal of this product.

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE.

Spalling Repair Protocol (small segments)

1. Remove all loose concrete with a screwdriver around the rebar.
2. Take a thorough examination of the spall and the concrete surrounding it and see if there is any other further damage where there are large cracks in the concrete slab.
3. After a thorough examination, any remaining loose concrete should be removed. A damp cloth should be used to wipe off all dust and debris from the spall area including a good wipe down of the rebar itself.
4. Take CRS and apply it to the rebar, the rebar joints, or any other exposed sections. If you must replace any rebar that is too corroded, please be sure to apply CRS on the new rebar to aid in preventing corrosion and the halo effect. Be sure to cover the entire exposed rebar (top, bottom, behind)
5. After the spall area has been reviewed and the CRS has dried (Approximately 2 to 4 hours). C2M should be applied to all exposed concrete areas and the rebar. Be sure to coat around the exposed rebar fully.
6. Then apply C2M to the entire spall area where the repair concrete cast will be applied at approximately two mils one coat. Two coats should be applied in a cross-hatch method.
7. Next, apply quick drying cement of your choice to re-cast the spalled area. Let quick dry cement dry and cure according to its requirements.
8. Once dried, apply C2M to the cold joints thoroughly. Stipple with a paint brush if necessary to get C2M into every crevice and pit. (stippling is brushing material onto a surface by dabbing in a downward motion directly into any crevices)
9. When the quick drying cement is fully cured, and cold joints are fully applied with C2M, you can then paint the entire area with C2M. Two coats of C2M is recommended, one coat applied east-west, one coat applied north-south. Total thickness for both coats should add up to no more than 3-4 mils. When applying C2M, be sure to let each coat sit until it is dry to the touch, then put on the second coat in the opposite direction. Let the entire application of C2M dry for four to six hours.
10. Then, if desired, apply a 1k or 2k paint on top to keep the moisture from coming back through the concrete.
11. On a larger more dramatic cracks and problems the same procedure is done only scaled up by using more product and a larger crew will be needed to investigate the spalled areas.

NOTE: Timing and scheduling of steps will be affected by your local temperature, humidity, and direct sunlight. Please conduct tests before starting a project.