

Substrates & Surface Preparation

General Remove all oil or grease from the surface to be coated using Thinner #2 or Carboline Surface Cleaner 3.

Steel Steel preparation before priming should be done in accordance with the recommended primers' Product Data Sheet.

Nullifire S607 should only be applied over compatible primers. The following primers have been tested as compatible:

Carboguard® 888 Carbocoat® 115 SG
Carboguard 1340 Carbocoat 150
Carbocrylic® 120 Nullifire® S620*

Rustbond Penetrating Sealer®

*Made to order only

Other primers may be acceptable. Contact Carboline Technical Service for information.

Galvanized Steel Follow Product Data Sheet instructions for the Rustbond Penetrating Sealer.

Non-Ferrous Metals Contact Carboline Technical Service for advice.

Application Equipment

Listed below are general guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

General Guidelines:

Mixer Use a ½" electric or air-driven mixer with a slotted paddle or Jiffy mixer.

Pumps 30:1 min. to give an operating pressure of 3000 p.s.i. (320 kg/cm²)
Pump Ratio 30:1 Minimum*
GPM Output 3.0 (minimum)
Material Hose 3/8" I.D. (minimum)
Tip Size .019 - .021 (.48-.53mm)
Hose Length 200' (60 meters) maximum
Fan Angle 20° - 40° (depending on section being sprayed)

* Teflon packings are recommended.

Spray Guns

Mfg.	Model
Graco	205-591
Graco Silver	208-663

Mixing & Thinning

Mixing Nullifire S607 is supplied ready for use and should not be thinned. Mix thoroughly before use.

Pot Life N/A

Application Procedures

Airless Spray: A single coat built up with a number of quick passes allows greater control over quantities, thickness and finish. In certain conditions, it may be advantageous to apply two thinner coats rather than one thick coat. In good weather conditions 70°F, (20°C) and air movement greater than 6 feet per second (2m/sec), it may be possible to apply two coats per day. However, it is necessary to ensure that the first coat is dry, particularly in the webs and flanges.

Brush/Roller: For brush application, a fully loaded brush should be used. A laying on technique will reduce the brush marking. A short-nap roller can be used but this will result in a textured finish. Drying time may increase with brush and roll application.

Application Rates: At an ambient temperature of 70°F (21°C) the following application rates are applicable per coat:

Method	Maximum Loading
Airless Spray	30 mils WFT, 19 mils DFT
Brush/Roller	15 mils WFT, 9 mils DFT

Application Conditions

Condition	Surface	Ambient	Humidity
Normal	60°-85°F (15°-29°C)	60°-85°F (15°-29°C)	0-80%
Minimum	40°F (5°C)	40°F (5°C)	0%
Maximum	90°F (32°C)	105°F (40°C)	80%

Steel surface temperature should be a minimum of 5°F above the dew point. If S607 is allowed to get wet, it can damage, blister and cause wrinkling to the surface. The S607 should be protected from rain and high humidity during application and curing.

Nullifire® S607

Protection of Adjacent Surfaces

Finished surfaces shall be protected from damage and overspray.

Thickness Measurement

During application the wet film thickness should be checked using a wet film gauge. To use the gauge, insert the teeth into the wet basecoat. The last tooth to be coated indicates the thickness achieved.

Prior to topcoating, the dry film thickness should be checked using an electronic gauge (Positector) or a banana gauge (Elcometer 211). Topcoat should not be applied until the correct thickness of S607 has been applied and cured.

It is important to ensure that the wet film applied is of sufficient thickness to give the required dry film thickness on drying. During the drying process, the coating will shrink due to the evaporation of water. In order to calculate the wet film thickness required the following formula can be used:

$$WFT = DFT \div \text{Volume solids (62)} \times 100$$

Example:

WFT	DFT
10 mils	6 mils
20 mils	12 mils
30 mils	18 mils

Dry film thickness measurements can be taken as soon as the coating is sufficiently hard enough to allow a reading without indenting the surface.

Curing Schedule

Drying times are dependent upon a number of factors:

- Temperature
- Air Movement
- Humidity
- Thickness of S607
- Method of application

High humidity and low air movement or low steel temperatures can result in condensation on the steel work causing prolonged drying times and possible poor adhesion.

The following table indicates the recoating times subject to various conditions:

RH %		50°F		70°F		85°F	
		Still Air	Air Flow	Still Air	Air Flow	Still Air	Air Flow
30	B/R	6 hrs.	3 hrs.	5 hrs.	2 hrs.	3 hrs.	2 hrs.
	S	10 hrs.	5 hrs.	7 hrs.	4 hrs.	6 hrs.	3 hrs.
50	B/R	8 hrs.	4 hrs.	6 hrs.	3 hrs.	4 hrs.	2 hrs.
	S	12 hrs.	6 hrs.	10 hrs.	5 hrs.	8 hrs.	4 hrs.
70	B/R	15 hrs.	8 hrs.	12 hrs.	6 hrs.	8 hrs.	4 hrs.
	S	24 hrs.	12 hrs.	20 hrs.	10 hrs.	16 hrs.	8 hrs.

B/R – Brush / Roller application at 15 mils DFT.

S – Spray application at 40 mils DFT.

Drying times may be double at 40°F or at over 75% RH.

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Topcoating

Final drying time before topcoating is a minimum of 24 hours or double the times given on the curing chart (whichever is greater). These figures are based on constant conditions, fluctuations will give variations to the drying time. If overnight condensation causes wetting, a further full drying period should be allowed.

Once the S607 Basecoat is applied to the specified DFT and is fully dry, it can be topcoated with Carbocrylic® 3359 or other approved topcoat.

Nullifire S607 is intended for internal use only and should not be left exposed to weather for extended periods.

Maintenance

Damaged areas should be abraded back to a firm edge by sanding or scraping. Topcoat should be abraded back by approximately 1 inch (2.5cm) from the damage. The surface should be clean and dry before re-applying the S607. The basecoat should be built up to the original thickness allowed to dry and then topcoated. Small scratches and chips can be repaired with Nullifire® System S Filler, which can be applied by putty knife in one application allowed to dry and then recoated with specified topcoat or system.

Cleanup & Safety

Cleanup Pump, mixer and hose should be cleaned with clean water at least once every 4 hours at 70°F (21°C), and more often at higher temperatures.

Safety Read and follow all caution statements on this Product Data Sheet and on the Material Safety Data Sheet for this product.

Caution All electrical equipment and installations should be made and grounded in accordance with the national Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes. When used in confined areas, workmen must wear appropriate respirator protection. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.



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