



Approved
No. CF 5303

APPLICATION INSTRUCTIONS

Contego *High Solids* Reactive Fire Barrier Intumescent (RFB)

GENERAL DESCRIPTION

Contego HS (RFB) is a full-bodied water-based acrylic latex, single component coating designed to protect interior structural steel in a fire.

Application of Contego HS intumescent coating consists of up to three distinct steps.

First, is to prepare the steel substrate by grit blasting to a surface profile of ASA 2.5 or equivalent. An approved, compatible primer is then applied before the cleaned steel can oxidize and form a layer of surface rust.

Second, Contego HS is applied over the primer to the required thickness. Contego HS provides superior protection to the steel in a fire scenario.

Third, an optional decorative and protective top coat is applied over Contego HS. This topcoat provides protection from abrasion, humidity and other conditions and should always be used for interior applications with unusual challenges such as aquatic centers with high levels of chlorine in the air that can potentially affect the intumescent. Contego is formulated to work with a wide range of top coats, to provide architectural aesthetics and to give a smooth finish with the desired color and sheen.

PRE-APPLICATION

Prior to use, Contego HS must be stored in a dry location at temperatures between 50°F (10°C) and 100°F (~40°C). Under these conditions shelf life is up to 24 months in unopened containers. **DO NOT ALLOW THE MATERIAL TO FREEZE.**

Before use, the container should be opened, inspected and stirred.

WORK SITE CONDITIONS

Lighting / Ventilation

Sufficient lighting and ventilation must be provided to ensure proper application and drying of the product both during and after its application. In enclosed spaces, there should be a minimum of four air exchanges per hour, until the coating is dry.

Application Conditions

Apply Contego HS when the ambient air temperature is above 50°F (10°C) and below 100°F (~40°C). A minimum substrate and air temperature of 50°F (10°C) must be maintained during and for at least 72 hours after application.

Steel temperature should be at least 4°F (2°C) above the dew point to prevent condensation from forming on the steel. If necessary, the application site should be enclosed and heated to provide proper temperature and humidity levels during and after application.

Relative humidity should be below 75% during application. Do not apply Contego HS if there is condensation on the steel or primer as this will affect adhesion of Contego HS to the steel. High humidity will also slow the drying process, reduce maximum wet film thickness per coat before sagging occurs, and can affect surface finish of the coating.

**Contego is Truly
Non-Toxic!**



HEALTH AND SAFETY

Refer to Material Safety Data Sheet for complete Health and Safety Information.

APPLICATION INSTRUCTIONS

Contego *High Solids* - CONTINUED

EQUIPMENT

Spray Equipment: It is recommended that Contego HS be applied with an electric, pneumatic, or gas powered airless spray pump capable of spraying at a minimum of 3,300 psi (216 Kg/cm²)

Hose: Rated to match the pump capacity, minimum diameter of 3/8" (10mm) ID. Hose length should be compatible with pump rating.

Spray Gun and Tip: A Graco Mastic Spray or Silver gun or equivalent with the diffuser tip removed, and all in-line filters removed, and rated to a minimum of 3,300 psi. Tip size should be a minimum of 0.025" (0.62mm).

Brush: Use a high quality latex paint brush. It is not recommended to use a roller to apply Contego HS.

Masking and Overspray Protection: Masking usually consists of lightweight polyethylene plastic held in place with duct tape. Install on all surfaces not intended to be coated with Contego HS.

Mixing Prior to Application: Contego HS is supplied ready for use and MUST NOT be diluted. Thoroughly stir Contego HS with a standard drywall mixing paddle or Jiffy mixer for 3-5 minutes before application. Remove any surface film before stirring. Do not stir surface film back into Contego HS.

SURFACE PREPARATION

- **General:** DO NOT paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable paint film. The surface should be prepared to SSPC-SP3 or SSPC-SP-5, depending on the end use application.
- **Primed Surface:** All structural steel surfaces to be coated with Contego HS must first be primed with an approved primer. Primed surfaces must be free from any grease, oil, dirt, loose mill scale, rust and any other contaminant that would affect the adhesion of Contego HS to the primer. The primer must be fully cured in accordance with the manufacturer's instructions before applying Contego HS.
- Contego HS is compatible with a wide range of primers including alkyds, silicone modified alkyds, phenolic modified alkyds, 2K epoxy polyamides, acrylic modified epoxy, and acrylics.
- High gloss primers should be avoided. Only flat or matte finish Red Oxide primers or similar should be used.
- Primers should be tested for adhesion to the substrate and to Contego HS prior to use.
- For specific primer recommendations and approvals contact CONTEGO INTERNATIONAL Technical Department.
- Cured primer thickness should be measured and recorded before applying Contego HS.

CONTEGO HS APPLICATION

Thoroughly mix Contego HS with a Jiffy style mixer or drywall paddle mixer for 3-5 minutes prior to use. Do not dilute

Painting Scheduling

- Apply the first coat of Contego HS to primed surfaces that have been cleaned, pre-treated, or otherwise prepared for painting as soon as practicable after surface preparation and before subsequent surface deterioration.
- Maximum wet film thickness of Contego HS per coat is:
 - Spray: 40 mils, (0.040", 1.0 mm)
 - Brush: 10 mils, (0.010", 0.25 mm)
- Film thickness required is the same regardless of application method.
- DO NOT apply subsequent coats until previous coat has cured. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
- Application thicknesses are dependent on air and steel temperature, relative humidity and air flow.
- Allow enough time between successive coats to permit complete drying. DO NOT recoat surfaces until paint has dried thoroughly. Applying additional coats of paint before surface is completely dry will cause the undercoat to retain moisture, which can cause blistering, cracking, and delamination from the primer. If this should happen, the entire coating must be stripped down to the primer and redone.
(NOTE: Waiting 24 hours between coats will insure thorough dryness.)
- Spray gun distance from the substrate should be a minimum of 12-18" (300 450 mm).

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APPLICATION INSTRUCTIONS Contego *High Solids* - CONTINUED

CONTEGO HS APPLICATION - Continued

Painting Strategy

- For spray application, two thin coats of 30 mils (0.030", 0.75mm) as opposed to one thicker coat of 40 mils (0.040", 1.0mm) allows for better control over sagging, thickness, texture and reduces drying time.
- Before applying a second coat, make sure the previous coat is thoroughly dry, particularly in the web and on flange junctions and tips.
- A minimum drying time of 8 hours is recommended between coats. Applying additional coats in less than 8 hours could cause blistering. (Refer to Contego Drying Times Chart).

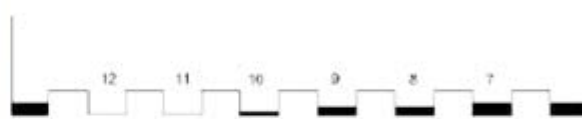
Checking Coating Thickness during Application

- Measure the wet film thickness frequently using a wet film thickness gauge to be sure the proper thickness is being applied evenly.
- To calculate dry film thickness (DFT) from wet film thickness (WFT), multiply WFT by 0.72

**Insert numbered tooth required into freshly applied wet coating system.
The gauge will show the wet mil thickness on the substrate
Refer to the illustrations below:**



Wet Mil Gauge in Coating



**Wet Mil Gauge
(Actual Size)**

***Indicates 10 Mils Wet Film Thickness**

DIRECTIONS FOR USE: Press gauge into wet coating. Withdraw vertically and note deepest tooth having paint on it and the next higher tooth that is not coated with paint. The true wet film thickness lies between these two readings. Clean gauge in suitable solvent after each use.

FINAL THICKNESS MEASUREMENT

Dry film thickness measurements should be taken at least 5 days after the last coat has been applied, and before any topcoat has been applied. Use an electronic thickness gauge such as an Elcometer or equivalent.

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APPLICATION INSTRUCTIONS

Contego High Solids - CONTINUED

TOP COAT APPLICATION

Contego International recommends for:

General Purpose Interior Use for acrylic latex top coat applied to a minimum dry film thickness of 5 mils (0.005", 0.13 mm).

Unconditioned Interior Space Use for protection from humidity, surface impact and damage, a silicon alkyd marine enamel, silicone modified alkyd, alkyd or exterior grade acrylic be applied at the manufacturers recommended DFT or 5 mils (0.005", 5 mils, 0.13mm).

Exterior Space Use a top coat is required and should be applied before the substrate is exposed to rain, dew, heavy fog, snow or other forms of moisture and/or precipitation.

Check with your Contego International representative for specific recommendations. A minimum of 5 days should be allowed before applying a topcoat the Contego HS to ensure complete cure and drying.

FINISH COAT

Apply two finish coats of acrylic enamel, silicon alkyd marine enamel, silicon modified alkyd, water-based epoxy, 2K epoxy, acrylic modified epoxy, as recommended by manufacturer to produce a smooth, even surface film. Provide a finish free of laps, runs, color irregularity, brush marks, orange peel, nail holes or other surface imperfections.

COMPLETED WORK

Match approved samples for texture and coverage. Remove, refinish, or repaint work not complying with requirements.

MISCELLANEOUS

Repairing Damaged Areas:

- Damaged areas should be abraded back to sound material.
- The surface should be cleaned and dried.
- Touch up with primer where needed.
- Apply Contego HS to the required film thickness.
- Spray Equipment Clean Up: Contego HS can be left in the hose for up to one hour.
- If the equipment will not be used for over one hour, it should be cleaned out. To clean, use potable water. Run the water through the spray pump, hose, spray gun and tips until clean. Do not allow Contego HS to set up in the spray pump, hose or spray gun or tips.

Information: The Following support materials are available at www.Contegointernational.com.

Architectural Specifications
Application Video
Adhesion "E" Book

Product Data Sheet
Global Certifications
Technical support

Drying Times Chart
MSDS

Project Planner
DFT & WFT Measuring Videos

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