



# APPLICATION INSTRUCTIONS

## Contego *Original* Reactive Fire Barrier Intumescent (RFB)

### GENERAL DESCRIPTION

Contego Original (RFB) is a full-bodied water-based acrylic latex, single component coating designed to protect various materials in a fire.

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

**First,** You can 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. Contego Original can be applied on previously painted steel as long as the coating is in good condition and is tightly bonded to the steel. If the existing coating on the steel is oil based, epoxy, or you are not sure what the existing coating is made of, the steel needs to be abraded and then a layer of bonding primer applied.. We recommend whenever possible that you order steel pre-primed from the fabricator.

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

**Third,** an optional decorative and protective top coat is applied over Contego Original. 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 gloss level.

### PRE-APPLICATION

Prior to use, Contego Original 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 Original 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 Original if there is condensation on any surfacel or primer as this will affect adhesion of Contego Original. 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.

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### HEALTH AND SAFETY

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

## APPLICATION INSTRUCTIONS

### Contego *Original* - CONTINUED

#### EQUIPMENT

**Spray Equipment:** It is recommended that Contego Original be applied with an electric, pneumatic, or gas powered airless spray pump capable of spraying at a minimum of 3,000 psi (210.9 Kg/cm<sup>2</sup>).

**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 3,000 psi. Tip size should be a minimum of 0.025" (0.635 mm).

**Brush or Roller:** Use a high quality latex paint brush. Contego Original can also be applied with a roller.

**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 Original.

**Mixing Prior to Application:** Contego Original is supplied ready for use and MUST NOT be diluted. Thoroughly stir Contego Original 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 Original.

#### 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 surfaces to be coated with Contego Original 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 Original to the primer. The primer must be fully cured in accordance with the manufacturer's instructions before applying Contego Original.
- Contego Original 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 Original 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 Original.

#### CONTEGO ORIGINAL APPLICATION

Thoroughly mix Contego Original 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 Original 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 Original per coat is:

Spray: 20 - 25 mils, (508μ - 635μ) - Varies with ambient temperature and humidity

Brush: 10 mils, (0.010", 0.25 mm) - Be sure to keep brush heavily loaded.

- Film thickness required is the same regardless of application method.
- DO NOT apply subsequent coats until previous coat is thoroughly dry, not just dry to the touch. 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.

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- (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).

## APPLICATION INSTRUCTIONS Contego *Original* - CONTINUED

### CONTEGO ORIGINAL APPLICATION - Continued

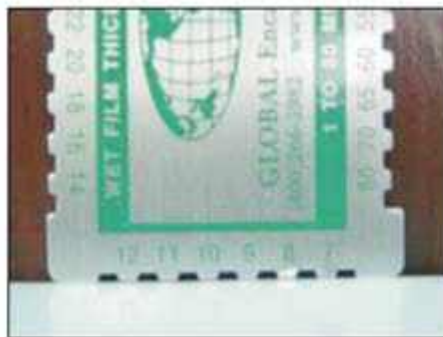
#### Painting Strategy

- For spray application, two thin coats of 20 - 25 mils, (508 $\mu$  - 635 $\mu$ ) offers better control over sagging, thickness, texture and reduces drying time.
- Before applying a second coat, make sure the previous coat is thoroughly dry, not just dry to the touch, 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).

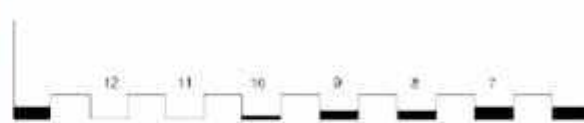
#### Checking Coating Thickness during Application

- 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 Mil 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 *Original* - 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 Original 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 Original to the required film thickness.
- Spray Equipment Clean Up: Contego Original 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 Original to set up in the spray pump, hose or spray gun or tips.

**Information: The Following support materials are available at [www.Contegointernational.com](http://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

### CONTACT

National Fireproofing Supply Co.  
420 Wagner Rd  
Porter, IN 46304  
Office: 219-926-1477  
Email: [support@natfire.com](mailto:support@natfire.com)

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