



Architectural Specification for

CONTEGO PASSIVE FIRE BARRIER LATEX ON POLYURETHANE SPRAY FOAM INSULATION

A water-based, thin film, one-component latex fire barrier coating containing 56.2% solids, by weight, is designed to protect various substrates by developing a thick char barrier (intumescent layer) when exposed to high temperatures or flame.

PRODUCT CHARACTERISTICS:

The product is a white, flat-finish coating with a nominal viscosity of 125 KU and a pH of 8.0 – 8.5.

APPLICATION EQUIPMENT:

The product can be applied with an airless sprayer (recommended 2,400 PSI, tip size 25 – 40, positive displacement). It can also be applied by roller, brush, or mitt. However, spray application is HIGHLY recommended because of the irregularity of the surface.

Recommended thickness depends on the substrate and the level of protection needed. See test data for recommendations, or call the manufacturer for technical assistance.

GENERAL:

The product polymerizes to all tested substrates and accepts top coating with alkyd, acrylic, or latex paint without loss of fire protective qualities. The product meets the following requirements for:

Spray Polyurethane Foam @ various thicknesses (see individual test reports)

- ASTM E-84.98 (UL-723) Flame Spread & Smoke Production (extended to 25 minutes)
- UBC-26.3 – Thermal Barrier Test for Interior Foam Plastic Systems
- NFPA-286 – Contribution to Room Combustibility.
- Toxicity Data (Zero toxicity/No HAZMAT)
- Vapor Barrier Test – ASTM E-283-04
- Adhesion Test – ASTM D3359, Method A and Method B

PROJECT CONDITIONS

- A. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F (10 and 32 deg C).
- B. Delete paragraph and subparagraph below for interior applications not subject to inclement weather conditions.**
- C. Do not apply intumescent paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; if temperature is less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces. If conditions described herein are expected within 24 hours of application, make sure the material is thoroughly protected by a waterproof tarp or other barrier until the topcoat is applied and fully cured. Failure to do so may cause the entire system to fail.

INTERIOR INTUMESCENT FINISH COATS

1. Prime Coat: Is not required except for bio-based (soybean or other organic vegetable based) foam. These products will typically produce a natural vegetableoil that will slough off any latex coating. In these cases, a SHELLAC BASED primer such Zinsser 1-2-3 SHELLAC BASE or similar applied at spreading rate recommended by manufacturer.
2. If the foam being protected is old, has cracks, or exposed cells from having been shaved down to fit between joists or studs, a noncombustible, ceramic based elastomeric such as Nationwide Coatings Perm-A-Kote 7525 (www.nationwidecoatings.com) is recommended to support the finish and avoid excessive absorption of the Contego coating. Excessive absorption is not detrimental, but will require much more Contego PFB to achieve the required surface film thickness.
3. Intermediate Coat: Contego PFB fire-retardant paint applied at spreading rate as indicated in the various tests provided. Generally, 14 mils (dft) applied as two coats, each at 14 mils wet, drying to 7 each for Class A Fame Spread and Smoke Production. For fire resistance requirements of 1 hour or more, apply two coats of Contego PFB, each at 20 mils wet using to achieve a total dry film thickness of 20 mils (dft).
4. Finish Coat – Any quality brand or type of commercial quality top coat can be applied for color or sheen when applied according to manufacturer's recommendations. If the painted surfaces will be outdoors, outdoor grade acrylic enamel must be used. Application of a top coat of acrylic enamel has been proven to enhance the fire resistance of Contego Passive Fire Barrier Latex by 25% to 32%. See test results for further information.

EXAMINATION

- D. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements and other conditions affecting performance of work.
 1. Proceed with application only after unsatisfactory conditions have been corrected and surfaces to receive paint are thoroughly dry.
 2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
- E. Before applying paint, consult manufacturer to determine if there are potential problems with use of intumescent paints over existing primers or previously applied coatings. Coordinating shop-applied primers with intumescent paint is critical. If problems exist, it may be necessary to provide barrier coats or to remove existing material and reprime substrate.
- F. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total intumescent paint system for various substrates. On Architect's request, furnish information on characteristics of finish materials to ensure use of compatible primers.

PREPARATION

- A. General: Remove hardware, hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 1. Make sure the surface of the foam is free of gouges, holes, exposed cells, and that the surface is stable and not crumbling or deteriorated. If any such defects are found, repair them prior to proceeding.
 2. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

- B. Cleaning: Before applying coatings or other surface treatments, clean substrates of substances that could impair bond of intumescent paint systems. Test a small area for adhesion.
 - 1. Schedule cleaning and painting application so dust and other contaminants will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturers written instructions for each particular substrate condition and as specified. Coordinating primers, if used, with the Contego PFB and then coordinating the Contego PFB with finish coats, if used, is critical. See "Coordination of Work" Paragraph in "Examination" Article. If compatibility problems develop, it may be necessary to provide barrier coats over primers, if used, or to remove primer and reprime substrate.
- D. Material Preparation: Mix and prepare materials according to manufacturers written instructions.
 - 1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
 - 2. Stir material before application to produce a mixture of uniform density, and as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
 - 3. Do not thin or mix with other products.
 - 4. **Delete paragraph below if tinting is not required. Different tints will show through as topcoat erodes.**
 - 5. Tinting: You may opt to tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match color of finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

APPLICATION

- A. General: Apply intumescent paints according to manufacturers written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
- B. Revise first subparagraph below if colors are not indicated in a schedule.**
- C. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable paint film.
- D. Provide primer coats, if used, that are compatible with Contego PFB.
- E. Provide finish coats that are compatible with Contego PFB.
- F. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
- G. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces.
- H. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 - 1. Film thickness required is the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer.

2. If surface has pre-existing coating, test for bleeding by applying a swatch of Contego PFB to a section of the primer or pre-existing coating. If undercoats, stains, or other conditions bleed through the test swatch of Contego PFB, redo the prep coat with a primer. (This will rarely if ever be necessary) then redo the test. Once you are satisfied, apply the required number of coats until paint film meets the dry film thickness required and is of uniform finish and appearance. Give special attention to ensure that edges, corners, crevices, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 3. Allow enough time between successive coats to permit complete drying. Do not recoat surfaces until paint has dried thoroughly. Otherwise, applying additional coats of paint will cause the undercoat to retain moisture, which can cause blistering, cracking, or, if enough moisture is trapped, cause the entire coating system to delaminate from the primer or surface. If this happens, the entire coating must be stripped down to the primer or bare foam and redone.
- I. Application Procedures: Apply coatings according to manufacturer's written instructions.
 1. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required. (See above).
 - J. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate for surface to be coated. Provide total dry film thickness of entire system as recommended by manufacturer.
 - K. Finish Coat: If you choose to use a top coat, apply two finish coats of acrylic enamel, as recommended by manufacturer. 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.
 - L. Produce a smooth surface film using multiple coats. Provide a finish free of laps, runs, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.
 - M. Completed Work: Match approved samples for texture and coverage. Remove, refinish, or repaint work not complying with specified requirements.

CLEANING AND PROTECTION

- N. Cleanup: At the end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
 1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by proper methods. Be careful not to scratch or otherwise damage adjacent finished surfaces.
- O. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting, remove temporary protective wrappings provided by others to protect their work.
 1. After work of other trades is completed, touch up and restore damaged or defaced surfaces. Comply with PDCA P1.

Manufactured by Contego International, Inc., Rochester, IN (USA) or other facility having been registered to the International Organization for Standardization ISO 9001:2000 standard for quality.

Complete test results. MSDS, Application Data and other information is available on the World Wide Web at <http://www.contegointernational.com>