

APPLICATION & HANDLING INSTRUCTIONS
CONTEGO PASSIVE FIRE BARRIER INTUMESCENT LATEX PAINT

If you purchased this product palletized – immediately check all containers for damage; opened paint cannot be 'salvaged' and a carrier claim will need to be filed for replacement.

HANDLING INSTRUCTIONS:

- DO NOT allow this product to freeze. If frozen the intumescent properties of this product may be adversely affected.
- Do not allow storage temperature to exceed 100 degrees F (38 C).
- If possible, store this product above 65 degrees F (18 C) for 48 hours prior to application – this will aid you during the application process.
- Do not reuse opened paint after 48 hours; the curing process has begun and may affect the product's performance.
- If you wish to set some paint aside for future touch-up work fill a small clean container completely with fresh paint from a 5 gallon bucket after it has been mixed as described in the 'Application' section below and then seal tightly.

APPLICATION INSTRUCTIONS:

1. CAUTIONS

- Apply only in a well-ventilated environment with adequate respiratory protection as prescribed by OSHA for all latex paints.
- Do not ingest; induce vomiting if this happens.
- Avoid contact with eyes; if this happens flush eyes freely with water until all traces of paint are removed.
- Avoid prolonged contact with skin; paint can be removed with warm water & soap.

2. APPLICATION PREPARATION & RECOMMENDED EQUIPMENT

- **VERY IMPORTANT:** This product must be mixed thoroughly before application. We recommend using a mixing paddle with power drill for a minimum of three (3) minutes at highest speed. Concentrate on the bottom of the bucket periodically moving to the middle and top areas. Product is properly mixed when: (1) there are no solids attached to the paddle after mixing at the bottom and (2) the paint shows a uniform consistency when mixed at the surface.
- **DO NOT** dilute or thin this product with any other liquid.
- This product may be applied as any other high quality latex based paint: brush, roller, airless spray - either gravity feed or suction, or compressed air sprayers.
- Surfaces must be clean, dry, and free of any grease, oils or other contaminants. Previous layers of paint must be solidly adhered to the surface with no flaking, chipping, or cracks. Bare steel should be primed with red oxide primer or its equivalent.
- Spraying is the recommended method of application. The minimum recommended spray setup is 2500 psi (172 bar) with a .015 inch tip (.38 mm). All Contego test applications are performed using a Graco XR5 with a .017 inch tip (.43 mm).
- Optimal application temperature is 85 degrees F (29 C); do not attempt application below 55 degrees F (13 C).

3. SPECIFIC APPLICATION INSTRUCTIONS

- **Coverage:** All coverage rates (except steel, below) are expressed on a 'per coat' basis. A single coat is applied at a rate of 130 sq feet (12 sqm) per gallon. This is equivalent to a wet coat of 12 mil (.30 mm) that will cure to a dry coat 7 mil thick (.18 mm). While under ideal conditions it is possible to apply a single coat of up to 20-22 mil (.50-.55 mm) wet, two thin coats are recommended to prevent the possibility of cracking while curing.
- **Sheetrock (gypsum), OSB (orientated strand board), plywood, structural lumber, and SIPs (structural insulated panels):** Requires two coats; the second can be applied when the first is dry to the touch. Full curing of both coats takes 72 hours.
- **Polyurethane foam insulation (PUF):** Also requires two coats but special consideration needs to be given to the condition of the foam's surface prior to application. Age, type, and method of application affects the surface porosity of PUF. Field testing has shown that unless the foam is newly installed and uncut it can absorb a significant quantity of paint. In these cases priming with a quality latex primer/sealer such as Zinsser's Bullseye 123 is recommended.
- **Structural steel:** A final dry film coating of 70 mil (1.8 mm) is recommended for adequate protection. Under proper conditions it is possible to achieve this with 6 coats of 20 mil (.50 mm) wet. Under less than ideal conditions, it may be necessary to apply more than 6 coats at a lesser thickness until a total of 120 mil wet (3mm) is achieved. In all cases the next coat may be applied when the prior is dry to the touch.
- **Top coating is optional.** To add color or sheen to surfaces Contego PFB may be top coated using virtually any alkyd, or enamel paint as soon as the intumescent coating is dry to the touch. To top coat with acrylic or latex spray or roll initial color coat DO NOT RE ROLL OR TOUCH UP until initial color coat is dry. Failure to wait for first color coat application of acrylic/latex to dry may result in the color coat smearing or rolling off on the roller. Once first color coat of latex/acrylic is dry apply second coat. Top coating does not reduce intumescent capability.
- Tinting is possible to pastel shades only. Limit tint to 10% of paint vol

For STEEL or ALUMINUM:

Architectural Specification

for

CONTEGO PASSIVE FIRE BARRIER LATEX

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 psi 1,200 – 2,400, tip size 25 – 50, positive displacement) or by roller, brush, or mitt.

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:

Structural Steel and Aluminum @ various thicknesses (see individual test reports)

- ASTM-E119/UL-263 – 2-Hour rating on .250 plate steel.
- ASTM-E119/UL-263 – 1.5 Hour rating on W10x49 beams
- ASTM-E119/UL-263 – 1.5 Hour rating on HSS 06.00 x .250 columns
- DIN 4102 Part 8 – 1.5 hour rating on .250 plate steel.
- CTL Test for Thermal Protection of .125 Aluminum Sheeting
- Toxicity Data (Zero toxicity/No HAZMAT)

PROJECT CONDITIONS

Revise this Article if manufacturer's requirements are more restrictive.

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).

Delete paragraph and subparagraph below for interior applications not subject to inclement weather conditions.

B. 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.

INTERIOR INTUMESCENT FINISH COATS

1. Prime Coat: Factory-formulated red oxide or similar applied at spreading rate recommended by manufacturer.
2. Intermediate Coat: Intumescent-type, fire-retardant paint applied at spreading rate of 10 – 20 mils wet using multiple coats to achieve a total dry film thickness of 75 MILS (DFT).
3. Finish Coat – For color or sheen applied according to manufacturer's recommendations.

EXAMINATION

Always retain this Article. Before starting, ensure that surfaces are in proper condition to receive intumescent paint, or failure is possible.

C. 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.

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.

D. 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

Revise first paragraph and subparagraph below if additional requirements are necessary to suit Project.

E. 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. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

F. Cleaning: Before applying coatings or other surface treatments, clean substrates of substances that could impair bond of intumescent paint systems.

1. Schedule cleaning and painting application so dust and other contaminants will not fall on wet, newly painted surfaces.

Always retain paragraph and subparagraphs below that specify surface preparation. Proper surface preparation is essential for satisfactory intumescent paint performance. If necessary, revise requirements to include special procedures requested by manufacturers or to suit Project.

G. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified. Coordinating shop-applied primers with finish coats is critical. See "Coordination of Work" Paragraph in "Examination" Article. If compatibility problems develop, it may be necessary to provide barrier coats over shop-applied primers or to remove primer and reprime substrate.

Revise paragraph and subparagraphs below to suit products specified.

H. Material Preparation: Mix and prepare paint materials according to manufacturer's 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. Use only thinners recommended by manufacturer and only within recommended limits.

Delete paragraph below if tinting is not required. Different tints will show through as topcoat erodes.

I. Tinting: 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

Revise this Article to suit Project. Add special restrictions on application methods if required.

J. General: Apply intumescent paints according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

Revise first subparagraph below if colors are not indicated in a schedule.

1. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable paint film.
2. Provide finish coats that are compatible with primers used.
3. 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.
4. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces.

Application in subparagraph below limits intumescent paint to door faces because activation of coating on edges may interfere with door opening.

K. 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. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
2. If undercoats, stains, or other conditions show through the final coat of paint, apply additional coats until paint film is of uniform finish, color, 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 proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where applying another coat of paint does not cause the undercoat to loose adhesion.

Insert restrictions or limits on using spray equipment to suit Project.

L. Application Procedures: Apply coatings by brush, roller, spray, or other applicators 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).

M. 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.

N. Prime Coat: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to substrates required to be painted that have not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas appears in the first coat.

O. Produce a smooth, even surface film using multiple coats. Provide a finish free of laps, runs, color irregularity, brush marks, orange peel, nail holes, or other surface imperfections.

P. Completed Work: Match approved samples for texture and coverage. Remove, refinish, or repaint work not complying with specified requirements.

CLEANING AND PROTECTION

Q. Cleanup: At the end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

Delete subparagraph below if final cleaning is not done by painter.

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.

R. 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.

END OF SECTION 09967>Delete subparagraph below if continued application in inclement weather will not be permitted under any circumstances.

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>

For WOOD:

Architectural Specification

for

CONTEGO PASSIVE FIRE BARRIER LATEX

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 psi 1,200 – 2,400, tip size 25 – 50, positive displacement) or by roller, brush, or mitt.

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:

Wood @ various thicknesses (see individual test reports)

- ASTM E-84.98 (UL-723) Class A Flame Spread & Smoke Production
- UBC-26.3 – Thermal Barrier Test for Interior Foam Plastic Systems.
- UBC-26.2 – Thermal Barrier for both standard and HUD applications.
- NFPA-286 – Contribution to Room Combustibility.
- Toxicity Data (Zero toxicity/No HAZMAT)

PROJECT CONDITIONS

Revise this Article if manufacturer's requirements are more restrictive.

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).

Delete paragraph and subparagraph below for interior applications not subject to inclement weather conditions.

B. 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.

INTERIOR INTUMESCENT FINISH COATS

1. Prime Coat: Is not required, but if used, factory-formulated Zinsser 1-2-3, Kilz, or similar applied at spreading rate recommended by manufacturer.

2. Intermediate Coat: Intumescent-type, fire-retardant paint applied at spreading rate of 20 mils wet using multiple coats to achieve a total dry film thickness of 14 MILS (DFT).

3. Finish Coat – For color or sheen applied according to manufacturer's recommendations.

EXAMINATION

Always retain this Article. Before starting, ensure that surfaces are in proper condition to receive intumescent paint, or failure is possible.

C. 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.

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.

D. 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

Revise first paragraph and subparagraph below if additional requirements are necessary to suit Project.

E. 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.

F. Cleaning: Before applying coatings or other surface treatments, clean substrates of substances that could impair bond of intumescent paint systems.

1. Schedule cleaning and painting application so dust and other contaminants will not fall on wet, newly painted surfaces.

Always retain paragraph and subparagraphs below that specify surface preparation. Proper surface preparation is essential for satisfactory intumescent paint performance. If necessary, revise requirements to include special procedures requested by manufacturers or to suit Project.

G. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturers written instructions for each particular substrate condition and as specified. Coordinating shop-applied primers with finish coats is critical. See "Coordination of Work" Paragraph in "Examination" Article. If compatibility problems develop, it may be necessary to provide barrier coats over shop-applied primers or to remove primer and reprime substrate.

Revise paragraph and subparagraphs below to suit products specified.

H. 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.

Delete paragraph below if tinting is not required. Different tints will show through as topcoat erodes.

I. Tinting: 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

Revise this Article to suit Project. Add special restrictions on application methods if required.

J. General: Apply intumescent paints according to manufacturers written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

Revise first subparagraph below if colors are not indicated in a schedule.

1. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable paint film.

2. Provide finish coats that are compatible with primers used.

3. 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.

4. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces.

Application in subparagraph below limits intumescent paint to door faces because activation of coating on edges may interfere with door opening.

K. 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. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions.

2. If undercoats, stains, or other conditions show through the final coat of paint, apply additional coats until paint film is of uniform finish, color, 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 proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where applying another coat of paint does not cause the undercoat to loose adhesion or cause the finish to crack.

Insert restrictions or limits on using spray equipment to suit Project.

L. Application Procedures: Apply coatings by brush, roller, spray, or other applicators 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).

M. 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.

N. Prime Coat: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to substrates required to be painted that have not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas appears in the first coat.

O. 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.

P. Completed Work: Match approved samples for texture and coverage. Remove, refinish, or repaint work not complying with specified requirements.

CLEANING AND PROTECTION

Q. Cleanup: At the end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

Delete subparagraph below if final cleaning is not done by painter.

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.

R. 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.

END OF SECTION 09967>Delete subparagraph below if continued application in inclement weather will not be permitted under any circumstances.

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>