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INNOVA-FR 41 AG®

General Application Procedure

1. Description of the Material

INNOVA-FR 41AG® is a unique one-component latex flame retardant – intumescent coating based on proprietary and patented, non-halogenated phosphate technology. When exposed to a fire condition, **INNOVA-FR 41AG®** expands to form a robust char insulation layer, encapsulating the substrate from the effects of rapid flame spread and smoke evolution. The flame retardant active ingredients within **INNOVA-FR®** products are not water soluble and will not leach out over time.

2. Surface Preparation

The surface should be clean and dry, free of dirt, oil, loose scales and other foreign matter. On porous surfaces or flaky rusty surfaces, loose flakes and/or rusty scales must first be removed by scraping and a proper surface suitable for application of the coating restored. The substrate surface itself should be prepared in accordance with SSPC SP2 or SSPC SP3 procedures.

New or Unpainted Surfaces: Priming is not required. Rusting metal should be cleaned.

Painted Surfaces: Priming is not required for latex, acrylic latex, alkyd or enamel painted surfaces.

For specific information, please call your local distributor or manufacturer.

3. Mixing Procedure

A 5 gallon pail of **INNOVA-FR 41AG®** can be adequately prepared using a 3/8 inch drill with an appropriate mixing tip, and mixing for at least 5 minutes.

4. Application using Spray Equipment

INNOVA-FR 41AG® can be applied using airless or conventional spray equipment. The product can be applied to the desired thickness usually in one application of up to 25 mils wet.

Do not apply when the air temperature or temperature of the surface being coated is below 32°F (0°C), or during times of any precipitation or when precipitation is expected within twenty-four hours (for exterior applications).

The required equipment is a standard conventional spray system or an airless paint sprayer with specifications similar to the following recommended unit:

Pump: Airlessco model SL6200 Airless Paint Sprayer
Pressure: 2400 to 3000 PSI
Hose: 50 foot x 1/4 inch airless paint hose (caution-longer lengths of hose may cause pressure fluctuations and uneven coating)
Gun: 008XL Spray Gun
Tip: 535 Zip Tip, reversible tip.
Filters: Pick up filter should correspond with tip size (Do not use any kind of Line or Spray Gun Filter)

The surface to be coated must be clean, dry and free of all loose materials. The surface should be suitable for painting, similar to any other paint job requirement.

Hold the spray gun 12 to 14 inches from the surface. Overlap each pass by approximately 30%.

Up to 25 mils wet thickness can be achieved in one wet application coat by following these instructions:

Start with a tack coat covering approximately 80 square feet. Then return to beginning to apply successive layers until desired thickness is achieved (no more than 25 mils in one wet application). Allow to dry for 2 hours or until dry to touch before applying layers in excess of 25 mils.

The wet film thickness should be checked frequently with a wet film thickness gauge.

A practice surface should be used to gain some familiarity with the coating material and equipment. After a few minutes of practice, the operator should be able to spray a smooth coat with the desired thickness.

The coverage should be as uniform as possible, including surfaces that are normally not in plain view such as underneath and behind overhangs. This will probably be the region with the most intense heat in the event of a fire, and require the best protection.

Any chips, cracks or thinly coated areas affect the fire performance only in the immediate area, and can be "touched up" upon inspection.

The coating should be allowed to dry for 2 -3 hours before a second spray coat is applied, if necessary.

No topcoating is necessary, even for outdoors applications.

5. Application with Brush & Roller

After proper mixing and surface preparation, apply the product directly from the container. Coat evenly and thoroughly over surface to be coated with a natural bristle brush or roller. Any chips, cracks or thinly coated areas can be "touched up" upon inspection. Do not apply multiple coats until the surface is completely dry as specified above. Do not apply when the air temperature or temperature of surface being coated is below 32° F (0° C). Do not apply during times of any precipitation or when precipitation is expected within two hours (for exterior applications).

For best results use any good quality bristle brush or 3/8" to 1/2" nap roller cover.

6. Application Specification

Approximate thickness for coverage - One coat application:

Brush or Roller: 6.5 -9.5 mils wet (4 -6 mils dry)
Spray: 9.5 -25 mils wet (6 -15 mils dry) depending upon spray procedure and surface to be coated.

The number of coats depends upon the total thickness needed to reach the specifications of the application.

Class A Surface Flame Spread ratings can be achieved with a wet film thickness of 2 – 10 mils depending on the type of material, density, surface granularity, etc. However, Class A rating is not a reliable determination of fire protection for most applications. Call manufacturer for recommendation for your application.

Examples of Spreading Rate / Coverage:

Thickness, Wet	Thickness, Dry	Coverage per Gallon
6 mils	3.8 mils	265 sq ft
10 mils	6.2 mils	160 sq ft
13 mils	8.1 mils	125 sq ft
16 mils	9.9 mils	100 sq ft
20 mils	12.4 mils	80 sq ft
25 mils	15 mils	65 sq ft

Porous or textured surfaces will reduce the spreading rate and coverage area.

Be sure that the entire surface is thoroughly coated to a thickness equal to or greater than the minimum required on all areas of the surface, especially areas that are usually not immediately visible, such as joints or underneath overhangs.

Drying time - depends upon the ambient temperature, relative humidity and applied thickness. Approximately two hours of drying time is required when temperature is 72° F (22°C) and relative humidity is below 50% and coat is 8-9mils wet. Lower temperatures, higher humidity or thicker coatings will require longer dry time. Curing time is 24 - 48 hours. Drying may be accelerated with gentle heated airflow under 200°F. Additional coats may be applied when dry to the touch.

7. Typical Coating Thickness

Type of Surface	Wet Film Thickness (mils)
Non-Combustible Surfaces – Unpainted Steel, Aluminum, Metals, Concrete	5 – 8
Non-Combustible Surfaces – Painted Sheet Rock, Fiberglass	9 – 15
Combustible Surfaces Wood, Wood Products, Composites, Foams	15 – 22
Marine – Combustible Surfaces	20 – 30
Others	Various

8. Testing Thickness after Curing

For the **INNOVA-FR 41AG®** coating, the coating thickness can be measured using non-destructive, or magnetic thickness gauges. Follow the thickness gauge manufacture's procedures for correct use.

9. Clean-up Instructions

Clean all equipment immediately after use with water. If equipment needs final flush with "alcohol" to prevent metal corrosion, consult equipment manufacturer before doing so. If product has accidentally dried on equipment, use soapy water or thinner to clear residue.

10. Warning

Use with adequate ventilation. Do not breathe vapors or spray mist. Wear an appropriate, properly fitted respirator (NIOSH/MSHA) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

FIRST AID: In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If affected by inhalation of vapor or spray mist, remove to fresh air. Do not take internally. If swallowed, get medical attention. Keep out of reach of children.

Keep container closed when not in use. In case of spillage absorb with inert material and dispose of in accordance with applicable regulations. Clean up with soap and water.