



5 James Street • South Hackensack • New Jersey 07606
Tel: 201-818-1616 • Fax: 201-818-8775
E-mail: nofire@nofire.net • Web Site: <http://www.nofire.com>

NoFire A-18CC - General Application Procedure & Technical Data

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1. General Description of the Material

NoFire® A-18CC is a one-part non-flammable water based intumescent coating similar in appearance to ordinary latex base paint. Upon exposure to flame or heat, it immediately foams and swells (intumesces) providing an effective insulation and heat shield to protect the subsurface.

NoFire A-18CC can be applied to many types of surfaces providing an attractive flat finish. For exterior applications NoFire A-18CC requires a topcoat, selected from NoFire Technologies' Approved Topcoats. Contact NoFire Technologies for approved topcoats for your application. **Do NOT use NoFire A18CC for exterior application without an approved topcoat.**

NoFire A-18CC is specifically designed for use as a cable coating. In addition to the performance advantages of all NoFire coatings, it has added flexibility that make it suitable for use on non rigid or flexible composites, such as cable jackets.

2. Surface Preparation

Proper adhesion to cable jackets is critical to the performance of the coating. Many cable jackets, such as PVC or similar composites, have glossy, shiny surfaces and may require a primer for best adhesion.

Specific recommended primers depend on the type of surface and application. For many applications, the following primers (or equivalents) are recommended:

1. Sherwin Williams Zinc Molybdate Primer, TT-P-645B
2. Americoat 5105, manufactured by PPG

Please contact manufacturers representative for recommended primer for your specific application.

If primer is not applied, the surface to be coated must be clean and dry, free of dirt, oil, loose scales or paint 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.

3. Mixing Procedure

Due to possible settling of contents during shipping and storage, the product should be thoroughly mixed from bottom to top of the container. No thinning of any kind is recommended.

A 5 gallon pail of NoFire A18CC can be adequately prepared using a 3/8 inch drill with an appropriate mixing tip, and mixing for at least 5 minutes. This procedure should be repeated each day the coating material will be used.

4. Application using Spray Equipment

NoFire A-18CC 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 40°F (5°C), or the relative humidity is above 85% or during times of any precipitation or when precipitation is expected within twenty-four hours (for exterior applications).

Recommended conventional spray equipment or airless spray equipment including minimum specifications for equivalent units:

I. Conventional Sprayer: Gun and Cup System or Pressure Pot/Paint Production System minimum requirements:

- Pressure feed system
- High viscosity coatings
- Minimum 0.05" orifice (spray nozzle)
- Medium-Fast delivery

A. Gun and Cup System:

Recommended unit: Grainger Model 2Z364; compressor with minimum delivery 9.4 cfm @ 50 psi.

B. Pressure Pot/Production Paint System:

Recommended components:

- Spray gun: Grainger Model 4XP64
- Pressure Pot: Grainger 6Z899
- Material and air line: 1Z530
- Paint tank: 10 gallon maximum
- Hose length: 15 feet maximum; 3/8 fluid and air line recommended
- Compressor: Minimum delivery 9.3 cfm @ 40 psi.

II. Airless Spray System

Requirements:

Pump:

- Minimum pressure: 3000 psi
- Minimum tip size: 0.033"
- Minimum output: 1.0 gallon/minute

Spray Gun:

Compatible with pump

Rated for Pump Max pressure
Reversible tip
Removable filters

Recommended Models:

Electric Power: Airlessco SL1500

Gas Power: Airlessco SL6250

Hose: 50 foot x 1/4 inch airless paint hose (**caution**-longer lengths of hose may cause pressure fluctuations and uneven coating)

Gun: 007XL 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 24 mils wet thickness can be achieved in one wet application coat by following these instructions:

Do not try to apply the total desired wet thickness in one pass. Rather 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 24 mils in one wet application). Allow to dry for 2 hours or until dry to touch before applying layers in excess of 24 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 to the touch for 2 - 4 hours (depending on temperature and humidity) before a second spray coat is applied, if necessary.

The coating should be allowed to dry and cure for 48 hours if possible, but no less than 24 hours, prior to topcoating.

5. Application Procedure with Brush and 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 40° F (5° C). Do not apply when the relative humidity is above 85% or 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 Specifications

Approximate thickness for one coat:

Brush or Roller: 6.5 - 9.5 mils wet (4 - 6 mils dry)

Spray: 9.5 - 24 mils wet (6 - 15 mils dry) depending upon spray procedure and surface to be coated.

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

Class A Surface Flame Spread ratings can be achieved with a wet film thickness of 0.002 – 0.0097 inches depending on the type of material, density, surface granularity, use of primer, 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
6.1 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
24 mils	15 mils	65 sq ft

Porous or textured surfaces will reduce the spreading rate.

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 70° F (21°C) and relative humidity is below 40% 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. Testing Thickness after Curing

For both the NoFire A18CC coating as well as the final topcoat (if used), the coating thickness can be measured using non-destructive, or magnetic thickness gauges. Follow the thickness gauge manufacture's procedures for correct use.

8. 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.

9. Warnings

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.

10. Technical Data

Finish: Flat	Color: Off White; also available in standard color range
Viscosity: 85 - 115 KU.	Approx. Weights: 11.5 ± 0.3 lbs. per gal
Solids by Weight: 63%	Solids by Volume: Approx. 63%
PH: 8.0 ± 0.5	Flash Point: None
Freeze-Thaw: Passes 5 cycles	Federal Spec Equivalent: TT-P-1932
Packaging: 5-gallon containers - gross weight 62 lbs., net weight 59 lbs	Shelf Life: Minimum 24 months from date of shipment

11. Environmental Information:

HMIS	
Health	1
Flammability	0
Reactivity	0
Personal Protection	B
Major Ingredients	CAS#
Titanium Dioxide	13463677
Ammonium Polyphosphate	68333-79-9

12. V.O.C. : 2.2 gms/liter

**ORIGINAL
COPY**

The NoFire product is classified by Underwriter's Laboratories of the United States as follows:
** Classified - COATING FIRE RETARDANT Surface Burning Characteristics R18958

Fire Hazard Classification (as per ASTM E84 on Eter Board):

Flame Spread: 0 Smoke Developed Value: 0

Toxicity: 0

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