

1
PAINTS
APPLICATIONS FOR
RESIDENTIAL
COMMERCIAL AND
INDUSTRIAL STRUCTURES

*Dedicated
to Providing
the Ultimate
Solutions In
Fire Protection
Systems*

Distributed by:



SINCE 1926

SOMAY PRODUCTS, INC.

4301 N.W. 35th Avenue
Miami, FL 33142-4382
Tel.: (305) 633-6333
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nofire[®]

does everything
that ordinary
paint does...
except burn!

NoFire is a nontoxic, water base intumescent paint that can be economically applied by brush, roller or spray to most common materials such as sheetrock, wood and wood products, steel and other metals as well as many types of plastics and composites. It can be used as a **primer coat** with most ordinary latex or solvent base paints applied on top as a finish coat. It can also be used as a **finish coat** over existing latex or solvent base paints.

NoFire can provide protection from fire and heat at temperatures in excess of 2000°F whether used as a primer coat or finish coat.

NoFire's fire retardant properties are not affected by gentle washing or aging. **NoFire** is extremely durable when compared to ordinary paint.

NoFire Helps Prevent FLASHOVER!

NoFire paint applied to the walls and ceiling of a room can effectively eliminate them as contributors to FLASHOVER! Flashover is the term for the condition which occurs in a room when a generally localized fire suddenly engulfs the entire room or area. The enormous amount of energy and toxic gases generated by the flashover can easily cause similar conditions in adjacent areas, resulting in rapid fire spread. Once these conditions have begun, the chance of survival for anyone in the vicinity is nearly zero.

In a series of independent laboratory tests, **NoFire** was demonstrated to effectively eliminate the walls and ceiling of a room as a contributor thereby drastically reducing the potential for flashover.



NoFire A and A18 General Application Procedure & Technical Data

1. General Description of the Material

NoFire® 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 can be applied to many types of surfaces providing an attractive flat finish. NoFire can be readily topcoated by many types of latex base paints, urethanes or acrylics for attractive weather resistant finishes.

2. Surface Preparation

The surface should 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 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 Formula A and A18 are best applied using airless 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).

The required equipment is a paint sprayer with specifications similar to the following recommended unit:

Pump:	Airlessco model 5300SL Airless Paint Sprayer
Pressure:	2400 to 3000 PSI
Hose:	50 foot x 1/4 inch airless paint hose
Gun:	007XL Spray Gun
Tip:	527 or 531 Zip Tip, reversible tip.
Filters:	Suction Filter Only (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%.

The wet film thickness should be checked constantly 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 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.

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 coverage - One coat application:

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 needed to reach the specifications of the application.

6.1 mils wet (3.8 mils dry) achieves a Class A rating. However, Class A thickness is NO DETERMINATION of fire retardant protection for most applications. Thickness required is determined by substrate to be coated and fire protection requirements. Call manufacturer for recommended specifications.

Examples of Spreading Rate / Coverage:

Thickness Wet	Thickness Dry	Coverage per Gallon
6.1 mils	3.8 mils	265 sqft
10 mils	6.2 mils	160 sqft
13 mils	8.1 mils	125 sqft
16 mils	9.9 mils	100 sqft
20 mils	12.4 mils	80 sqft
24 mils	15 mils	65 sqft

Porous or textured surfaces will reduce the spreading rate.

Be sure that the entire surface is thoroughly coated with a thickness equal to or greater than the minimum required on all regions of the surface, especially regions 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 RH 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 coating as well as the final topcoat, 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: White; also available in standard color range
Viscosity: A 80 - 100 KU. A18 85 - 115 KU.	Approx. Weights: A 10.7 lbs. per gal or greater A18 11.0 lbs. per gal or greater
Solids by Weight: Approx. 64% A, 67% A18	Solids by Volume: Approx. 60% A, 63% A18
PH: 7.5	Flash Point: None
Freeze-Thaw: Passes 5 cycles	Federal Spec Equivalent: TT-P-1932
Packaging: 5 gallon containers - A: gross weight 58 lbs., net weight 55 lbs. A18: gross weight 61 lbs., net weight 58 lbs	Shelf Life: Stable up to 12 months from date of shipment

11. Environmental Information:

HMIS	
Health	1
Flammability	0
Reactivity	0
Personal Protection	B
Major Ingredients	CAS#
Titanium Dioxide	13463677
Melamine	108781
Vinyl Acetate Latex	25067021
DiPentaerythritol	162-58-9
Ammonium Polyphosphate	6833799
Water	7732185
Aluminum Oxide	142844-00-6
Silicon Dioxide	142844-00-6

12. V.O.C. (V.O.S.): Contains max. 7 gms/ltr or .06 lbs/gal V.O.C.

The NoFire product is listed by Underwriter's Laboratories of the United States as follows:
Listing number: E129989, Component Flame Retardant Coating, QMOTZ, August 22, 1990

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

Flame Spread: 0

Smoke Developed Value: 0

Toxicity: 0

Military Specification MIL M-14H

U.S. Patent Numbers: 4,879,320; 4,965,296; 5,723,515

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CLASS
A
RATING
ASTM-E84



A-18 NV FIRE RETARDANT FLAT COATING WATER BASE
APPROVED UNDER MPI CATEGORY # 64

Accepted For Use
City of New York
Department of Buildings
MEA 104-96-M
NoFire®

Accepted For Use
State of Rhode Island
Department of Building Code Standards
NoFire Flame Retardant Coating
Approval Report
No. 97-211


NoFire S-Barrier
INTUMESCENT WRAP SYSTEM
Accepted for Use
City of New York
Department of Buildings
MEA 430-00-M

CLASSIFIED
UL
33LM

FIRE RETARDANT COATING
SURFACE BURNING CHARACTERISTICS
FLAME SPREAD: 10
SMOKE DEVELOPED: 55
NO. OF PRELIMINARY COATS: 0
RATE OF COST (FT²/GAL): —
NO. OF FIRE RETARDANT COATS: 1
RATE PER COAT (FT²/GAL): 165
NO. OF OVERCOATS: 0
RATE PER COAT (FT²/GAL) —

NoFire® Approvals

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- A. ASTM E84-87, Surface Burning Characteristics of Building Materials**
Eter Board, Douglas Fir, Low Density Fiberboard, Composite Panels, United States Testing Company, Inc.,
Fairfield, New Jersey
- B. UL 723 – Report on Fire Retardant Coating under the CLASSIFICATION PROGRAM**
Douglas Fir, Underwriters Laboratories, Northbrook, Illinois
- C. United States Navy Qualified Products List (QPL)**
Qualification Letter
MIL-PRF-24596 Type II Class I Application A
Fire Test Results, Naval Surface Warfare Center, Carderock Div., Bethesda, MD.
Naval Environmental Health Center (NEHC) Report
SGS U.S. Testing Report
- D. International Maritime Organization (IMO)**
Resolution A.653(16), Resolution MSC.41(64)
“Recommendation on Improved Fire Test Procedures for Surface Flammability of Bulkhead,
Ceiling and Deck Finish Materials”

Performed at Southwest Research Institute, San Antonio, Texas on Calcium Silicate Board and
Marine Grade Polyester

- E. Type Approval – NoFire A18**
United States Coast Guard, Det Norske Veritas (DNV) American
Bureau of Shipping (ABS) and Lloyd's Register

- F. Certificate of Conformity-EC**
EC Type Examination Certificate – NoFire A18
Det Norske Veritas (DNV)

- G. UL 94 and 746C Tests for Flammability of Plastic Materials for
Parts in Devices and Applications**

Performed at Underwriters Laboratories on grades PVC-3, PVC-4,
AL-2, and SS-1. (UL 94 is equivalent to ASTM D3801 and IEC 707
ISO 1210.2) using NoFire A. These specifications exceed the
IEEE-383 Vertical Burn Test

Included in these tests were:

Surface resistivity - on Aluminum, Stainless Steel, and PVC UL746C

Flexural strength - on Aluminum, Stainless Steel, and PVC ASTM D-790

Environmental - on PVC, UL746C, ASTM D-790

Performed at Underwriters Laboratories on Wood Particle Board using NoFire A18.

**INDEPENDENT
TESTS
& PRODUCT
APPROVALS**

- H. Uniform Building Code UBC 8-2 (Formerly UBC 42-2) Standard Method for Evaluating Room Fire
Growth Contribution Of Textile Wall Coverings**

Tests on 1/4" hardwood plywood, T111 plywood, wood shingles, 1/2" hardboard siding, and lap 7/16"
flakeboard siding. Performed using A, at University of California, Berkeley, June, 1992

Tests on T111 Plywood, Cedar Shakes using A18 performed at University of California, Berkeley, 1995

Tests on 1/4" Sterling Board coated with 18 coats of alkyd base paint, and topcoated with A18, performed at
VTEC Laboratories, Bronx, New York, 1996

Tests on Cement Board coated with 6 coats of alkyd base paint, and top-coated with A18, performed at
VTEC Laboratories, Bronx, New York, 1999

Tests on T-111 Plywood Panels coated with 1 coat of A18 and top-coated with exterior latex paint,
performed at VTEC Laboratories, Bronx, New York, 1999

Tests on Sheet Rock Panels coated with 8 coats of interior latex paint top-coated with A18, and finished
with 1 coat exterior latex paint, performed at VTEC Laboratories, Bronx, New York, 1999

- I. Report of Material and Equipment Acceptance**
(MEA#: 104-96-M)
Department of Buildings, City of New York, May 16, 1996
- J. Approval as Registered Flame Resistant Product**
California Department of Forestry and Fire Protection Office of the State Marshal
- K. Approval as Registered Flame Resistant Product**
Department of Buildings, State of Rhode Island
- L. Toxicity Tests**
- NES 713 Test
Test performed at VTEC Laboratories, January 29, 1996
NoFire A
- Acute Inhalation Toxicity of Thermal Degradation Products Using the NYS Modified Pittsburgh Protocol
Tests performed at United States Testing Laboratories, Fairfield, New Jersey on NoFire A18
- Gas Analysis by the Dragger Tube Method
ASTM E662 - NoFire A
Tests performed by HPVA Laboratory and Testing Service, March 1, 1996
- Gas Analysis by the Dragger Tube Method
ASTM E662 - NoFire CT3 Coal Tar Epoxy
Tests performed by HPVA Laboratory and Testing Service, March 1, 1996
- MIL M-14H NoFire A
Tests performed by United States Testing Company, June 17, 1992
- Boeing and Bombardier Standards
- M. ASTM D-3359**
Standard Method for Adhesion Test
Test performed at United States Testing Company, January 16, 1996 to January 18, 1996
- N. NFPA 417**
Standard on Construction and Protection of Aircraft Loading Walkways
Tests performed at Underwriters Laboratories, Canada, on Aircraft Loading Bridges, May 1994.
- O. International Maritime Organization, IMO Resolution A.754 (18) and High Speed Craft Code (HSC) for aluminum and steel construction.** Intertek Testing Services NA Ltd. Coquitlam, British Columbia, Canada Certificate Of Approval, Ministry of Transport, Canada
- P. Fire Endurance Test of Versa Wrap Raceway Fire Barrier Systems for Conduit and Cable Trays**
Conducted according to Nuclear Regulatory Commission (NRC) Generic Letter 86-10 Supplement 1, One and Three Hour Protocol for Conduit, Cable Trays, Junction Boxes and Hangers
Omega Point Laboratories, Elmendorf, Texas
- Q. ASTM E814-88**
Standard Method for Fire Test Through-Penetration and Fire Stops, on PVC pipes
performed at Southwest Research Institute, San Antonio, Texas
- R. ANSI/IEEE Standard 383**
Standard Test of Class 1E Electrical Cables for Nuclear Power Generation Stations (Cable Coating)
Test performed by Underwriters Laboratories, August 19, 1996
- S. FAR 25.855, Appendix F, Part III, Amendment 25-60**
Flammability of Aircraft Cargo Liners
Tests performed by Flight Insulation Co., at US Testing Co., December 1993 using No Fire 2025/30.
Specifications meet codes of FAR 25.855, Appendix F, Part III, Amendment 25-60(now FAR 25.855(c) as changed by Amendment 25-72)

- T. NAVSEA MIL-STD-2031**
Fire Protection of Glass/Vinyl Ester Composites for Structural Applications
Naval Surface Warfare Center, Carderock Division, Bethesda, Maryland
- U. Uniform Building Code UBC 17-5**
Room fire test for interior of foam plastic systems
Test performed at Southwest Research Institute, San Antonio, Texas, and December 5, 1995
- V. ASTM E152, BS-476 Part 22, ISO-3008**
Standard Methods of Fire Tests of Door Assemblies
Tests performed by Weyerhaeuser Co. on 1 5/8" Particle Core Profile Doors.
ASTM E152 - Longview, Washington - May 1993
BS-476 Part 22 - Trade Technology Ltd., Buckinghamshire, England - August 1993
International Standards Organization - Test #: ISO-3008, - August 1993
- W. CAN4 S104-M80**
Standard Methods of Fire Tests of Door Assemblies
Tests performed at Underwriters Laboratories Canada on Retrofit Doors, May 1994.
- X. FC708**
Acoustical Ceiling Fire Tests
Tests performed by US Gypsum, June 1994
- Y. MIL-STD 1648A**
Radiation Heat Flux on Naval Missile Canister, performed by FMC Corporation for the US Navy.
- Z. Approval for use at Zaporozhye Nuclear Power Station, Ukraine**
First Deputy Chairman Ukrainian State, Committee, Nuclear Energy, September 19, 1995

UNITED STATES PATENTS

INTUMESCENT FIRE-RETARDANT COATING MATERIAL
NUMBER 4,879,320

INTUMESCENT FIRE-RETARDANT AND ELECTRICALLY CONDUCTIVE
COATING MATERIAL
NUMBER 4,965,296

INTUMESCENT FIRE-RETARDANT COMPOSITION FOR HIGH TEMPERATURE
AND LONG DURATION PROTECTION
NUMBER 5,723,515

FIRE, HEAT AND BACKDRAFT PROTECTION SHIELD
FOR FIREFIGHTERS
NUMBER 6,048,805

FIRE AND HEAT PROTECTION WRAP FOR CONDUITS, CABLE TRAYS,
OTHER ELECTRICAL TRANSMISSION LINES
AND GAS AND OIL PIPELINES
NUMBER 5,985,385

FIRE AND HEAT PROTECTION WRAP FOR STRUCTURAL STEEL COLUMNS,
BEAMS AND OPEN WEB JOISTS
MARKETED UNDER TRADE NAME S-BARRIER
NUMBER 6,074,714

INSULATION BLANKET HAVING AN INNER METAL CORE AIR CELL AND ADJOINING
OUTER INSULATION LAYERS
MARKETED UNDER TRADE NAME A-BARRIER
NUMBER 6,114,003

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Surface Preparation: All surfaces must be clean and free of dirt, grease, oil or peeling paint. A white powdery deposit often found on masonry surfaces, should be completely removed with a stiff wire brush. Repair cracks and other imperfections with spackle.

New or Unpainted Surfaces: Priming is not required for wood, wallboard, aluminum, copper or masonry substrates. Rusting metal should be primed with a rust inhibiting primer.

Painted Surfaces: Loose or peeling paint must be removed. Surface must be clean and free of dirt, grease or oil.

Priming is usually not required for latex, acrylic latex or alkyd paints.

Enamel paint is **NOT** a suitable surface for the application of NoFire paints. The enamel must be removed prior to painting or primed with a recommended primer. See your distributor or manufacturer for details.

Application: For best results, any good quality bristle brush or 3/8" to 1/2" nap roller cover may be used.

Spray: For conventional air atomized spraying, excellent results are obtained with air nozzle orifices from 0.04 to 0.07 inches and pressure from 30 to 70 PSI. The fluid nozzle orifice size should be 0.07 to 0.11 inches.

For airless spraying, excellent results are obtained with an orifice size of .031 to .039 inches with pressure of 2400 to 3500 PSI. Spray width may range from 10 to 16 inch distance. For best results, use equipment manufacturer's recommendations.

Drying Time: NoFire will dry to the touch in 2 to 4 hours depending on ambient conditions. If multiple coats are desired, allow 1 to 2 hours between coats. Curing time is approximately 24 to 48 hours.

Cleaning up after any job is easy. JUST USE WATER.

NoFire contains *NO* lead, asbestos or halogens.

**Typical coverage ranges from
60 Sq Ft Per Gal (at 25 mil wet = .025 in)
TO
250 Sq Ft Per Gal (at 6 mil wet = .006 in)
Depending on surface material and requirements**

**ONE ROLLER COAT APPLIES UP TO 8 MILS WET THICKNESS
ONE BRUSH COAT APPLIES UP TO 5 MILS WET THICKNESS
ONE SPRAY COAT APPLIES UP TO 25 MILS WET THICKNESS**