



FLAME CONTROL NO. 166

A Solvent Base Coating

Intumescent Fire Retardant Varnish
Fire Hazard Classification, CLASS "A"

DESCRIPTION:

Flame Control No. 166 is a clear satin finish fire retardant varnish having a Class "A" Underwriters' laboratories flame spread rating. When exposed to flame or high heat, the coating puffs up to form a thick insulating cellular foam. This foam layer retards the penetration of heat, thereby reducing the flame spread (surface burning characteristics) and smoke development of combustible materials.

RECOMMENDED USES:

No. 166 is designed for use on interior wood surfaces where it is desirable to maintain the natural wood appearance, while obtaining a Class "A" flame spread rating. No. 166 is suitable for use on wall paneling, ceiling panels and other such surfaces. Not recommended for use on floors, doors, shelving, or in areas where there could be exposure to dampness, high humidity, moisture or water, as the coating is somewhat softer than conventional varnishes, and may turn milky if exposed to damp or humid conditions. (On hard use surfaces or in areas where damp and humid conditions could be encountered, we recommend Flame Control No. 129 and No. 130 Class "B" Fire Retardant Varnish system). No. 166 dries to a clear velvety satin finish. All surfaces that will be subjected to handling, or where a low, semi or hi-gloss finish is desired, should be topcoated with Flame Control No. 167 Fire Retardant Varnish Overcoat. The use of No. 167 Overcoat greatly improves the durability of No. 166.

USED BY:

Schools, Colleges, Nursing Homes, Child Care Centers, Hospitals, Penal Institutions, Apartments, Hotels, Factories, Warehouses, Retail Stores, Restaurants, Utilities, Railroad and other Transportation Companies, Oil and Chemical Installations, Military Installations, and other facilities where fire retardant coatings are required.

USE UNTOPCOATED OR TOPCOATED:

Topcoating is not necessary for many applications, however, all surfaces that will be subjected to handling, or where a low, semi or hi-gloss finish is desired, should be topcoated with Flame Control No. 167 Fire Retardant Varnish Overcoat. The use of No. 167 Overcoat greatly improves the durability of No. 166.

PERFORMANCE INFORMATION:

- Class "A" fire rated (see fire hazard classification section)
- Complies with federal, state, local building and fire code requirements.
- Dries by solvent evaporation to a velvety satin finish.
- Meets all present lead regulations.

CHARACTERISTICS:

Finish Satin, 5-10 units @60°

Color Clear Varnish

Spreading Rate 300 sq.ft/gal. (7.4 m²L)
5.3 mils wet, 2.7 mils dry/coat
(2 coats required)

Solids by Weight 63% ± 2%

Solids by Volume 50% ± 2%

Drying Time @ 77°F (25°C) & 50% R.H.
To touch 3-4 hour
To handle 7-8 hours
To recoat 16 hours
To topcoat 48 hours

Type of Cure Solvent Evaporation

Flash Point of Liquid Coating 105°F (40.6°C)
(Pensky-Martens closed cup)

Reducer No. 166 Special Reducer

Clean Up Solvent Xylene (Xylol)

Shelf Life 1 year (unopened)

Packaging 1 & 5 gal. containers
weight/gal. 9.9 ± 0.2 lbs.

* Also available in 12 oz Aerosol Cans

Shipping Weight 4 gals. - 44 lbs.
5 gals. - 53 lbs.

Application Brush, roll, airless
Conventional heavy duty spray

PRECAUTIONS:

The liquid coating contains volatile (combustible) solvents. Due care must be exercised during and after application. Adequate ventilation must be provided during and after application until the coating is dry. Keep away from heat, sparks and open flame. Do not smoke - extinguish all flames, pilot lights and heaters - turn off stoves, electric tools and appliances, and any other source of ignition. Avoid contact with skin and breathing of vapor or spray mist. Close container after use. DO NOT TAKE INTERNALLY.

Read MSDS before opening containers.

KEEP OUT OF REACH OF CHILDREN

SURFACE PREPARATION:

Surface preparation should be carried out according to good painting practices. All dirt, grease, oil, wax, and other foreign matter must be removed.

NEW SURFACES:

All surfaces must be dry, clean, free of all dirt, sanding dust, etc. If staining is desired, the use of non bleeding type stains is recommended. All surfaces should be thoroughly sealed with Flame Control No. 6 Clear Wood Sealer. Allow the surface to thoroughly dry before proceeding with the application of No. 166. It is recommended that a representative sample of the system be prepared prior to starting the project.

PREVIOUSLY COATED SURFACES:

All surfaces which have been previously coated with a conventional coating (this includes prefinished wood paneling), must be washed down with mineral spirits or other suitable solution, to remove all wax, grease, etc. Lightly sand or steel wool all glossy surfaces, test patch small areas, if old coating is not affected, proceed with the application of No. 166.



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If old coating is affected, it will be necessary to completely remove the coating then treat as "New Surface", and apply Flame Control No.6, 166 and 167. NOTE: On prefinished "V" grooved paneling, it may be necessary to seal the grooves. as most panel manufacturers only stain these areas and the grooves are highly porous.

APPLICATION:

Mix material thoroughly by boxing or stirring. No. 166 can be applied by brush, airless or conventional heavy duty spray equipment. On wood paneling and other large surface areas, spray application is suggested as it will yield a more uniform finish. Should thinning be required, use only Flame Control No. 166 Special Reducer. Apply using a full bodied coat at the recommended coverage rate. NOTE: Two coats are required. To conform with surface burning characteristics established for this varnish, dilution of the varnish should be compensated with reduced coverage rates. Do not apply when surface or air temperature is below 50°F (10°C).

APPLICATION EQUIPMENT:

Conventional Spray

Air Supply 15 CFM, 50 psi
fluid 20 psi

Gun . .Graco 217-800 to 217-816

Type External Mix

Reduction Up to 7%

Airless Spray

Titan 440 Impact (or Equivalent)
Pump
Fluid Pressure. 2000-2400 psi
Manifold Filter 60 Mesh
Gun Filter 60 Mesh
Fluid Hose ¼" diameter
Gun LX-80 II
Tip.010 - .013
Reduction Up to 7%

FIRE HAZARD CLASSIFICATION

Flame Spread Rating. Class "A" when tested in accordance with ASTM E-84 (NFPA 255), the coating obtained the following UNDERWRITERS' LABORATORIES fire hazard classification.

COATING (SYSTEM) DETAILS	CLASSIFICATION OR RATING (WHEN APPLIED TO DOUGLAS FIR)	
	Flame Spread	Smoke Developed
SEALER – Type 6 applied in one coat at 400 sq. ft./US gal (9.8 m ² /L) BASE COAT – Type 166 applied in two coats at 300 sq. ft./U.S. gal. (7.4 m ² /L) TOP COAT – None	15	50
SEALER – Type 6 applied in one coat at 400 sq. ft./US gal (9.8 m ² /L) BASE COAT – Type 166 applied in two coats at 300 sq. ft./U.S. gal. (7.4 m ² /L) TOP COAT – Type 167 applied in one coat at 1800 sq. ft./US gal (44.2 m ² /L)	15	30-50

As we cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used, we accept no responsibility for results obtained by the application of this information or the safety or suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product or product combination for their own purposes. We sell the products without warranty or guarantee, and buyers and users assume all responsibility and liability for loss or damage from the handling and use of our products, whether used alone or in combination with other products.