



75 Chambers Drive, Unit 9, Ajax, Ontario, L1Z 1E1 (905) 619-0115

# FLAME CONTROL NO. 46081

Thermal Insulating Intumescent Epoxy Paint  
Military Specification Mil-C-46081A  
Fire Hazard Classification, ASTM E-84 (NFPA 255) Class "B"

## DESCRIPTION:

Flame Control No. 46081 is a Class "B" two component (catalytic epoxy) thermal insulating (intumescent) semi-gloss fire retardant paint. This product is manufactured in accordance with the United States Military Specification Mil-C-46081A. The coating is designed for use on Naval & Marine vessels, military & commercial aircraft, off-shore drilling rigs, fuel tanks & storage vessels, ammunition crates, missiles, warheads and other surfaces where it is essential to obtain the maximum thermal insulating protection under the severest of fire conditions.

## PERFORMANCE INFORMATION:

- Manufactured in accordance with the United States Military Specification Mil-C-46081A.
- Class "B" fire rated - See Fire Hazard Classification Section.

## CHARACTERISTICS:

**Finish** . . . . . Semi-Gloss

**Color** . . . . . White

**Coverage**

**Rate** . . . . . 130 - 135 sq. ft./gal  
(3.2 - 3.3m<sup>2</sup>/L)  
Applied in two coats  
260 - 270 sq. ft./gal  
(6.4 - 6.6m<sup>2</sup>/L)  
11.8-12.3 mils wet, 9.5-9.9 mils dry

**V.O.C. Less Than** . . . . . 1.5 lbs./gal. (180 g/L)

**Volume Solids** . . . . . 81% ± 2  
(when mixed to 8:1 by weight)

**Weight Solids** . . . . . 86% ± 2

**Drying Time @ 77°F & 50% RH:** .To touch 3-6 hours  
To recoat 16-24 hours  
Full Hardness 3-7 days  
Cure depends upon coating thickness

**Type of Cure** . . . . . Catalytic Epoxy

**Flash Point** . . . . . 104°F (40°C)  
(Pensky-Martens Closed Cup)

**Reducer/Cleaner** . . . . .  
46081 Special Reducer

**Shelf Life** . . . . . 2 years (unopened)

**Packaging** . . . . . 1 & 5 gal. containers  
weight/gal. 10.3 ± 0.2 lbs.

**Shipping weight** . . . . . 4 gals - 46 lbs.  
5 gals - 56 lbs.

**Application** Brush, roll, conventional  
and airless spray

## PRECAUTIONS:

CAUTION! COMBUSTIBLE! VAPOR HARMFUL. MAY EFFECT THE BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. CAUSES EYE, SKIN, NOSE AND THROAT IRRITATION. NOTICE: Reports have associated repeated and prolonged occupational over-exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Keep away from heat, sparks and flame. VAPORS MAY CAUSE FLASH FIRE. Do not smoke. Extinguish all flames and pilot lights, and turn off stoves, heaters, electric motors and other sources of ignition during use and until all vapors are gone. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation.

**USE WITH ADEQUATE VENTILATION:** Do not breathe vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headaches or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. Close the container after each use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

## FIRST AID:

If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. 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 swallowed, get medical attention immediately. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

**Read MSDS before opening containers.**

**KEEP OUT OF REACH OF CHILDREN**

## MIXING INSTRUCTIONS:

Mix Part "A" well; then add 1 part by weight of Part "B" to 8 parts by weight of Part "A" and mix well (do not use a mechanical agitator). Local exhaust ventilation should be provided where Part "A" and Part "B" are mixed.

The mixed components A and B must be allowed to activate for a minimum period prior to use, otherwise an extremely tacky condition will result for an extended period and the final cured finish could be streaked and flat. The activation period is a function of time and temperature. At room temperature (70°F); a five (5) gallon container should activate for 30-45 minutes. A one (1) gallon container should activate for 45-60 minutes and smaller quantities will require 1.5-2 hours. Temperatures substantially above 70°F will shorten the activation period. Conversely, temperatures less than 70°F will lengthen the period.



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No. 46081 must be used immediately after the activation period. Under standard conditions, pot life is 2-2.5 hours. This may be extended by temperature lower than the standard 70°F as well as by the addition of a small amount of No. 46081 Special Reducer. No. 46081 should only be reduced with No. 46081 Special Reducer, using not more than ½ pint per gallon. Thinning must be done after activation and just prior to use.

No. 46081 may be sprayed, brushed, or rolled. Care must be taken not to brush or roll out excessively. Rolling alone produces a pattern; therefore, it is recommended that the applicator brush out after rolling to remove this pattern. No. 46081 has some self-sealing qualities and dries to a low semi-gloss finish. However, like any conventional gloss paint, it is necessary to have an adequately sealed or primed surface to avoid flashing and to attain, particularly in the case of metal, maximum adhesion and resistance to corrosion and salt spray.

## SURFACE PREPARATION:

### UNPAINTED METAL SURFACES:

(Iron, Steel and Aluminum) Rust, scale, grease and other foreign matter must be completely removed. Sand-blasting is an effective method of cleaning. On aluminum, a chromic acid rinse is preferred. On metal surfaces, apply one coat of Flame Control No. 3005 two-component corrosion resistant primer to a dry film thickness of 2 to 3 mils, before applying No. 46081.

### UNPAINTED WOOD SURFACES:

On new clean, (free from dust, oil, grease, and other foreign matter) surfaces such as wood, fiberboard and other surfaces, No. 46081 may be applied directly in one or two coats. For best results and appearance, use primer sealer.

### MASONRY SURFACES:

No. 46081 is well suited for use on masonry surfaces because of its good alkali resistance, good exterior or interior durability and good adhesion without the necessity of etching the masonry.

The coating can be applied before cement or plaster is thoroughly cured, since high alkalinity of concrete or plaster does not affect resultant film properties.

### PREVIOUSLY PAINTED SURFACES:

May be applied directly, provided paint is sound. All loose or poorly bonded paint, dirt, oil or grease must be removed. All gloss surfaces should be lightly sanded before applying No. 46081. After surface preparation has been carried out, apply by brush, roller or spray application.

### CURING TIMES:

**Air Dry:** Set to touch 3-6 hours, recoat 16-24 hours, dry through 16-24 hours, full hardness 3-7 days. The speed of cure depends upon the coating thickness, surface and surrounding temperature. Higher temperatures accelerate the speed of cure.

**Oven Curing:** Can be oven cured at low temperatures 120°F to 150°F (48.9°C to 65.5°C) for 1-3 hours. Hardness after oven curing is equivalent to 2-3 days of air drying

No. 46081 can be applied by brush, roller, airless or conventional heavy duty spray equipment. If thinning is required, use only Flame Control No. 46081 Special Reducer. Do not apply when surface or air temperature is below 55°F (12.8°C).

## APPLICATION:

### APPLICATION EQUIPMENT:

#### Conventional Spray

Air Supply . . . . . 12 CFM, 50 psi  
 at nozzle, fluid 15-20 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 . . . . . 2100-2600 psi  
 Manifold Filter . . . . . 60 Mesh  
 Gun Filter . . . . . 60 Mesh  
 Fluid Hose . . . . . ¼" diameter  
 Gun . . . . . LX-80 II  
 Tip . . . . . .017 - .021  
 Reduction . . . . . Up to 7%

## FIRE HAZARD CLASSIFICATION

Flame Spread Rating. Class "B" when tested in accordance with ASTM E-84 (NFPA 255), the coating obtained the following Intertek Testing Services fire hazard classification.

COATING (SYSTEM) DETAILS	CLASSIFICATION OR RATING (WHEN APPLIED TO DOUGLAS FIR)	
	Flame Spread	Smoke Developed
46081 Thermal Insulating (Intumescent) Epoxy Paint	30	175

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