



**DESCRIPTION:**

Flame Control No. 173 Aircraft is a highly flexible, intumescent type, fire resistant coating. When attacked by fire and/or high heat, the coating puffs up (intumesces) and forms a thick, dense fire barrier, thus affording maximum burn through (fire) protection. This foam layer retards the penetration of heat to the substrate, thus insulating the surface.

Aluminum panels 0.050 inches thick, coated with No. 173 to a dry film thickness of 0.033 inches, have successfully passed the standard FAA 2000°F fire test, while being subjected to simulated engine take-off and operating conditions. The coated panels completed the FAA 15 minute requirements, with approximately a 50% time safety margin (in excess of 22 minutes before failure).

Flame Control No. 173 possesses outstanding properties in the following categories. Fire resistant (thermal insulating and burn through protection), adhesion to primed and bare aluminum, metal, and alloy substrates, flexibility, and crack resistance under continuous vibrating conditions.

**RECOMMENDED USES:**

Developed primarily for the aircraft industries as an economical means of affording maximum fire protection to lightweight metals, such as aluminum, magnesium, etc.

**PRODUCT SPECIFICATION:**

- Fineness of Grind**  
(ASTM D 1210) . . . . . 1 N. S., maximum
- Solids, non-volatile**  
(Fed test method STD. 141, method 4041.1) . . . . . 72% minimum
- Specific Gravity**  
(ASTM D 1475) . . . . . 1.34 ± 0.03
- Viscosity**  
(ASTM D 562, procedure "A")  
. . . . . 1100 – 1800 grams

**Certificate of Test**

A certificate of test will be forwarded upon request for each lot of material supplied.

**CHARACTERISTICS:**

- Colors** . . . . . White\*  
\* Special colors are available upon request
- Coverage at 1 Mil Dry** . 986 sq. ft./gallon
- V.O.C.** . . . . . 2.91 lbs/gl (335 g/L)
- Drying Time @ 77°F (25°C) & 50% R.H.** . . . . . see application section
- Type of Cure** . . . . . Coalescence
- Flash Point** . . . . . 40°F (4.4°C)  
(Pensky-Martens Closed Cup)
- Reducer/Cleaner** . . . . . No. 173 Reducer
- Shelf Life** . . . . . 1 year (unopened)
- Packaging** . . . . . 1 & 5 gal. containers
- Weight/gal** . . . . . 10.9 ± 0.2 lbs.
- Shipping Weight.** . . . . . 4 gals. - 47 lbs.  
5 gals. - 58 lbs.
- Application** . . . . . Brush or airless spray

**PRECAUTIONS:**

**WARNING!** FLAMMABLE LIQUID & VAPOR: CONTAINS XYLENE & PETROLEUM DISTILLATES

VAPOR HARMFUL. MAY AFFECT 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 overexposure 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 ONLY WITH ADEQUATE VENTILATION. Do not breathe vapors or spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. Close 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**

**SURFACE PREPARTION:**

When specified, follow applicable aircraft painting specifications and procedures; if not specified, proceed as follows.

**New Work:** All surfaces should be primed with a corrosion resistant primer suitable for the substrate. To assure proper adhesion, it is of the utmost importance that the surfaces be CLEAN, free of all oils, fuels, grease, and other foreign matter.



Intumescent Fire Resistant Coating Compound

Repaint Work: When specified, follow applicable aircraft painting specification and procedures; if not specified, proceed as follows. Remove all old intumescent coating with a non-flammable paint stripper. After the old coating has been removed, thoroughly clean the surface with Mineral Spirits, making sure all old intumescent coating and foreign matter is completely removed. Examine surface for removal of primer. All areas where the primer has been removed should be reprimed and thoroughly cured before proceeding with the application of No. 173.

APPLICATION

When specified, follow applicable aircraft painting specifications and procedures; if not specified, proceed as follows. Thoroughly mix to reincorporate all ingredients. A mechanical shaker is recommended. DO NOT STRAIN material.

Using heavy duty spray equipment with pot agitation, apply one cross coat of No. 173 at approximately 8-10 mils wet film, be certain that the coating is applied uniformly to all areas. If thinning is required for spray application, use only Flame Control No. 173 Reducer.

Air cure coating for a minimum of 30 minutes (65 - 100°F). Force air dry in oven at 175 + 15°F for a minimum of 1 1/2 hours.

Add additional cross coats using the above procedure until the proper film thickness, normally 30 mils (0.030 inches), is obtained. By brush, touch up all hard to get at areas, pin holes, peel strip edges, gauge marks, and other areas showing damage, using Flame Control No. 180 Brushable Fire Resistant Coating Compound.

After the final coat has been applied and all touch up work performed, allow units to air cure for a minimum of 30 minutes (65 - 100°F). Force air dry in an oven at 175 + 15°F for a minimum of 4 hours.

NOTE: If these surfaces are to be overcoated with Flame Control

No. 190 white polyurethane Overcoat or other specified overcoat, be certain to protect the coating surfaces against contamination ( dirt, fingerprints, grease, etc.), during and after the curing cycles.

Apply Flame Control No. 190 white polyurethane overcoat per No.190 instructions.

APPLICATION EQUIPMENT:

Airless Spray

Titan 740 Impact (or Equivalent)

- Pump
Fluid Pressure. . . . . 2800-3200 psi
Manifold Filter . . . . . None
Gun Filter . . . . . 30 Mesh or remove
Fluid Hose . . . . . 1/4" diameter
Gun . . . . . LX-80 II
Tip. . . . . .023 - .029
Reduction . . . . . Up to 7%

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.