

FIRE-TROL® 931

LONG-TERM RETARDANT - AERIAL APPLICATION



DESCRIPTION

FIRE-TROL® 931 is a liquid concentrate mixed with water, used for aerial applications by fixed wing aircraft and helicopters to control wildfires. Composed of ammonium polyphosphate, clay, corrosion inhibitor, coloring agents.

CERTIFICATIONS

FIRE-TROL 931 has been tested on the thermal tunnel (CEREN, National French Research Laboratory for Firefighting). The experiments determined the inhibiting capacity of the retardant by simulating the arrival of flames on a treated area and comparing this with the spontaneous dehydration of the product, which occurs after application.

The solution's extinguishing capacity is evaluated by the mass of concentrate required to stop the spread of flames under precise operating conditions. These tests demonstrated that FIRE-TROL 931 at 20% (v/v) dilution rate is an excellent long-term retardant.

COATING AND COLORATION

The solution of FIRE-TROL 931 clings very well to the fuel source. Bright intense coloration makes the patterns quite visible from the air tankers.

EFFECTS ON ENVIRONMENT

Evaluations have been made of the effect of FIRE-TROL 931 on germination, growth and re-growing of the plants. When used at the same dilution rate as in fire suppression, FIRE-TROL 931 stimulates fuel yield.

CORROSION

FIRE-TROL 931 has been tested either electro chemically or using (coupons) methods. These tests have shown good inhibition action of the product on aluminum, steel and brass (CEREN, National French Research Laboratory for Firefighting, and Italian Air Force Lab).

Approved for use by Conair, Bombardier, Air Tractor, Viking / De Havilland Aircraft, and French Civil Security - DGSCGC.



TOXICOLOGICAL PROPERTIES

FIRE-TROL 931 is considered non-toxic. It has been submitted to toxicological and eco-toxicological testing in accordance with the OECD guidelines applicable European Directives (2005).

PHYSICAL PROPERTIES

Specific gravity (concentrate)	1.38 - 1.43 kg/dm ³
Specific gravity (solution 20%)	1.08 - 1.10 kg/dm ³
pH at 20°C (concentrate)	6.0 - 6.5
pH at 20°C (solution 20%)	6.4 - 6.6
Viscosity of the concentrate (cps)	Higher than 1000
Mix ratio	20% (v/v)

TEST PROPERTIES

Concentrate	mild eye and skin irritation
LD ₅₀ acute dermal toxicity on rabbit : > 2040 mg/kg	
Diluted Product	minimal eye and skin irritation
LD ₅₀ acute dermal toxicity on rabbit : > 2020 mg/kg	

RECOMMENDATIONS

- Mixing and loading: use procedures specific to each situation.
- Necessary training of ground crews to the use of retardant.
- Appropriate clothing.
- Wash off equipment circuits after each use.

COMPOSITION

Amonium polyphosphate, corrosion inhibitor, wetting agent.

LIMITS IN THE PERFORMANCE OF GROUND RETARDANT

- Rain washes off the retardant.
- Protective barriers must be laid down when the risk of fire is real (except in countries with no risk of precipitation for a period of time).
- When the cannon is not controlled from the fire-truck cabin, the holder is exposed to splashes.

ADDED VALUE

- More efficient than water (even enhanced water) either in direct or indirect attack.
- More comfortable for the nozzle operator (no vapor emission).
- Better adapted performance (flexibility in setting the parameters of coverage level).
- Can be used at night which is a major advantage when aircrafts cannot fly.
- Ground applications are particularly effective in the protection of specific areas such as residential areas or rural communities, factories, gas stations, etc. When enough means are available, chemical barriers can be a determining factor in controlling forest fires.

HANDLING PRECAUTIONS

- FOR DETAILED SAFETY INFORMATION, please refer to the SDS.
- FIRE-TROL 931 fire retardant is moderately irritating to eyes and slightly irritating to skin. Prolonged or repeated contact with concentrate may produce skin irritation and inhalation of mists can irritate the nose and upper respiratory system.
- **Eye Protection:** Goggles are recommended when handling concentrate. If in the eyes, flush immediately with plenty of water for at least 15 seconds.
- **Skin Protection:** Wear protective clothing and chemical resistant gloves when handling concentrate. Exposed skin should be washed as soon as possible.
- **Respiratory Protection:** None required. Avoid breathing mist of vapor.
- **Other precautions:** Keep container closed. Use with adequate ventilation.
- These precautions and practices are like those used with any heavy-duty detergent.
- For complete SDS, visit www.perimeter-solutions.com

PACKAGING

FIRE-TROL 93 packaging options include 20 liter pails, 1,000 liter IBC and bulk trucks. Contact your local authorized BIOGEMA distributor or factory representative for details. Visit www.perimeter-solutions.com

**Trusted. Solutions That Save.****FOR MORE INFORMATION**

Contact any of our worldwide Perimeter Solutions Fire Safety offices or visit:

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