

# FLAME OUT - Foam

Revolutionary fire suppressant wetting agent for Class A and B fires

## AFFF and Halon Alternative

UL Classified NFPA (UL File #EX5028)  
 Approved Halon alternative under the US EPA 'SNAP' program.  
 Approved to NFPA 18, UL162, UL711 and EN1568-3  
 Approved USDA Forestry Services 5100-307  
 Up to 7 times more effective than water alone.  
 Suitable for Class A and B  
 Non Toxic & 100% Biodegradable  
 Environmentally friendly, low odor alternative to AFFF.  
 Encapsulates the Oxygen to consume the fire.  
 Shears the Hydrocarbon molecules to break the flame carriers  
 Non Corrosive, and 'lubricates' hoses and fittings.  
 Stays in suspension in water indefinitely.  
 Safe to store, handle and use without PPE.

FlameOut is the only UL Classified wetting agent for Class A & B fires that is also USDA Forestry Services 5100-307 approved.

FlameOut is unique in the way it attacks the fire in 3 distinctive ways:

1. FlameOut encapsulates the Oxygen to effectively starve the fire.
2. FlameOut chemically shears the hydrocarbon strings, rendering the fuel source inert.
3. FlameOut 'wets' the water, increasing its cooling and penetrative properties.

Over 16 years in development, FlameOut when mixed at between 1 - 10% concentration, is a certified SNAP replacement for Halon 1211, and is a safe and friendly alternative to AFFF.

The chemical is non-toxic, non-corrosive and leaves no residue. As a result, any mess or clean up time and cost is considerably reduced.

As the product is 100% rapidly bio degradable, accidental spillage or entry into the waste water system presents no hazard to persons, animals or plant life. Flameout is the only surfactant approved by the ERA for both commercial and residential applications.

FlameOut can be used in portable appliances and may be applied via pumping apparatus, reservoirs or directly into the hose lines via conventional dispensing equipment.

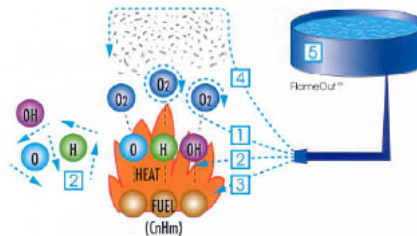
By reducing the amount of water required for a given fire, resultant loss or damage to property may also be reduced, as well as preserving an increasingly valuable resource.

FlameOut is widely used by the fire industry supplied nationwide in US Domestic and industrial portable extinguishers, and is in trials with the US Navy. Flameout is also undergoing certification to FAA minimum performance standards as a Halon replacement for hand held extinguishers on commercial passenger aircraft.

FlameOut is the result of extensive patented research and development by BioGenesis Enterprises Inc.

## FlameOut™ in Action

1. Encapsulates the oxygen to effectively 'eat' the fire
2. Breaks the hydrocarbon strings to render the fuel inert
3. 'Wets' the water increasing its cooling & penetration properties
4. Acts as a 'scrubber' knocking smoke & soot to the ground
5. Makes water up to 7 times more effective



## Specification data

Chemical Description : Aqueous Synthetic Biosurfactant  
 PH : 8. Dilution's with water are pH neutral  
 Solubility : 100% Complete in water & remains in suspension  
 Dilution for use : Class A Fires: 0.5%~1% (Wetting agent)  
 Class B Fires: 2%~6% (AFFF alternative)  
 Colour : Pale yellow, almost clear, with mild lemon smell  
 Bio degradability : Complete within 21 days.  
 Flammability : Not combustible.  
 Testing : UL Classified NFPA18, UL162, UL711, USDA 5100-307, EN 1568-3  
 Specific Gravity : 1.09@25°C  
 Toxicity : Nil. Tested by the United States Testing Company  
 Corrosives : Nil. Tested by the United States Testing Company

Full toxicology and material safety data sheet available upon request.

## Comparison table

Product	Fire Class	Non Toxic	Non Corrosive	Biodegradable <sup>1</sup>	EPA listed Halon alternative	Environment Friendly <sup>2</sup>	UL Classified
FlameOut™	A, B	Yes	Yes	Yes	Yes	Yes	Yes
Halon 1211	B, C, E	No	Yes	No	N/A	No	Yes
HF Gases	B, C, E	No	No	No	Yes	No	Yes
AFFF / Foams	A, B	Some	No	Some	Some	No	Yes
Dry Powder	A, B, C, D	Some	No	Some	Yes	Some	Yes
CO2	E	Yes	Yes	Yes	Yes	Yes	Yes
Water	A	Yes	Yes	Yes	Yes	Yes	N/A

1. Determined as not traceable after 21 days.

2. Determined as Zero ODP & GDP for gases and requiring little or no clean up for liquids/solids, nor use of personal protection equipment.