



FIRESTOPPER

"Bringing Firefighting Into The 21st Century"™

StormFront™



**A NOVEL FAILSAFE
FIREPROTECTION
SYSTEM AGAINST
WILDLANDS FIRE**

Marketing Department: Technical

WHITE PAPER

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FIRESTOPPER®
Industrial - Commercial
Government

INTRODUCTION

FireStopper® International Limited (*FireStopper®*), a transnational Registered Company, is the developer of the world's most advanced and uniquely powerful firefighting and anti-explosion ***“Proprietary Technology,”*** within the meaning of the Uniform Trade Secret Act (“UTSA”) Cal. Civ. Code Sec. 3426, Common law, Business and Profession §17200 and all other applicable U.S. and International statutes, which also produce environmental remediation and other supporting applications.

FireStopper® initially devoted the first 25-years of its existence to R&D and market research. Subsequently, *FireStopper®* is the recipient of the stand-alone global testing and certifications results unsurpassed by the industry. Such achievement is afforded by way of unprecedented results in fire ratings, usage, and environmental certifications. Without exception, all certifications have been granted through the most respected testing and certification facilities domestically and internationally.

Moreover, this unique technology has rendered the only available ***“all fire class”*** effective and ***“anti-explosive”*** products, which are ***Non-Toxic, Non-Irritant, Environmentally Safe and Non-Hazardous***. These achievements were accomplished by way of the most demanding environmental and life and materials exposure testing and certification making the *FireStopper®* “Brand” the best overall provider of products over the other existing and available products manufacturers in the explosion/fire and safety channel of business.

Fire services around the World tend to follow and copy the implemented techniques, products, and usage of the American fire service's approach to wildland fires. The traditional path for the Global approach starts with the National Fire Protection Association (NFPA), an Industry based, “Non-profit Organization composed of the fire industry providers of products and services whether they are commercially, or Government based. Also, organizations such as The International Association of Wildland Fire (IAWF) also “a professional membership association dedicated to uniting the global wildland fire community.” It is precisely this unification that is the construct of a dangerous “monopoly,” whether intentionally or unintentionally, which by practice acts as an impediment to progress.

Notwithstanding the above, there exists a culture based around these organizations that no matter where it originates, the result is that the industry, which supports the organizations through its memberships and other promotions, earmarked to maintain its financial stability, becomes exclusive to the needs of its members, the special interests, rather than the greater need or the people and the environment.

All one must do to confirm said condition is simply research the restrictive and dictatorial requirements imposed by the USDA's Missoula Fire Sciences Laboratory on new candidate technology products that may provide superior results both in efficacy, safety, and economy. Based on the controls US Forestry, a division of the USDA, has exercised over the overall management and control over the related wildland fire events, new technology has been excluded through built-in regulations acting as stopple preventing proved innovation from participating and aiding in the fire disaster. The edict is that unless the intended product submits totally to the dictates of the controlling Governmental entity, it is prevented from being used regardless of its possible superiority over the accepted protocols.

DISCUSSION:

For over 100-years the approach to combat and stop wildland fires has demonstrated year over year a massive failure to defeat the consequences of said fire events. It should not come as a surprise to anyone that the only observation about the way the National and States Fire Services approach to battling wildland fires fall under the heading of insanity: the act of doing the same thing hoping for a different outcome. Taking into consideration the history of the fire services over the past 20-years FireStopper® has developed a novel, failsafe approach to secure the people, the environment and commerce from the devastation we all have seen to date.

PRESENTATION:

The FireStopper® Firefighting Foaming Catalyst Technology, AKA: (FFC) is in its second-generation phase. Thus, with its recent introduction of new next generation products that far demonstrate the increased safety and efficacy over its previous generation, it has developed a technological lead at least a 50-year advancement over any other wildland and general fire protection application. In pursuit of innovation FireStopper® introduces a never before capable application of FireStopper®. A three-stage, failsafe approach to deliver the FireStopper® application for the full protection against the advancement of wildlands fire and the prevention of the total consumption of property, land by fire, irreparable damage to the environment, and most important, loss of life. Therefore we introduce the following:

1. The Static System

*A designed to fit system of monitors that are strategically placed producing 100% coverage of the area to be protected by manifesting a raining dome of **FireStopper® Disruptor 3610 FFC** concentrate fully covering the property's perimeter. The result being that no ember will survive exposure to the Disruptor. Said mixture at 3 or 6% mixed with water shall provide the necessary dependable and effective protection against ignition based on the end-users' chosen setup.*

*Secondly, every structure on the property is fitted with a sprinkler system covering the total area outlined by the roof. This additional step insures failsafe protection no matter the intensity of the oncoming fire event. The FireStopper® FFC/EnviroSafe® Technologies produced Products that are designed to be deployed in all firefighting/anti-explosion environments and tasks, shall provide the exclusive ability to extinguish every type of flammable material on the Planet thus ameliorating potential explosive events so prevalent in the current Global fire environments; all availed while being **"GREEN"***

*This novel, SAFE and most powerful advanced Technology offer a multitude of products designed to fit a variety of fire safety purposes, uses and applications. For this comparative narrative, we shall limit the flow of information to the FireStopper® product: **DISRUPTOR 3610™ FFC**. FireStopper® unequivocally believes this product is best of its product line designed to solve decades of massive destruction to the environment, the public and the public trust as evident by the current defensive practices being deployed on wildfires¹ by USDA's US Forestry and CDF's Calfire. FireStopper® can and shall demonstrate through its third-party certifications and on*

¹ A surface that receives a coating of the intended FireStopper® Product will produce reliable extinguishment with no re-ignition

demand, for the first time over all other products in use, that it's technology shall deliver extinguishment to the applied surfaces or materials as required to protect structures in the line of fire eliminating the need to deploy so-called long-term retardants among other costly and inefficient products and efforts. When directly applied to the wildland fire events, the **Disruptor 3610™** will defeat by extinguishment the advancement of wildfires regardless of the source or terrain when directly applied by land or air.

Moreover, for the first time in wildfire firefighting history a product such as the **FireStopper® Disruptor™** will deliver reliable instant massive temperature reduction never-before availed enabling firefighters on the ground to access the treated areas and construct containment lines, as needed safely and reliably to provide additional non-active fire related services in theater, providing additional manpower in the process of normalizing efforts to the devastated area.

In contrast with the **Disruptor™**, the currently deployed/used products in wild land fires fail at the following:

- These products do not produce any viable temperature reduction, thereby increasing the difficulty of ground crews to efficiently access the terrain or area treated. Secondly, these products now in use have shown no effect in preventing the heat related so-called wildfire related weather events. Thus, increasing the chance of re-ignition due to secondary source availability.
- Since the inception of use the sum effect of the application of these products on wild land fires is total devastation. They have shown little or no extinguishment of the wildland fire events, which clearly defines the incompetence of said products.
- Response time being a major component and limitation of the current products in use is an additional contributor to low efficiency in wildland fire mitigation. The currently tasked products require on the ground and in theater personnel and equipment for premixing adding costly delay to the response time sorely needed under the emergent conditions. Additionally, such a requirement for use also adds significant investment in equipment, personnel, and logistics necessary in their use.

When **Disruptor™** is applied either by airdrop or through ground-based applications, the product will deliver full extinguishment leaving the treated surface incapable of reignition. In addition, the product is designed to reach the belowground fires a source of re-ignitions so common to these events. Therefore, wildfire fighting becomes more efficient and economical.

- The airdrop application over dense forest growth, reportedly produce product clumping on the top of the trees or elevated surfaces. This will not provide viable extinguishment result on the ground-based fire that feed the growth of the fire through crowning and the subsequent spread of said event².

The sum effect of deployment of this new technology and products are superior economic advantage, saving in time and equipment and better man-hour management needed to provide quick and efficient, safe, and liable extinguishment of the fire event. Thus, implementing this novel approach to wildland fire management will afford the best safety approach for the public with the most efficient and swift action needed under such devastating conditions.

² Based on the year over year total devastation result occurring in every seasonal fire event, the currently employed method is clearly a massive failure.

- The current approach to wildland fire management has produced serious unintended and unwanted consequences on the environment and on the health of the citizens affected by wildland fires.

ADVANTAGES OF FireStopper® OVER Phos-chek® BY COMPARISON

FireStopper® (All liquid products)	Phos-Chek®*: MVP-FX, F & 259-F (Dry Powder)	LC95A, FX, & F	LC95W
NON-TOXIC, “ GREEN ”	Toxic	Toxic	Toxic
NON-CORROSIVE	Corrosive	Corrosive	Corrosive
CLEAN AGENT	Not A Clean Agent	Not A Clean Agent	Not A Clean Agent
NON-IRRITANT (SKIN & EYE)	Irritant	Irritant	Irritant
ENVIRONMENTALLY SAFE (Flora, Fauna, Rivers & Oceans)	Pervasive in the environment; kills fish flora & fauna	Pervasive in the environment; kills fish flora & fauna	Pervasive in the environment; kills fish flora & fauna
◇ NO SPECIAL EQUIPMENT FOR MIXING OR APPLICATION	Require onsite mixing with special equipment	Require onsite mixing with special equipment	Require onsite mixing with special equipment
ALL FIRE CLASS EFFECTIVE: ABCDK	Fire Class: A only**	Fire Class: A only	Fire Class: A only
TECHNOLOGY: (FFC) FIRE FIGHTING CATALYST	Ammonium Phosphates +	Ammonium Phosphate +	Ammonium Phosphate +
EXTREME LOW EVAPORATION water thin; deep penetrator	Slurry (viscus)	Slurry	Slurry
MASSIVE TEMPERATURE REDUCTION	No temperature effect	No temperature effect	No temperature effect
EXTREME RETARDANT PROPERTIES NO RE-IGNITION POST EXTINGUISHMENT	Thick coating	Thick coating	Thick coating
APPLICATION: AIR & GROUND BASED	Air	Air	Ground
DEEP PENETRATION TO THE ROOTS	NONE	NONE	NONE

* Phos-Chek employ “polyphosphates” mono ammonium phosphate/ Diammonium phosphate, etc., in the variation of their formulas as the lead retardant ingredient. In the massive use of these retardant, as in wildland fires, have an environmental devastating effect short and long term. Wildland fire fuel is composed of class A and class B fuel. The oils and turpentine are classified as B-type fires and based on the viscosity and auto ignition temperature of the oils it may fall in the K class thus, ineffective on other inherent fuels making-up the wildlands fire fuel potential

ALL FireStopper® LIQUID PRODUCTS ARE



2. Introducing:

FIRESTOPPER IDENTIFY CONFIRM & EXTINGUISHMENT (ICE) SYSTEM™

The **FireStopper® ICE System™** is the only capable and usable rapid deployment, drone-based extinguishing system in the World that can utilize a dependable and effective light payload firefighting drone to defeat and stop the devastating effects of wildland fires at its inception. Moreover, due to the accuracy and reliability of the supporting detection hardware, identification and confirmation systems, the correspondent state-of-the-art, low wight and volume drone payload delivery vehicle system deploys the **FireStopper® Predator FFC™**, which will extinguish the incipient fire event at the earliest possible intervention.

FireStopper® PREDATOR FFC* (A Premix Formula)

PRODUCT	SPECIFICATION	USAGE
FireStopper® “PREDATOR” FFC* <ul style="list-style-type: none"> No Halogens, absolutely NO FLUORINE 	<ul style="list-style-type: none"> Liquid premix Temp resistant: <-99°F to >140°F Low viscosity to water thin 	<ul style="list-style-type: none"> All fire class effective³ ABCDK & sub-classes including Nuclear related flammables All environments use and applications

* The “Predator” FFC is NOT commercially available; it is exclusive to FireStopper® Trademark handheld, large volume portables and fixed systems

The **Predator FFC™** as with all other FireStopper® liquids do not pose any health, environmental, or materials hazards. Coupled with the unprecedented over-all global performance, offer the unique opportunity to provide incomparable safety and reliability not available before with any other products, systems or techniques.

Wildland fire events throughout history and to the present have either extinguished themselves by running out of fuel or have been ended by nature by producing rain; man’s interjection generally has proven to be feeble at best in the attempt to halt and extinguish the wildfire occurrences.

To this end, it is indisputable that since the adoption by USDA/US Forestry of the current exclusive mass application of Phos-Chek®, generally the experience and result of its use has demonstrated a massive failure to stop the progress of the fire and extinguish the occurrence. Nevertheless, the chemical structure or components of these products employed at great expense to the Public, does not propound any new or never-before experienced chemical structure. As a matter of fact, the main components of this slurry mixture are ammonium phosphate compounds, have been used in dry chem portable extinguishers for over 100-years and have proven to be inefficient in real world fire applications.

Coupled with the required additional costs to the fire services for pricey on-sight mixing equipment to produce the slurry that then is applied through airdrop, as a result, the expenditures have not delivered any viable positive results requiring the exclusive domain currently afforded by US Forestry, California Department of Forestry, CDF, AKA: Calfire, and or any of the other supporting municipal fire services.

Thus, the result of this type of corrosive practice has produced massive economic loss overall, destruction of the forests and natural resources, devastation of families and most damaging the

³ The Predator is effective on all flammables including Nuclear Industry related exotic flammables
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loss of life! To continue this hopeless path is to subscribe and submit, by definition, to insanity. We as the citizens of this Nation must and should question the wholesale disregard for progress and innovation by the Agencies and Personnel charged with the protection of “Commons,” the People and the Natural Resources of this Nation.

The Detection Confirmation & Extinguishment

The **FireStopper® ICE™** System employ a fail-safe 2-step multi verifying system that employ state-of-the-art cameras that can detect and identify incipient fires from 8 to 20-kilometers depending on the required placement for the desired result. A set of 3-cameras are deployed to triangulate the location of the incipient fire event thereby maximizing efficiency.

At the speed of light, confirmation is attained, and deployment of the state-of-the-art drone is activated rapidly delivering the **FireStopper® PREDATOR FFC™** to the source and location of the incipient fire for full extinguishment and termination of the destructive event within 10-minutes from confirmation.

The individual **ICE™** System will carry 4-gallons of the premix, which by design can deliver a 10 to 20-A fire performance, 40 to 60-B, C, D, and K full and reliable extinguishment. The **FireStopper® ICE™**, as its predecessor **FireStopper® PFE-FR FFC**, will enter the marketplace with full third-party, World recognized certification as a portable and fixed system use as an all-fire class premix extinguishing media.

Moreover, this second application system is intended to deploy in a swarm configuration consisting of 10 to 20-drone vehicles all operating as a unit, thus, being able to thwart any incipient wildland fire.

3. The FireStopper® StormFront System™

The third prong of the triad of protection is exclusively designed for use and implementation by Government. The **StormFront System™** is designed for use where a wildland fire event, for whatever reason, has grown out of control and quick and swift action by Government is required to extinguish and stop the advancement of fire.

As in seaborne warfare battleships are armed with depth charges, which are barrel bombs designed to explode at differently designated depths. So has **FireStopper®** designed a 1000-liter tote to explode using a barometric activated explosive charge at the most advantageous and efficacious deployment height above ground, creating a **FireStopper®** rainstorm over the advancing fire line. The **StormFront System™** shall be best deployed in C-130s or greater carrying military transports that can carry and drop 16 to 32 totes each aircraft thereby being able to deliver the proper carpet style bombardment of **FireStopper® Disruptor 3610 FFC** in a 6% solution to extinguish the fire, stop its progress, penetrate, and stop the underground fire component while cool the environment for assessment and land clearing if necessary.

Please see **Fig. 1, 2 & 3** below:

Fig. 1



Fig. 2



Fig.3



Fig. 4



CONCLUSION

The sum intention and effect of this tri-system is the elimination of devastating wildland out of control fire threat, preventing the events whenever possible, and providing communities with an individual or cooperative fire protection system that will eliminate the threat of fire and the enormous material and emotional losses. Moreover, initially the big beneficiaries shall be the Insurance Industry, which will greatly benefit from the loss of contingent liabilities as related to structural and personal losses. The taxpayer undoubtedly will receive the greatest potential savings since we are the ultimate go-to by Government and Industry for all losses and costs pertaining to any expenditures by Government and add-on costs for losses by Industry.

We should not fall victims to the special interest, e.g., the fire related Unions and the organized clamor that always raises its ugly head whenever efficiencies and advances in services present a threat to the business-as-usual mindset regardless of the costs to society.