
FIRESTOPPER
"Bringing Firefighting Into The 21st Century"
MUNICIPAL FIRE SERVICES
"A COMPREHENSIVE REVIEW OF FireStopper®" AS A VIABLE REPLACEMENT TO THE CURRENTLY EMPLOYED FIRE FIGHTING PROTOCOLS
FIRESTOPPER
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Introduction

FireStopper® International Limited, a transnational Registered Company, is the developer of the world's most advanced and powerful firefighting and anti-explosion ***"Proprietary Technology"***, which also produce environmental remediation and other supporting applications.

FireStopper® initially devoted the first 25-years of its existence to R&D and subsequently is the recipient of the stand-alone testing results in ratings and environmental certifications. Said superior performance is evident over all others as certified by the most recognized and respected third-party testing and listing facilities in the world. 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 garnered per the most demanding environmental and life exposure testing and certification making the ***FireStopper®*** "Brand" the best over all other existing and available products in the explosion/fire and safety channel of business.

In addition, ***FireStopper®*** has secured supply lines for its raw materials to meet its current production capacity of 1-Mil gallons per month and 50k units/month in the handheld portables product line. As for delivering its portable systems and fixed systems, FireStopper® International Limited is dedicated to meet or exceed the client expectations at every junction.

In the last 40-years many have represented to have a portable extinguisher device or agent that would extinguish every class of fire as defined by Government and Standards such as EN, IMO, ICAO or *NFPA*. However, to prove to the market that the representations made are factual, these pretenders would need to submit their product to be tested and achieve a rating according to recognized Standards that in fact support their representations.

Time has demonstrated that none of those pretenders nor the major recognized fire protection companies, who dominate the market place, have been able to meet the level of certifications FireStopper® has achieve thus far "We challenge any or all to match our product's achievements".

In the pursuit of perfection, ***FireStopper®*** is engaged in the development and manufacture of superior stainless steel portable hardware and fixed systems designed to complement and deploy the already available ***FireStopper®*** extinguishment and anti-explosion media. This company's lineup of powerful equipment employ the most durable and affordable materials that makeup a solid line of fire protection, anti-explosion and environmental remediation products to lead its users into the 21st Century.

The currently available line of ***FireStopper®*** branded Products demonstrate superior performance, durability, and produce superior economy when replacing old technology products on hand and additionally evident through their deployment, application and use. In the International arena, the ***FireStopper®*** brand is the recipient of the highest certifications in all category of Governmental requirements to market such as defined below:

Handheld Portable Extinguishers:

ANSI/UL711, ULC – Southwest Research Institute (San Antonio, TX)
Defense Logistics Agency (DLA) US Gov. NSN Approval #s'

EN3-7; EN3-8[1] – MPA, Dresden (Germany)
CE[2] – DNV

Firefighting Foam Concentrates:	***Environmental Testing:***
EN1568 – MPA Dresden	NAMSA, USA
ICAO – CNPP (France)	Associated Laboratories, CA USA
IMO – MPA Dresden, Lloyds Registry: DNV & MED	Environmental Medicine, Inc., USA
CE	OPUS, Ltd., UK

Executive Summary

Municipality's demands and responsibilities have expanded dramatically in the past 20-years. Today, given the population expansion, increase in urban density, economic downturn, domestic and external potential and realized violence, climate unpredictability and other potentially devastating possibilities have given rise to obtaining the most reliable tools to serve the population's fire protection needs.

In accordance with the above, the public fire services are under overwhelming pressure to deliver the utmost in service in an emergent event. Unfortunately, firefighting tools have stayed pretty much the same in the past 100-years with marginal improvement in technology and subsequent products deployed to deliver life, property and environment protection.

Generally, the most deployed product against fire is water. The biggest reason for using water, as stated by fire service professionals, is that ***"water is free"***. ***However, this statement is highly inaccurate***. Notwithstanding the above, the fact remains for firefighting traditionally fire services throughout have relied on water to be used as the go-to tool, which is the most inefficient fire fighting media and no one seems to want to investigate the true cost of *water* and more important, ***who pays for it***. Let us explore the issue…

The Supporting Mechanism For Said Water Policy:

- Hydrants for firefighting are generally available in every city block
- The Municipality entitles said availability for the general fire protection of the city and its inhabitants
- The cost for said service is passed through to the ***TAX PAYER***, you and me…

This is where the misconception resides; of course it is free to the fire department…nevertheless, everyone, including the fire professional pay the bill. Moreover, the cost of employing water exclusively as the main media for fire protection comes with additional hidden costs:

- Statistics[3] show that the average water usage on structural fires, in the U.S., is about 20k-gallons to 30k-gallons per structural fire

[1] This Standard refers to hardware durability, reliability and efficacy

[2] This Mark assures manufacturing quality through yearly inspections

[3] *NFPA; U.S. Fire Administration*

- This enormous volume of water creates additional structural damage far beyond the actual cost of the fire damage, which then is reflected on insurance premiums spread across the insured pool (which is everyone who caries fire insurance)

- Post fire cleanup is another hidden upcharge for water usage – the cost to the water district from drainage/transportation of the contaminated water employed in the fire event, which is washed away into the drains leading to the water reclamation plants ***(which is also not*** ***included in consideration for the cost of water used in firefighting)***

- An additional example commonly occurring is the costly effect on the environment and the additional expenditures needed to cleanup the contaminants left in the sewers while the contaminated water heads to the Municipal Treatment Plant

(In the case of tanker fires on highways, there is a major upcharge/cost to the Municipality and the Taxpayer for the environmental cleanup in the drainage system, which the massive amount of water w/the foam will pickup and spread through its course to the water treatment plant)

The Obvious Consequence of The Current Water Use Policy By Fire Services

- When class "B" flammables are the source of a fire event water is the foam delivery vehicle:

    1. Basics - in the past years many lawsuits are on record to remediate the toxic effects caused by the used of AFFF foam requiring ***mass water use***:

        a. AFFFs' are not biodegradable and are eye and skin irritants opening the Municipality to justified injury claims from fire personnel

        b. Non Fluorinated replacements are a new source of potential major claims against the Municipality for potentially more egregious claims

        c. Private citizens and community groups who have filed lawsuits for injury claims due to the residue of AFFF in their water systems and the surrounding ground where the contamination originated from its use

    2. The water treatment plants have to enhance their ability to recover and clean the water that contains the foam contaminants and the additional massive amounts of contaminants carried away by the burnt byproducts created in the fire and contained in the runoff. The fact remains that there are other costly considerations born out of the blind principal use of water in firefighting.

We propose that new and powerful technology exist that will massively reduce the overall use of water, thus greatly reducing and/or eliminating most of the above liabilities. In this paper we offer the following fix when FireStopper® is implemented:

- Based on1-min @ 90/GPM/1000-ft² real world application and performance[4], FireStopper® will reduce water usage in such a dramatic way that cost savings will be realized immediately

[4] Fig. 1 below is derived from real world applications and world-class demonstrations of ***FireStopper® XL "PLUS FFC, XL FFC & AB 40002 FFC*** concentrates

(Please note: FireStopper® Concentrates are the only firefighting concentrates in the World designed to certify in multiple percentages and perform their efficacy equally in any of the certified percentages of use; thus reducing and/or eliminating the need for costly specialized equipment as an added cost saving bonus)

Fig. 1

COMPETITIVE COMPARISON WITH ALL AFFF

FireStopper® PRODUCTS	*TESTED & CERTIFIED USAGE*	*APPLICATION RATE/ APPROX. AREA*	*APPROX. EXTINGUISHMENT TIME*	*AFFF*	*APPLICATION RATE/ APPROX. AREA*	*APPROX. EXTINGUISHMENT TIME*
AB 40002 FFC	6%	90/GPM/1000-ft²	**<15-secs**	6%	90/GPM/1000-ft²	**4 to 6-min**
XL FFC	3%; 6%	90/GPM/1000-ft²	**<10-secs**	3%	90/GPM/1000-ft²	**4 to 6-min**
XL "PLUS" FFC	1%; 3%; 6%	90/GPM/1000-ft²	**<5-secs**	1%	90/GPM/1000-ft²	**4 to 6-min**

VERIFIABLE ECONOMIC COMPARISON

*PRODUCT***	*ACTUAL COST BY USAGE*	*AFFF (Chemguard)*	*ACTUAL COST BY USAGE*
AB 40002 FFC	1-min @ 90/GPM/1000-ft² $60.95/gal=$329, 13÷4=**$82.28**	***6%***	1-min@90/GPM/1000-ft² @ $20.95*/gal=$113.13x4=**$452.52**
XL FFC	1-min@90/GPM/1000-ft² @ $74.95/gal=$374, 75÷6=**$62.45**	***3%***	1-min@90/GPM/1000-ft² @ $32.99*/gal=$171.54x4=**$686.19**
XL "PLUS" FFC	1-min@90/GPM/1000-ft² @ $97.50/gal=$487, 50÷6=**$40.62**	***1%***	1-min@90/GPM/1000-ft² @ $44.20*/gal=$229.84x4=**$919.36**

* ***ALL CHEMGUARD FOAM UNIT PRICING ACQUIRED FROM AMAZON.COM*** *and extended cost calculations favor the best performance of AFFF*

** ***FireStopper International Limited*** *is keenly focused on providing Government, industry, and the public the most advanced products its Technology has to offer*

Class A Fire Example:

- In 1998 FireStopper® was invited to demonstrate its concentrate AB 40002 FFC by the Los Angeles County Fire Services during their county wide training exercise in San Bernardino County where a very large complex of condemned duplex units were donated for said exercise:

  1. In 2-identical spaces, LA County fire prepared a head-to-head demonstration between FireStopper® and their standard applied protocol using water

  2. FireStopper® was applied to a pallet fire inside the living room space in the duplex unit, temperature monitored. At 1500ºF, FireStopper® was deployed using one 1 ½-inch line @ the standard GPM through an exterior application protocol

  3. AB 40002 FFC extinguished the fire in 54-sec & reduced the temperature to ambient temperature

- The LA County standard firefighting protocol using water produced the following results:

1. The exterior attack on the identical fire in the adjacent identical unit was fought for 20-min with little or no effect, causing the 3-man fire crew to enter the unit and tear up the rafter since the fire had grown through the eves into the roof…this was a total loss.

   (Please note: this event took place at a time when FireStopper® was in its early stage of development and was firmly entrenched in R&D with the UK Ministry of Defense and the only product it had developed was AB40002 FFC)

- During the same year, FireStopper® working with Loss Prevention Council (UK) *(LPCB Approved Products & Services*) rated and had approved the highest class A fire rating to date on a 9-liter extinguisher premixing AB40002 FFC *(a 43A rating: a 4.3-meter long pine wood crib according to EN3-4)* further proving the superior class A capability of this new Technology and type of foam concentrate

- In addition Gloria GmbH, a Kidde company, commercially made available a line of specialized class "A" extinguishers distributed throughout the world employing our concentrate further supporting the stand alone position of FireStopper®.

Class C Fire Efficacy:

- Likewise this technology was put to task, using the same extinguisher, to pass the "C" (E in the UK) testing and rating…it did

Class D Fire Efficacy:

- While working with the UK MoD, FireStopper® demonstrated the additional class D capability of its Technology product AB 40002 FFC on various type of magnesium and aluminum fires

- Today, we have demonstrated the stand-alone efficacy of all the FireStopper® products against all flammable metals including nuclear. FireStopper International Limited is the only company in the world to provide a firefighting product that will extinguish all flammable materials in the planet

Conclusion

In the interest and service of the public, the Municipal Fire Services must engage in providing the best and most effective fire and fire related protection possible. Within the scope of said mandate, fire services should also provide for the safety of its personnel in the act of the intended task and within this pursuit. It is incumbent upon said service to investigate and identify the most reliable new technologies and products that will enable them to deliver the best and most reliable results available.

In the current profound social and economic conditions, Government, Industry and the consumer cannot afford the risk of loss both materially and the ever present risk to life. FireStopper® offers the only real security against the ever present danger of catastrophic fire and or worst, explosion.