



# A New Never Before Available Fire Protection For The Petrochemical Industry

## XL 'PLUS' FFC

*FireStopper Marketing Department*  
WHITE PAPER

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**FIRESTOPPER®**  
Industrial - Commercial  
Government

# **Preface**

FireStopper International Limited, a transnational Registered Company, is the developer of the most advanced, powerful and safe firefighting technology in the “World. It devoted the first 25-years of its existence to R&D and the recipient of subsequent stand alone testing results based on the ratings and certifications awarded by the most recognized and respected third-party testing and listing facilities in the world.

Moreover, this unique Technology has derived the only available all fire class/subclass effective, and anti-explosive products, which are non-toxic, non-irritant, environmentally safe, and non-hazardous over all other existing and available products in the fire and safety channel of business.

Having proven the former statement through the outstanding results of the products testing, rating, and certifications thus received, FireStopper®, in tandem with its novel firefighting and anti-explosion products (the “software”), developed the most durable and reliable supporting hardware and detection systems available today, which also meet and exceed the relative standards used to certify said product lines.

Moreover, the FireStopper® lines of products reach across the full spectrum of safety application including environmental remediation post spills both onshore and offshore.

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<sup>1</sup> – MPA, Dresden (Germany)  
CE<sup>2</sup> – DNV*

## ***Firefighting Foam Concentrates:***

*EN1568 – MPA Dresden  
ICAO – CNPP (France)  
IMO – MPA Dresden, Lloyds Registry: DNV & MED  
CE*

## ***Environmental Testing:***

NAMSA, USA  
Associated Laboratories, CA USA  
Environmental Medicine, Inc., USA  
OPUS, Ltd., UK

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<sup>1</sup> This Standard refers to hardware durability, reliability and efficacy

<sup>2</sup> This Mark assures manufacturing quality through yearly inspections

# ***Executive Summary***

## **A New Weapon Against All Flammable Events Inherent In The Petrochemical Industry**

Never before has there been a greater demand for fire protection both against industry related events and the externally driven maleficence. The security needed to protect this valuable infrastructure is currently in the hands of proven inadequate old technology product (*AFFF, FFFP, Dry Chemical Powders and dangerous Streaming Gases*). Actual history shows that when these catastrophic events occur, the infrastructure is massively damaged or totally destroyed causing massive loss of revenue and the irreplaceable loss of time.



In today's economic environment, Industry cannot afford business as usual with the usual products at hand.

Now with the advent of the FireStopper® FFC (*Fire Fighting Catalyst*) Technology, the assigned individual or personnel charged with protecting the infrastructure can safely, effectively and quickly extinguish the fire event and transforming the affected area to the ambient temperature environment, which will enable the repair crews to return the facility to a working and productive

enterprise reducing time loss to the minimum. The advantages FireStopper® deliver, not available before in any other currently employed products or technologies, are as follows:

1. *Effectiveness on all classes and sub classes of fire:*
  - a. *FireStopper® XL “PLUS” FFC is the only concentrate in the world capable to deliver the highest fire extinguishment efficacy, according to its EN1568 Certification, equally in all three (3) industry recognizes percent usage (1%, 3%, & 6% inclusively).*
  - b. *It is certified to perform equally on all three (3)-percentage uses while mixing with both fresh and salt water (only product to ever achieve certification level of 1A rating in all three-percentage and in mixture with fresh and salt water).*
  - c. *The only concentrate to achieve “GREEN” rating under the HOCNF protocol, and:*
    - i. **ENVIRONMENTAL & TOXICOLOGY TESTING**  
*FFCs’ are independently tested and found to be non-hazardous to fish or any other life forms. The mixture is not an eye or skin irritant and is non-toxic when tested according to the FHSA protocols. It is judged to pose no chronic health hazard. Under European standards OECD 306, and 117 Method 2004, ISO 14669 (1999), ISO 5667-16 (1998), and ISO 10253 2006, (OSPAR/HOCNF) Part B, the FFCs meet “Green” 1qualifying requirements. The FFCs need no special labeling or chronic health hazard warning statements and are in compliance with FHSA Regulations, 16 CFR 1500 and California Proposition 65.*
2. *Fast extinguishment*
3. *No re-ignition*
4. *Non-Irritant (skin or eyes), Non-Toxic, Non-Aggressive*
5. *Freeze resistant to -34.5°C*

**Comparison Overview Of Fire Testing And Certification Standards EN1568 To UI162**

EN1568	NFPA11/UL162
<i>Fuel Type &amp; Volume: n-Heptane, 300-L            Test Pan Shape &amp; Size: Round, 79 ft<sup>2</sup>            Pre-burn Time: 1-min            Fire Extinguishing Time: 3-min or less  <b>(A Rating is assigned based on the overall performance during the fire test)</b>            Burn back: 5-min – 25% allowed            Torch and burning &amp; pot methods            Foam Quality Physical Testing            Temperature Resistance Testing</i>	<i>Fuel Type &amp; Volume: n-Heptane, 227-L            Test Pan Shape &amp; Size: Square, 50 ft<sup>2</sup>            Pre-burn Time: 1-min            Fire Extinguishing Time: 3-min or less  <b>Not available in this Standard</b>            Burn back: 5-min – 20% allowed            (No Rating is applied)            Torch &amp; Stove Pipe methods            Foam Quality Physical Testing            Temperature Resistance Testing</i>

As a global supplier of fire and explosion suppression products designed to meeting all possible needs of the industry, FireStopper® additionally offers the following innovative product lines:

- **Fixed and Portable Systems** - powered by the most powerful, all flammables effective, all environment usable and human and environment friendly liquid suppressant
- All fixed systems are individually designed and engineered to fit the purpose
- All FireStopper® branded hardware fabricated in non oxidizing stainless steel for long term durability and reliability
- Built around the most advanced, military grade detection and deployment support system designed to minimize and ameliorate the unexpected destructive event
- Providing the longest Limited Warranty in the Industry; twenty (20)-years
- **Environmental Remediation and Drilling Support Products** – please review the FireStopper® Liquids Catalog for individual product specifications

#### *FIRE EXTINGUISHER LIQUID PRODUCT SPECIFICATIONS*

- All fire class effective ABCDK
- Non-Toxic, Non-Hazardous, Eco-Safe according to HOCNF (Harmonized Offshore Chemical Notification Format and *FHSA regulations, 16 CFR 1500 and California Proposition 65*) **will meet and exceed all environmental requirements for fire safety products**
- **FireStopper® PFE-FR FFC** (a premix exclusively designed and available for use in conjunction with FireStopper® trademarked systems)

#### *Advantages:*

- This product is designed for use exclusively with FireStopper® trademarked systems and delivers:
  - DLA (US Defense Logistics Agency) approved
  - Full efficacy on all fire class and subclasses
  - -100°F freeze resistance while in use without harmful antifreeze additives
  - Viscosity: water-thin
  - Anti-explosive properties
  - Highest ratings in the world both: EN3-7 & UL7-11
  - Highest Eco-Safety testing results under HOCNF, and meet or exceed *FHSA regulations, 16 CFR 1500 and California Proposition 65*
  - Ideal for use where extreme cold temperatures may be a factor
  - The ideal product for use in concert with FireStopper® CAC (*Compressed Air Catalyst*) units; please see CAC Catalog

- **FireStopper® EXP FFC** (an anti-explosive premix exclusively designed and available for use in conjunction with FireStopper® trademarked systems)
  - This product offers all the above advantages in the explosion suppression application against all potential explosive environment inherent in the Petrochemical Industry

## Conclusion

Because of the vulnerabilities present in the nature of the petrochemical business, political unrest giving birth to Asymmetric warfare and conventional engagements will require a new generation of fire protection. FireStopper® has developed the deepest variety and most flexible hardware to deploy the most advanced, powerful, reliable and safe array of firefighting and anti-explosion media available in the world. No matter whether it is necessary in a concentrated form for massive use or in a premix format exclusively designed for use through FireStopper® trademarked portable or fixed systems, FireStopper® stands ready to deliver...

### VISIT US

AT: <http://firestopperintl.com/>

### CERTIFICATIONS:



"GREEN"