

**Environmentally Friendly Extinguishing**

**With AF-X Fireblocker**





**Prevent fire damage**  
**Secure business continuity**  
**Prevent consequential loss**  
**Safe, inexpensive**

### **Use AF-X Fireblocker**

Originally developed for space travel, the AF-X Fireblocker acts as a built-in firefighter that rapidly extinguishes fires using a dry aerosol. This system operates without water or gas, thereby avoiding water damage and ensuring there are no toxic gas emissions.

Consequently, there is no fire damage, no water damage, and no consequential losses. The system is safe for humans, animals, and the environment.

### **AF-X Fireblocker is Unique**

Most onboard fires result from electrical faults or malfunctioning equipment, often in unseen and unnoticed locations. The compact AF-X Fireblocker systems are designed to extinguish fires both in open spaces and at their sources, effectively halting the fire before it spreads. This innovative approach significantly reduces potential damage by swiftly neutralise the fire's self-reinforcing cycle.

### **Prevent fire with AF-X Fireblocker**

Fire can cause immense damage to your crew, vessel, and the environment. In fact, fire and its consequences can be devastating, potentially leading to significant financial losses or even the complete loss of your ship. Implementing preventive measures against fire is crucial. Did you know that over 60% of businesses that suffer a major fire go bankrupt within three years? Ensuring your vessel is protected can prevent you from becoming part of this statistic.

# Meet the family



> CXXS

> CXS

> CS

> CM



> BXS



> BS



> BM



> BL

## Once activated, the aerosol fire extinguisher initiates a reaction in which the released aerosol binds the free radicals.

The aerosol used in AF-X generators is Potassium-based (K), which binds faster with the unstable free radicals O (oxygen) and H (hydrogen) than a fire reaction. Forming stable products such as KOH (making unstable radicals stable). Due to the presence of CO<sub>2</sub>, the KOH disintegrates into K<sub>2</sub>CO<sub>3</sub>, a stable white substance that is noncorrosive and poses no danger to humans, animals, and the environment.

This action extinguishes fire without depleting the ambient oxygen content. The solid particles of Potassium based (K) have a particle size of less than two ppm (parts per million) and remain in suspension in the protected room/enclosure for at least 30 minutes, preventing further re-ignition of the fire.

## Extinguishing is achieved.

By two reactions:

- > Physical
- > Chemical

### Physical

By absorbing the energy needed for the chemical reaction, it results in a cooling effect.

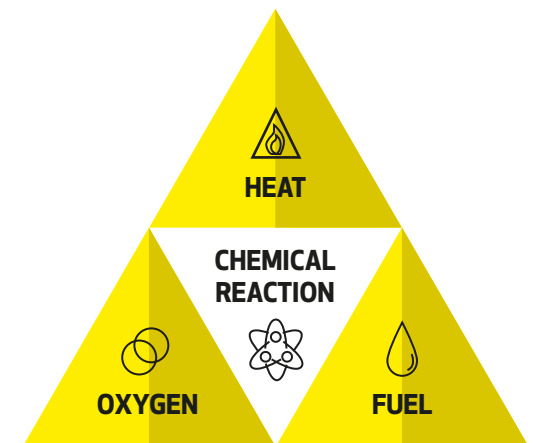
### Chemical

The instable radicals (OH) react with Potassium (K) quicker than the fire-reaction and create a stable potassium hydroxide (K<sub>2</sub>CO<sub>3</sub>).

A fire is a chain reaction between

- > Heat
- > Fuel
- > Oxygen

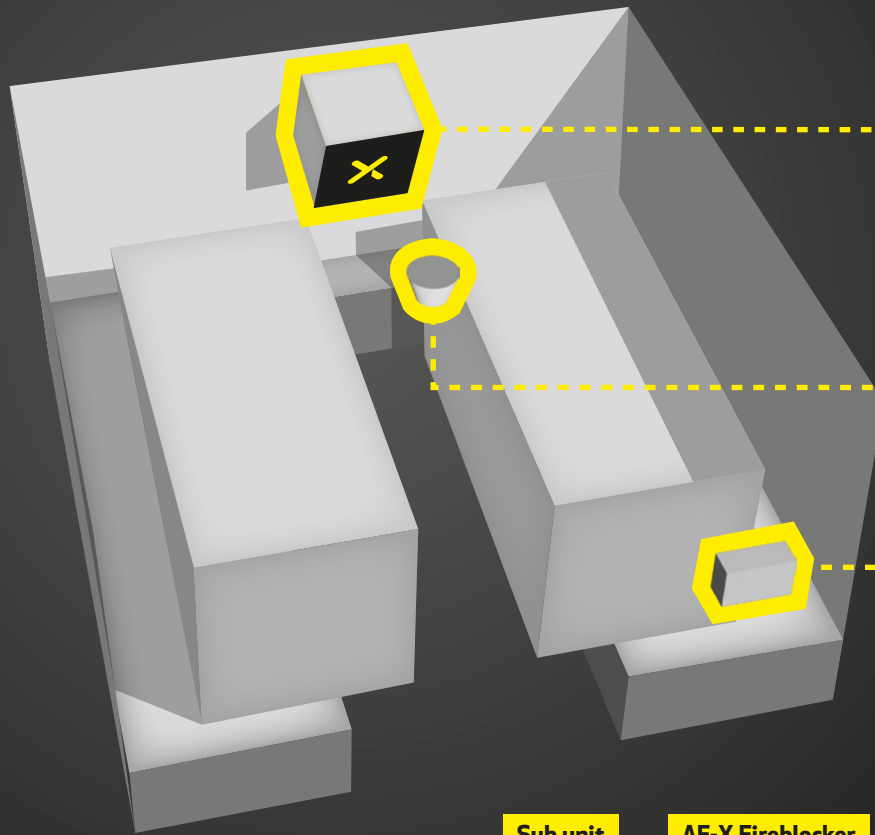
So break the chain!





# Let's implement

## Some basic elements in a system



### AF-X Fireblocker

The AF-X Fireblocker extinguishing system utilises an aerosol compound to extinguish the fire. Extinguishing with an aerosol is rapid and very effective in suppressing fire without damaging the present equipment or processes. The extinguishing takes place at a molecular level by binding and stabilising oxygen molecules and absorbing the energy (heat) present in the flame. AF-X Fireblocker is non-corrosive and environmentally friendly and is safe for humans and animals

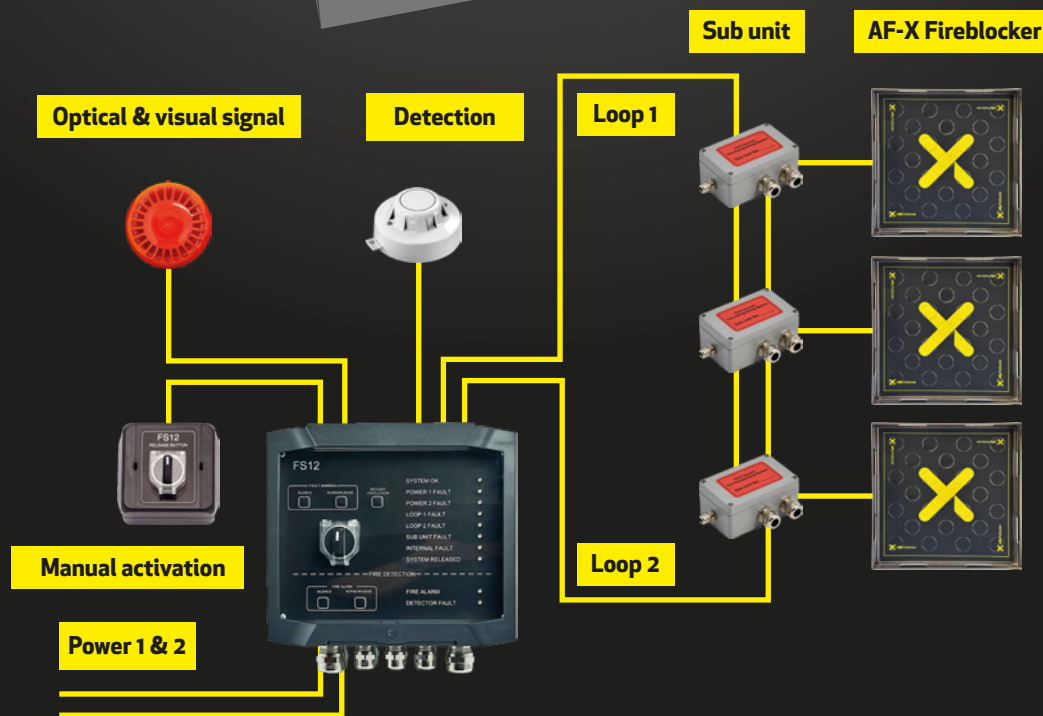
### Detection

To quickly detect a fire, detection systems are installed in the space. In a given space, detection can occur through various means such as:

- > Smoke detectors
- > Thermal detectors
- > CO and thermal multi-detectors
- > H<sub>2</sub> (Hydrogen) detectors
- > Or other external detection mechanisms like Aspiration, Linear Heat detection, etc.

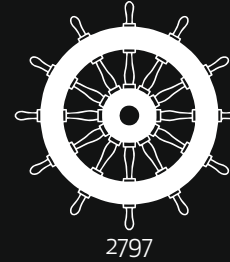
### Fire control panel

A fire control panel is the heart of the extinguishing system and communicates between the detection and the extinguishing system. The panel will detect and respond in case of a fire by manual and/or automatic activation of the AF-X Fireblockers and sounding an alarm.



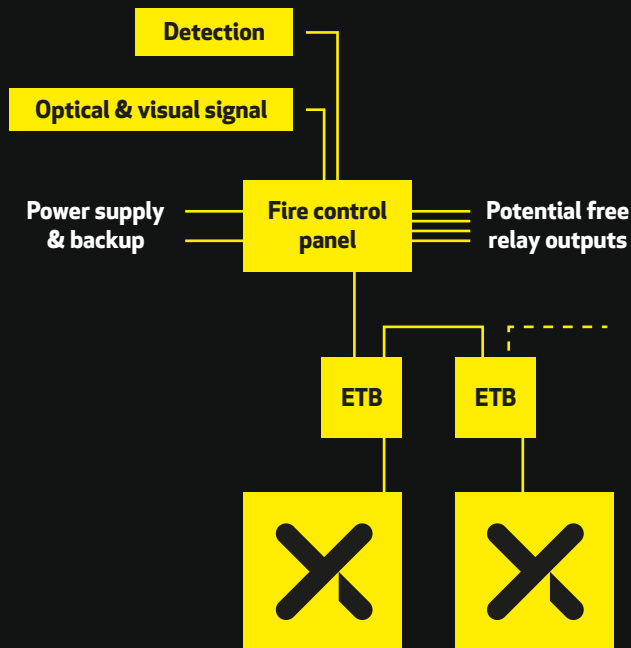
# Different vessels, different systems

All systems are modular and selected to  
optimise the specific needs to ensure  
the required safety.



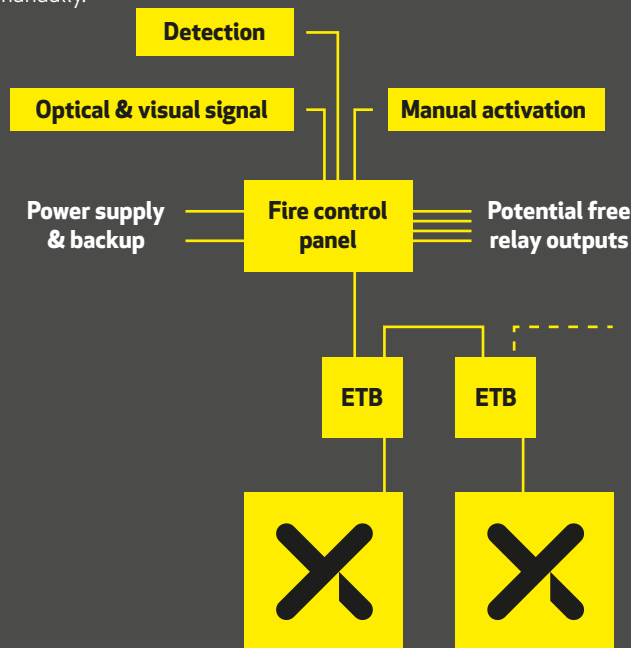
## Fully automatic systems

The system will detect and start extinguishing automatically.



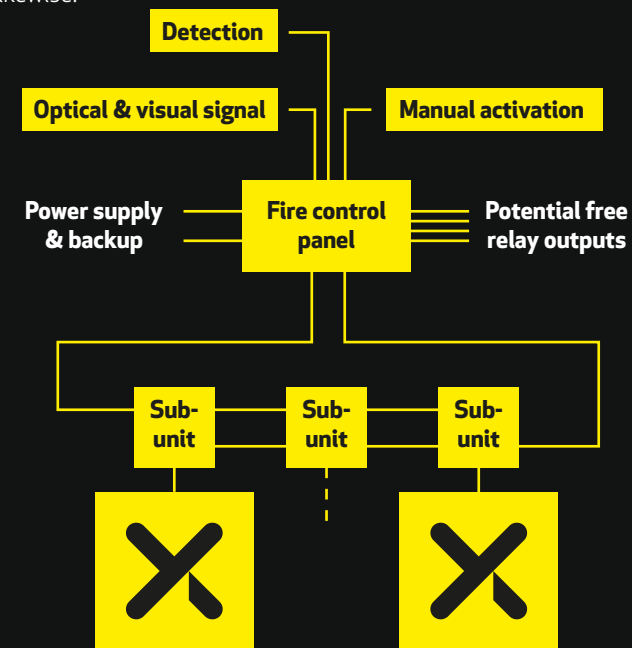
## Manually activated

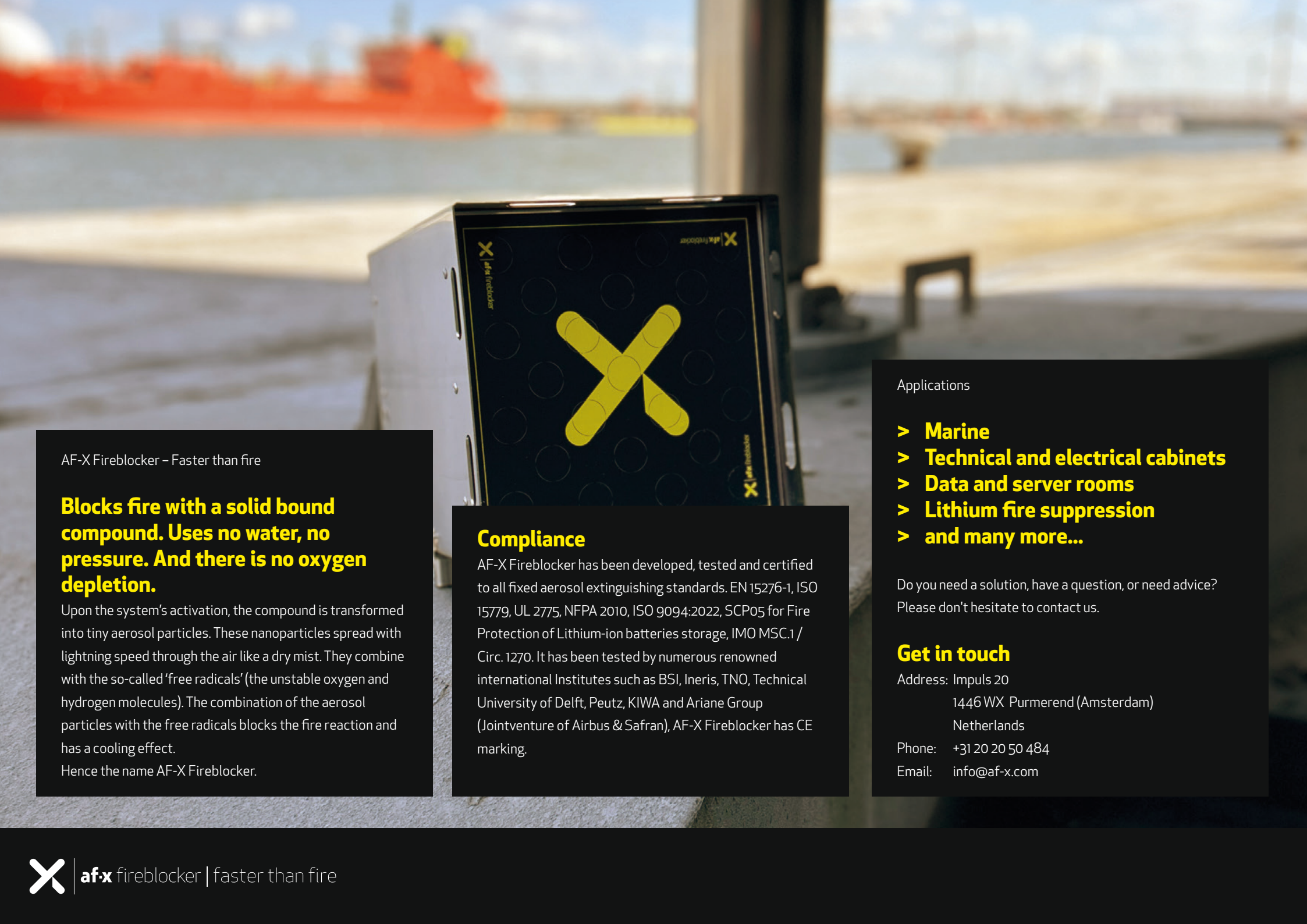
The system can detect but extinguishing will be done manually.



## Regulated according IMO 1270

To comply with IMO standards the system will be installed likewise.





AF-X Fireblocker – Faster than fire

**Blocks fire with a solid bound compound. Uses no water, no pressure. And there is no oxygen depletion.**

Upon the system's activation, the compound is transformed into tiny aerosol particles. These nanoparticles spread with lightning speed through the air like a dry mist. They combine with the so-called 'free radicals' (the unstable oxygen and hydrogen molecules). The combination of the aerosol particles with the free radicals blocks the fire reaction and has a cooling effect.

Hence the name AF-X Fireblocker.

### Compliance

AF-X Fireblocker has been developed, tested and certified to all fixed aerosol extinguishing standards. EN 15276-1, ISO 15779, UL 2775, NFPA 2010, ISO 9094:2022, SCP05 for Fire Protection of Lithium-ion batteries storage, IMO MSC.1 / Circ. 1270. It has been tested by numerous renowned international Institutes such as BSI, Ineris, TNO, Technical University of Delft, Peutz, KIWA and Ariane Group (Jointventure of Airbus & Safran), AF-X Fireblocker has CE marking.

### Applications

- > **Marine**
- > **Technical and electrical cabinets**
- > **Data and server rooms**
- > **Lithium fire suppression**
- > **and many more...**

Do you need a solution, have a question, or need advice?  
Please don't hesitate to contact us.

### Get in touch

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