



Protecting
people, properties
& the planet
through innovative,
non-toxic, eco-
friendly fire
extinguishing and
prevention fluids &
products

Copyright © 2024 LifeSafe Holdings plc.
All details and statistics correct at time of publishing.
Private & confidential.



Industrial fluids – WildFire Pro

2



- The best new fluid for wildfire suppression, retardancy and prevention of re-ignition.
- LifeSafe Wildfire Pro (WFP) - Is patented pending and designed to tackle wildfires through multiple application methods by significantly reducing the transfer of heat. The WFP is non-toxic, non-hazardous and fluorine-free.
- LifeSafe WFP is suitable for multiple application methods including aviation and ground crew attack via induction or mixing tanks.
- As a pre-mixed concentrate, WFP can be used as a powerful ground attack suppression fluid and coolant and can be used in standard extinguishers or spray tanks.
- When used in larger tanks such as for aviation drops, WFP requires little or no agitation in the mixing tank and creates a solution heavier than water, increasing penetration into the core fuel source.
- W-FP is not only effective at extinguishing the ferocious flames of wildfire, it is also perfect for use as a fire retardant in at-risk areas yet to be affected by the fire to create fire breaks.
- Where pre-treatment is applied, the fire retardants non-toxic residue left behind after water evaporation remains effective after more than 14 days.
- Our unique wildfire-fighting solution can be applied in both the suppression and prevention stages of tackling a wildfire, maximising the practicality of use whilst keeping the wildfire contained until fully extinguished.

00:09:08:22



THERMAL REDUCTION - COMPETITOR A, HIGHER RATIO



This video shows the superior product capability at preventing any ignition

1st bunch of dried grass untreated

2nd bunch of dried grass was pre-treated with WFP and left to dry in the sun for 3 full days



- Knockdown/cooling
- Suppression and prevents re-ignition
- Retardant features allowing pretreatment



Technology behind the fluid

By utilising the foundation technology of the LifeSafe fluid we have created a highly efficient wildfire firefighting product that can be used from 10% dilution right up to 100% strength, giving the user the ability to deal with multiple application methods from aviation drops to knapsack ground attack at 100% solution at the fire edge.

Competition

The sector is divided into suppression and long term retardancy which requires the users and FDS teams to choose which approach to take. and these products require significant water mix drops and attack approaches given the low % dilution rates and overall effectiveness of the products.

How does it work

Our dilution at 10% provides significant firefighting capability and retardancy at the same time. This is possible because of the 3 in 1 fluid technology.

1. By reducing the surface tension and disrupting the molecular structure of the fuel source by creating an endothermic reaction.
2. Secondary suppression delivered by creating an inert gas to prevent re-ignition
3. When induced into a dosing system the WFP also reduces the surface tension of the water. Making water 100% more effective.

Non-Hazardous and Fluorine free

Battle Card

LifeSafe Technologies

WFP



Better than Competition

- Flame control and cooling effect
- Retardant
- No re-ignition
- Long lasting effect

Why LifeSafe Technologies

- New and innovative product range
- Market leading
- Trusted
- Customer focused
- High quality

Application methods

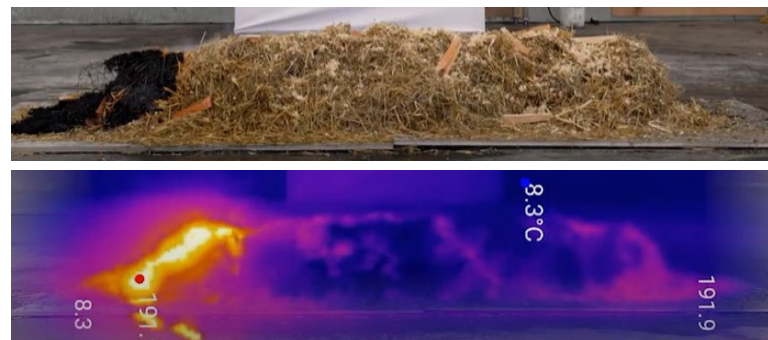
- 10% - 100% dilution ratios
- Direct ground attack
- Pre-treatment
- Induced into firetruck system

WFP Benefits

- Faster extinguishing to control of the fire quickly and effectively
- Used from 10% dilution right up to 100%, giving the user the ability to deal with multiple application methods from direct attack to knapsack ground attack at 100% solution at the fire edge.
- Unique retardancy features and A class attack options in one product
- W-FP is a multi-use fluid designed to be highly effective across multiple aspects of the wildfire
- Significant reduction in the amount of fluid required compared with traditional methods

WFP Features

- 3 in 1 fluid technology
- Reducing the surface tension and disrupting the molecular structure of the fuel source by creating an endothermic reaction
- Secondary suppression delivered by creating an inert gas to prevent re-ignition
- Induced into a dosing system the WFP also reduces the surface tension of the water. Making water 100% more effective.
- Non-Hazardous, Eco friendly, and fluorine free



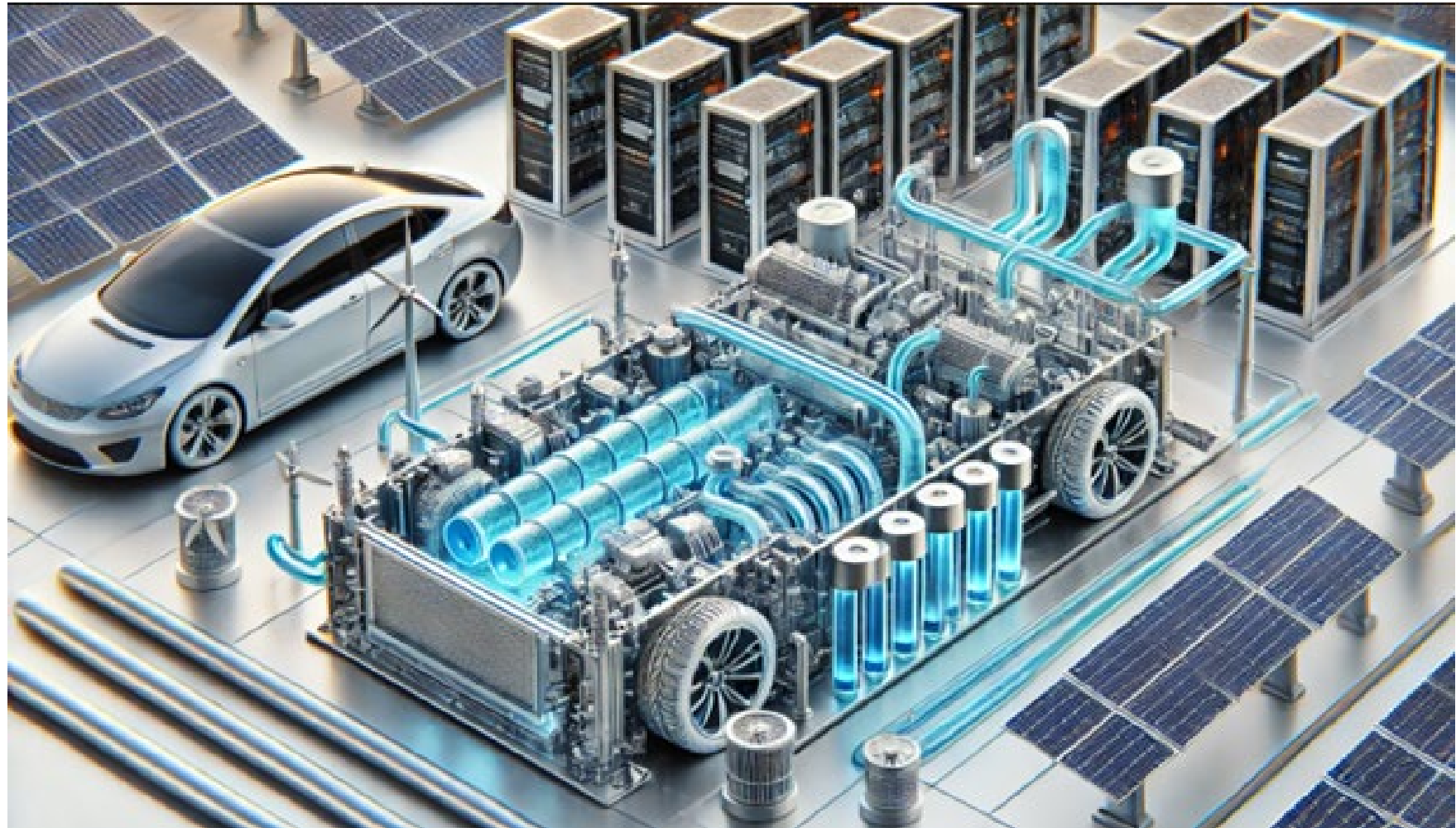
Photos





**Protecting
people, properties
& the planet
through innovative,
non-toxic, eco-
friendly fire
extinguishing and
prevention fluids &
products**

Copyright © 2024 LifeSafe Holdings plc.
All details and statistics correct at time of publishing.
Private & confidential.





- LifeSafe Thermal Management Fluid – ground-breaking, patent-pending coolant solution that prevents the deadly threat of thermal runaway by significantly reducing the transfer of heat within a battery pack. The TMF is non-toxic, non-hazardous and importantly non-corrosive, a significant leap forward in the efforts to better control battery fires and overheating before it becomes a deadly fire , in a safe and more sustainable way.
- In the case of overheating battery packs, there are two stages of possible intervention
 1. Pre-trauma describes the point where overheating has started and is taking the batteries into propagation or thermal runaway.
 2. Post-trauma describes the point where the batteries ignite and dangerous gasses are vented from the battery pack.
- The use of lithium-ion batteries and their use has increased rapidly in recent years, most notably transport and energy storage sectors.
- With an increasing number of devices and industries around the world utilising the power and efficiency of lithium batteries, there is a growing need for a new approach to controlling and managing the heat build-up within a battery.

Website link

[Pre-Trauma Fluid — LifeSafe Industrial Fluids](#)

<https://youtu.be/wm9rktTb7s?si=jsDoE0aYOFIXPu68>



The TMF fluid has an extremely stable chemical structure and can be deemed a coolant due to its low thermal conductivity. This means it transfers heat at a much slower rate than other materials, leading to excellent heat resistance.

It can also be described as having excellent 'thermal stability' meaning it retains its structure and properties over a wide temperature range.

Has an extremely High insulation rate 999 mOhms prohibiting electrical current to pass through.

It is also an extremely good lubricant for moving metal parts and unlike many mineral based lubricants won't break down plastics.

Non-Flammable, Non-Toxic, Non-Hazardous, Non-Corrosive, Fluorine Free low PH levels and incredible performance.



Properties and features TMF

- Chemically Inert
- Superior dielectric characteristics
- Excellent High & Low Thermal Stability
- High Water Repellences
- Low surface tension
- Low pour point
- Excellent Lubrication
- Non-Flammable
- High Resistance to Oxidation
- High Resistance to Shear
- Low surface tension
- Low viscosity temperature change

Core Product performance Attributes

Some of the highest temperature levels in the industry

- Determination of flash point in closed cup –
 - **flash point 273 °C.**
- Determination of flash and fire points, Cleveland open cup method –
 - **flash point is 334 °C, fire point is 351 °C.**
- Determination of ignition temperature –
 - **ignition temperature is 375 °C.**
- Determination of sustained combustibility –
 - **non-sustaining combustion**



Proven to prevent thermal propagation

This unit went up to over 550oC and the thin plastic top layer is largely intact



Outperforms global coolant market for thermal performance



Global first for non-toxic formula



Cell Temperatures across supercell

