

- EXTINGUISHERS
- BATTERY
FIRE BLANKETS
- FIRE RESISTANT
CONTAINERS
- FIRE SUPPRESSION KITS

FIRECHIEF®

making the world a safer place

LITHIUM-ION

BATTERY SAFETY RANGE

CASE STUDIES

Specialist extinguishers and accessories designed to stop Lithium-ion battery fires fast.

The English Electric Motorcycle Company
(Motorcycle Retailer & Repairs)

UKRI (Public Body)

Victory Fire & Gorillas (Grocery Courier)

Stewart Ramsey Ltd & MVV Environment
(Energy Recycling)

Fire Response & (Warehousing &
Distribution Operation)



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INTRODUCTION:

Lithium-ion batteries present a more frequent fire hazard each day as the number of consumer and industrial goods powered by them increases. Firechief Lith-Ex extinguishers are suited to confined spaces where fires need to be suppressed in their infancy before developing into a fully established fire.

They can also be used to protect against fires where batteries are under charge and where batteries are stored, for example, goods distribution, battery collection bins, battery recycling locations, public services, and battery charging stations.

How do Firechief Lith-Ex extinguishers work?

Firechief Lith-Ex extinguishers contain Aqueous Vermiculite Dispersion (AVD), a revolutionary fire extinguishing agent. The water content of the extinguisher cools the fire source, while the Vermiculite platelets encapsulate the fuel source creating a thermal barrier to prevent propagation of the fire. The Vermiculite film is not electrically conductive. AVD is nearly twice as effective as water on a Class A fires and is environmentally friendly.



Science and
Technology
Facilities Council

CASE STUDY 1:

UKRI (Public Body)

What was the need?

Launched in April 2018, UKRI is a public body sponsored by the Department for Business and Energy.

The fire team at UKRI approached Firechief for information on the Lith-Ex portable extinguishers and Battery Fire Suppression Kits. UKRI had had several Lithium-ion battery fires in laptops and batteries whilst being transported, hence the need for a product to safeguard against this risk.

The solution

The organisation was impressed with the Firechief Fire Suppression Kit, as the ideal solution for the effective control and suppression of Lithium-ion battery fires. They use the bags within their buildings and when Lithium-ion batteries need to be transported.

Lith-Ex extinguishers were also chosen due to them being environmentally friendly and their proven track record - including test results - of the AVD in stopping thermal runaway.

The benefits

The Firechief Lith-Ex Fire Suppression Kits solved the risk issue UKRI had, providing a trustworthy safeguard against small battery fires and security to employees when transporting devices with Lithium batteries.

The Firechief brand was recognized as a market leader and UKRI were impressed with the excellent customer service and product knowledge of the team.





CASE STUDY 2:

Fire Response & A Warehousing & Distribution Operation

What was the need?

Fire Response provides fire safety for a very well-known warehouse and distribution company in the UK.

The client had concerns about the fire safety of the Lithium-ion batteries in the many handheld scanners that are used throughout the business and the increased risk when these units are on charge.

They had similar concerns about the small robots being used which are also powered by lithium-ion batteries, as well as the many products they store and distribute which contain these batteries.

The size of the client's distribution facilities means on going reports and fire risk assessments based of Lithium-Ion batteries will be required.

The solution

To date, 85 Firechief Lith-Ex extinguishers and signs have been installed at various locations in a first stage UK trial, prior to an ongoing rollout program across the client's distribution centres.

The benefits

The client now has a portable fire solution that all staff can access, which can be used very quickly and will deal effectively with small Lithium-Ion battery fires.





CASE STUDY 3:

The English Electric Motorcycle Company (Motorcycle Retailer & Repairs)

What was the need?

Founded in 2010, The English Electric Motorcycle Company (EEMC) offers a full range of electric on-road and off-road motorcycles and mopeds.

The owner of the business was concerned about the Lithium-ion battery fire risk, particularly since a few years ago one manufacturer did have issues with faulty batteries which resulted in several motorbike fires.

The business also has a repairs section, so there was the need to cover the fire risk there too.

The solution

Lith-Ex extinguisher units were fitted, along with signs, within the works van and the workshop for health and safety reasons and the protection of EEMC staff.

The benefits

EEMC liked the idea of the AVD being environmentally friendly and were impressed with the thermal runaway barrier provided by the Lith-Ex extinguisher. They appreciated Firechief as a quality brand with a proven track record within the fire industry and were impressed with the knowledge of the issue of Lithium battery fires.



CASE STUDY 4:

Victory Fire & Gorillas (Grocery Courier)

What was the need?

Victory Fire's new client Gorillas, enquired about extinguishers that could deal with Lithium-ion battery fires.

Gorillas is a new online grocery business which aims to deliver a range of groceries within 10 minutes of a customer ordering via their app. This is made possible because of the distance from a small hub to the customer within a specific radius, and the fact that the deliveries are made on e-bikes.

The client had seen the issues with Lithium-ion battery fires in the press both in the UK and Germany. They were concerned about the e-bikes being charged throughout the day and wanted cover to minimise the Lithium-ion fire risk as well as a product that could prevent thermal runaway.

The reason for the request was that 30 delivery hubs were being opened during the last few months of 2021, with a further 30 planned to come on stream in 2022.

The solution

Each hub required a Firechief 9 litre Lith-Ex extinguisher with sign. These have already been supplied and fitted in the first 30 Gorillas delivery hubs with further orders to follow for the new hubs in 2022.

The benefits

Both Victory Fire and Gorillas were not convinced by an alternative German F-500 product as the features and benefits were not as strong as the Lith-Ex extinguisher and AVD solution. Thermal runaway and the way AVD works to suppress it was a major factor in the decision battery fires.

GORILLAS





CASE STUDY 5:

Stewart Ramsey Ltd & MVV Environment (Energy Recycling)

What was the need?

Firechief customer Stewart Ramsey Limited needed a product which could provide protection for their client, MVV Environment in Dundee. Operating in the Energy Recycling sector, MVV's concern about Lithium-ion battery fires was high as they deal with lithium-ion batteries daily.

MVV wanted extra fire protection due to the size of the specific area that needed cover and the associated fire risk.

The solution

Following a fire risk assessment, a 50 litre Firechief Lith-Ex Trolley was installed, along with several Lith-Ex portable extinguishers and signs.

The benefits

MVV was impressed with the environmental qualities of AVD as well as being convinced with its effectiveness on thermal runaway within Lithium-Ion batteries.



LITHIUM-ION BATTERY SAFETY RANGE

Lithium-ion batteries are a common part of everyday life, at home and at work. They are used in power tools, computers, personal devices, scooters and bikes, cars, forklift trucks and other factory equipment and much more. The dangers they pose are prominent as Lithium-ion battery fire hazards can be caused by physical impact, overheating, internal cell failure, short circuits, or manufacturing defects.

The Firechief Lith-Ex range provides effective Lithium-ion battery fire protection to a wide range of sectors:

- Transport – Aviation, Automotive
- Energy Storage
- Waste & recycling
- Motor Sport
- Shipping
- Logistics
- Marine
- Domestic
- Industrial

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