

# FIRE/ISOLATOR

## EV-CAR FIRE PROTECTION ON FERRIES



# EV FIRE PROTECTION ON FERRIES

The danger of lithium-ion batteries, such as those found in smartphones and electric vehicles (EVs), catching fire or exploding is well known. Although the actual impact of an EV battery catching fire and the dangers that those fires can cause are widely known, it remains very difficult to extinguish these fires.

Imagine this happening on the cardeck of a ferry. The consequences could be disastrous. The methods for extinguishing a lithium-ion battery fire are depending on the location and size of the fire. However, as a general rule, special extinguishers & methods are needed to fully and safely extinguish or isolate the fire during sailing.

## KEY FACTS ABOUT EV-FIRES

Here are a few key facts that everyone dealing with EV's on ferries should know and do about EV-fires:

1. Lithium-ion batteries are a Class B flammable liquid and require dry chemical extinguishing agents to extinguish.
2. Important is that preventive action should be taken to avoid a chemical reaction that could cause a fire.
3. Be sure that the crew is well trained in the various actions that need to be performed

In terms of minimizing the damages in case of EV-fires, it is a best practice to perform all three actions.

## ABOUT THE **FIRE ISOLATOR** CONCEPT

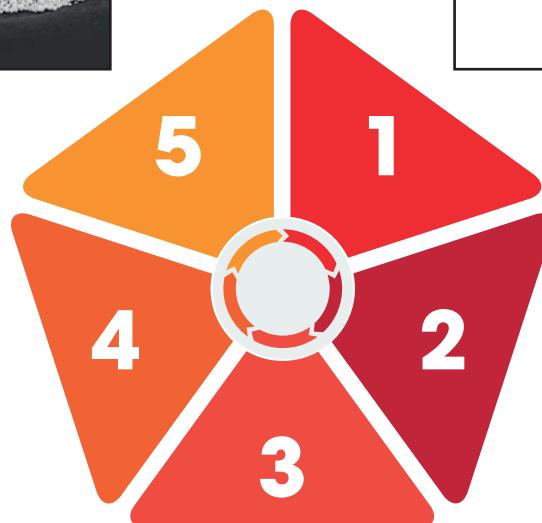
In general, there is no single solution to extinguish EV car fires. Most specialists agree that more than one solution should be available on board. Once an EV fire occurs, the shipowner/captain must be able to reach the nearest port as soon as possible to keep damages to an absolute minimum. Specialist with a long track record of fighting E-fires figured out what the best method to fight a EV fire is in order to have minimum damages towards Cargo & Passengers. The conclusion was that a combination of different extinguishing methods delivers the best results. With this best practice, the concept of Fire Isolator was born.

The Fire Isolator Concept holds 6 elements that, when used together, deliver the best results when fighting EV-fires on board ferries:

1. The use of water as the best extinguishing and cooling agent for lithium-ion high-voltage battery fires
2. The use of Special Med approved extinguishers
3. The use of a High Temperature resistant Fire Blanket
4. The use of a Water Mist lance and Potassium Salt Aerosol Units
5. The use of a Protection Granulate
6. Training of the crew in this concept

# EV FIRE ISOLATOR CONCEPT

BY USING MULTIPLE WAYS OF EV CAR FIREFIGHTING,  
THE CHANCES OF ISOLATING THE FIRE AND SAFELY  
REACHING THE PORT ARE INCREASED BY 500%.



# EV FIRE ISOLATOR PRODUCTS



## FIRE ISOLATOR MED EXTINGUISHER

Our MED approved Lithium Fire Extinguishers will have an impact in a car fire when the agent is applied to the cells. Spraying the AVD on the outer casing will stop the short term fire effects. After this, cover the casing with the Fire Isolator blanket as soon as possible.



## FIRE ISOLATOR BLANKET

The Fire Isolator Blanket is the best way to extinguish and isolate car fires for normal cars as well as All-Electric Vehicles (EVs). The Fire Isolator Car Fire Blanket will direct assist in containing the flames, smoke and toxic fumes. The blanket is temperature resistant till 1500 °C.



## FIRE ISOLATOR EXTINGUISHING LANCE

The Fire Isolator Extinguishing lance is your assistant in quickly and efficiently extinguishing fires in EV vehicles. The Fire Isolator Extinguishing Lance is drilled directly into the battery by a specialist in an easily accessible location. This method allows water to enter the battery cells directly. The lance only needs to be inserted at a small depth.



## FIRE ISOLATOR POTASSIUM SALT AEROSOL UNITS

Our Potassium Salt Aerosol Units are lightweight, hand-held units designed to provide portable fire extinguishing. Potassium Salt Aerosol Units are designed exclusively for trained first responders to slow or stop the escalation of a fire. It has been proven that the deployment of a Potassium Salt Aerosol Units by trained personnel can save valuable time, stop a flashover and provide an emergency route through a wall of flames and/or even extinguish the fire and ultimately help save lives.



## FIRE ISOLATOR GRANULES

With the fire-extinguishing granules you are prepared for all lithium fires, even on your ferry. If an EV car battery ignites here, you can quickly and safely extinguish it with the granules! The expanded glass granules surround the fire and suffocate it. At particularly high temperatures, the expanded glass melts and spreads over the surface of the burning metal. The extinguishing granules are suitable for Class D fire loads and lithium ions.

# EDUCATION AND TRAINING

Education and training resources provide fire and rescue professionals with essential information that continually supports the designation of how to deal with E-fires.

Superior training efforts, whether online, in a classroom or on board, are essential. Training of basic skills, such as the use of all the different basic equipment and the maintenance and use of SCBAs. But also advanced tactics related to high risk, low frequency events, such as technical rescue and response to active shooter incidents.

# ENGINEERING, INSTALLATION AND SERVICE

Based on drawings of your vessel, our team of engineers will create a tailor-made proposal. Quotations can be made for both Open Deck ferries and closed RoPax ferries.

If required, we can deliver the EV Fire Isolator equipment on board and install it professionally. We also offer Annual service contracts. For more information, please contact us.

# ACCESSORIES

Required accessoires like Nomex fire suits, thermal imaging cameras, firehoses, coupling and cabinet can be quoted. Ask us for the pricing information.

# EV FIRE ISOLATOR PARTNERS

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