

# Certified safety solutions and systems for lithium battery fires



In partnership with

**FIRE/ISOLATOR**



**PENTA**  
ELECTRICAL SAFETY PRODUCTS

**CEMO**

for safe storage

Exclusively by EMME Antincendio

# The risks associated with lithium batteries: causes and safety challenges.



Lithium batteries, found in numerous devices, offer great advantages in terms of durability and energy capacity. However, their use involves significant risks. In the event of damage, overcharging or overheating, fires fuelled by exothermic chemical reactions can occur.

A critical phenomenon is thermal runaway, a process that generates extremely high temperatures and causes the rapid spread of fire between battery cells. These events, which are difficult to control with traditional extinguishing methods, can release toxic gases and cause devastating damage.

The Lith-M Green Wave and Lith-M fire extinguisher range, Fire Isolator devices, CEMO containment solutions and PENTA protection systems represent EMME's integrated response to effectively prevent and manage the risks associated with lithium batteries.

Designed with effectiveness and sustainability in mind, these solutions offer comprehensive protection for people, structures and the environment, responding promptly even to the most critical situations.



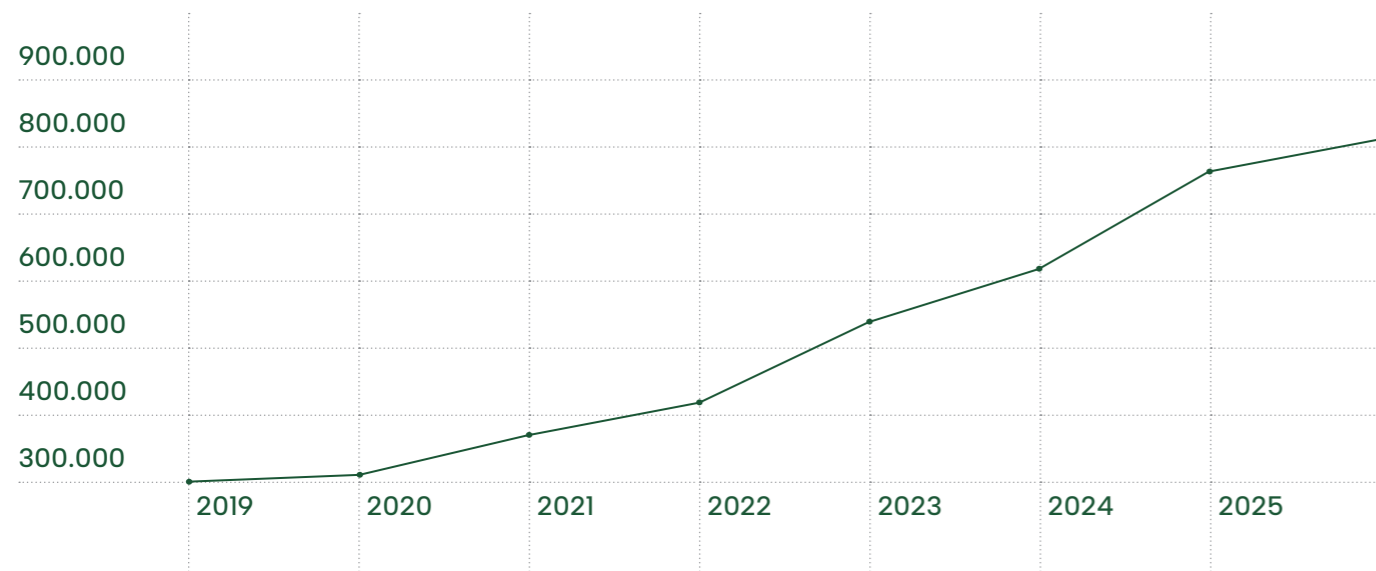
# Safety in electric vehicles and devices: a growing priority.

The use of electric devices and vehicles is growing exponentially, and the associated risk factors are still often underestimated. For example, electric operational vehicles are becoming increasingly common in industry. However, this growing adoption of electric technologies

brings new risks related to lithium battery safety. Proper management of these risks is essential to ensure worker safety and protect facilities and equipment.

## Increase in electric vehicle and equipment sales 2019–2025

Sources: Motus-E, Legambiente, AISEM, ASSTRA



## Applications:



Companies and warehouses



Commercial buildings and offices



Public transport and mobility



Manufacturing industries



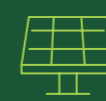
Marine sector



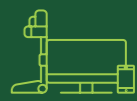
Car parks and garages



Data centers and critical infrastructure



Photovoltaic systems and home automation



Consumer electronic devices

## Standards and regulations: how fire safety in the electric sector is changing.

New European regulations are reshaping the fire safety sector, introducing stricter standards for protection against lithium batteries and for the use of extinguishing agents.

Complying with these regulations means not only meeting legal requirements, but also anticipating market needs and ensuring safer, more sustainable solutions.

### Italian Fire Brigade Circular No. 2/2018 Guidelines for charging stations

#### What does it require?

Use of suitable fire extinguishers to extinguish fires caused by electrical faults.

Installation of emergency disconnect devices.

Although excluded from inspections under Presidential Decree 151/2011, charging stations located within activities subject to fire safety supervision must be declared when compliance is renewed.

**Relying on EMME Antincendio means choosing the most suitable device,** compliant with regulations and capable of ensuring rapid and effective intervention in case of emergency.



## Fire Risk Management for Lithium Batteries: prevention and operational solutions

Customizable learning program on fire prevention, risk analysis, and understanding of new fire protection solutions. The course combines theory, risk scenario analysis, and practical applications to identify effective procedures and fire protection measures. The training can be tailored with a technical, technical-practical, or technical-commercial focus to develop operational skills and enhance the presentation of solutions to clients.

### Why did we develop this learning program?

We developed this learning program because managing risks related to lithium batteries requires practical and concrete guidance that can be applied in real working environments.

For this reason, the program is modular and can be tailored according to sectors, participants, and objectives.

The objective is to help understand real scenarios and risks, identify the most common operational criticalities, and learn how to prevent them effectively.

At the same time, the program helps participants navigate the available solutions, understand which ones to adopt, how to use them correctly, and which mistakes or misconceptions to avoid.

An important part is also dedicated to the technical-commercial approach, aimed at improving the ability to identify opportunities, understand customer needs, and translate them into clear and consistent proposals.

A practical and hands-on program designed to combine technical expertise with strong consultative and sales capabilities.

### Who is this course designed for

Fire safety professionals

Fire safety consultants

Heads of Prevention and Protection Services

HSE: Health, Safety & Environment

Sales directors and sales teams

Fire safety personnel across all industries

Automotive sector operators (workshops, body shops, roadside assistance)



# Our integrated solutions for advanced safety.



## Sustainable Fire Extinguisher Range

Exclusive to **EMME Antincendio**

Fire extinguishers specifically designed for lithium batteries use special extinguishing agents, such as fluorine-free foams, designed to put out fires caused by lithium-ion batteries. These fire extinguishers are used in both industrial and domestic settings.



## Fire Blankets

Exclusive to **EMME Antincendio**

Fire Isolator rapidly contains lithium battery fires thanks to insulating materials that reduce oxygen. The fire blanket limits fire spread, the aerosol interrupts combustion, and the Water Mist lance cools and reduces smoke. Ideal for industrial environments.



## Battery storage and charging cabinets

Exclusive to **EMME Antincendio**

CEMO is among the first in Europe to systematically analyse lithium battery behaviour during charging and storage, designing cabinets to contain the risk. The Safe LOCEX range was also tested on real batteries and follows German guidelines for storage.



## Electrical safety PPE

Exclusive to **EMME Antincendio**

PENTA ESP, a global leader in electrical safety, with thousands of products and years of research and development. It designs complete solutions for individual and collective protection, tools and extractors for work on hybrid and electric vehicles. It participates in ASTM and IEC committees.



# Lith-M Green Wave and Lith-M: EMME's answer to lithium battery fires.

Portable and wheeled units, with high performance and sustainable foam.

Starting in 2025, the European Union bans the use of extinguishing agents containing fluorinated compounds such as PFOS, PFAS and PFOA, to reduce environmental impact and protect public health.

Our models anticipate this change:

both use fluorine free foam concentrates, completely free of PFOS, PFAS and PFOA.

These innovative solutions deliver high performance in extinguishing fires involving solid materials, flammable liquids, cooking oils and lithium batteries, while also offering a concrete choice of environmental responsibility and future regulatory compliance.



# Green Wave

Certified fire extinguishers

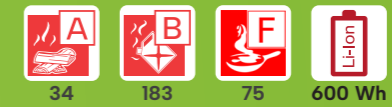


Tested safety,  
certified  
reliability.



Safety is not improvised.  
For this reason, EMME subjects its fire extinguishers to the most rigorous European tests, obtaining certifications that guarantee effectiveness in real situations. The Lith M Green Wave GW9A and GW9P fire extinguishers **comply with the NTA 8133:2021+A1:2025** standard, a benchmark for extinguisher performance in lithium battery fire scenarios.

## Green Wave GW9P 22093-700L 9 Litres



High strength steel cylinder, deep drawn and powder coated

Extinguishing agent: fluorine free water based foam

M30x1.5 valve

Reinforced rubber hose



## Green Wave GW9A 32093-700L 9 Litres



High strength steel cylinder, deep drawn and powder coated

Extinguishing agent: fluorine free water based foam

M74x2 valve

Reinforced rubber hose

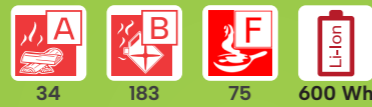


# Green Wave

Certified fire extinguishers



## Green Wave GW9A 32093-701L



9 Litres

High strength steel cylinder, deep drawn and powder coated

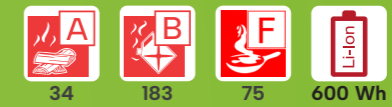
Extinguishing agent: fluorine free water based foam

M74x2 valve

Reinforced rubber hose



## Green Wave GW9AI 32093-711L



9 Litres

High strength steel cylinder, deep drawn and powder coated

Extinguishing agent: water plus fluorine free foaming additive with CEMO floating system

M74x2 valve

Reinforced rubber hose



## Green Wave GW9AI 32093-710L



9 Litres

High strength steel cylinder, deep drawn and powder coated

Extinguishing agent: water plus fluorine free foaming additive with CEMO floating system

M74x2 valve

Reinforced rubber hose



# Green Wave

Certified extinguishing agent



## Green Wave GW2P 22020-700L 2 Litres



High strength steel cylinder, deep drawn and powder coated

Extinguishing agent: fluorine free water based foam

M30x1.5 valve with ergonomic handle

Nozzle integrated in the valve



## Green Wave GW6P 22066-700L 6 Litres



High strength steel cylinder, deep drawn and powder coated

Extinguishing agent: fluorine free water based foam

M30x1.5 valve

Reinforced rubber hose



## Green Wave GW3P 22031-703L 3 Litres



High strength steel cylinder, deep drawn and powder coated

Extinguishing agent: fluorine free water based foam

M30x1.5 valve with ergonomic handle

Nozzle integrated in the valve



## Green Wave GW6P 22066-710L 6 Litres



Stainless steel cylinder, deep drawn and powder coated

Extinguishing agent: fluorine free water based foam

M30x1.5 valve

Reinforced rubber hose



# Green Wave

Certified extinguishing agent



## Green Wave GW6A 32066-700L 6 Litres



High strength steel cylinder, deep drawn and powder coated

Extinguishing agent: fluorine free water based foam

M74x2 valve

Reinforced rubber hose



## Green Wave GW6AI 32066-710L 6 Litres



High strength steel cylinder, deep drawn and powder coated

Extinguishing agent:

water plus fluorine free foaming additive with floating system

M74x2 valve

Reinforced rubber hose



## Green Wave GW6A 32066-701L 6 Litres



High strength steel cylinder, deep drawn and powder coated

Extinguishing agent: fluorine free water based foam

M74x2 valve

Reinforced rubber hose



## Green Wave GW6AI 32066-711L 6 Litres



High strength steel cylinder, deep drawn and powder coated

Extinguishing agent:

water plus fluorine free foaming additive with floating system

M74x2 valve

Reinforced rubber hose

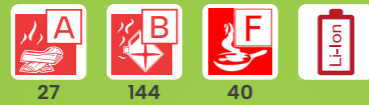


# Green Wave

Certified extinguishing agent



## Green Wave 32066-720L 6 Litres



AISI 304 stainless steel cylinder. Sandblasted and powder coated.

Extinguishing agent:

100% Green Wave premix, fluorine free, water based foam.

M74x2 valve

Discharge hose complete with nozzle



## Green Wave 32066-721L 6 Litres



AISI 304 stainless steel cylinder. Sandblasted and powder coated.

Extinguishing agent: 100% Green Wave premix, fluorine free, water based foam.

M74x2 valve

Discharge hose complete with nozzle



## Green Wave 32066-730L 6 Litres



High strength steel alloy cylinder. Deep drawn, with clip, powder coated

Extinguishing agent: water plus fluorine free foaming additive in cartridge

M74x2 valve

Discharge hose complete with nozzle



WITH FLOATING

## Green Wave 32066-731L 6 Litres



High strength steel alloy cylinder. Deep drawn, with clip, powder coated

Extinguishing agent: water plus fluorine free foaming additive in cartridge

M74x2 valve

Discharge hose complete with nozzle



WITH FLOATING

# Green Wave

Certified extinguishing agent



## Green Wave GW25P 19258-400L 25 Litres



INOX



AISI 304 stainless steel cylinder. Sandblasted and powder coated.

Extinguishing agent: fluorine free water based foam

High strength rubber hose

High density, heavy duty rubber wheels



## Green Wave GW100P 19118-400L 100 Litres



INOX



AISI 304 stainless steel cylinder. Sandblasted and powder coated.

Extinguishing agent: fluorine free water based foam

High strength rubber hose

High density, heavy duty rubber wheels



## Green Wave GW50P 19508-400L 50 Litres



INOX



AISI 304 stainless steel cylinder. Sandblasted and powder coated.

Extinguishing agent: fluorine free water based foam

High strength rubber hose

High density, heavy duty rubber wheels



# Green Wave

Certified extinguishing agent



## Green Wave GW25A 19258-701L 25 Litres



INOX



AISI 304 stainless steel cylinder. Sandblasted and powder coated.

Extinguishing agent: fluorine free water based foam

High strength rubber hose

High density, heavy duty rubber wheels

External nitrogen cylinder



## Green Wave GW100A 19118-701L 100 Litres



INOX



AISI 304 stainless steel cylinder. Sandblasted and powder coated.

Extinguishing agent: fluorine free water based foam

High strength rubber hose

High density, heavy duty rubber wheels

External nitrogen cylinder



## Green Wave GW50A 19508-701L 50 Litres



INOX



AISI 304 stainless steel cylinder. Sandblasted and powder coated.

Extinguishing agent: fluorine free water based foam

High strength rubber hose

High density, heavy duty rubber wheels

External nitrogen cylinder



## Green Wave GW150A 19158-701L 150 Litres



INOX



AISI 304 stainless steel cylinder. Sandblasted and powder coated.

Extinguishing agent: fluorine free water based foam

High strength rubber hose

High density, heavy duty rubber wheels

External nitrogen cylinder



# Safety tested without PFAS up to 750 Wh

Lith-M FX fire extinguishers are PFAS-free and use a special, completely fluorine-free foaming agent. On EMME's initiative, they have undergone additional, non-mandatory testing to verify their effectiveness in extinguishing fires on lithium batteries up to 750 Wh.



# Lith-M FX

## Tested fire extinguisher

Tested on lithium batteries with a capacity of 750 Wh

750Wh



### 22066-945 Lith-M 6 Litres



INOX



Extinguishing agent:	Lith-M FX foam
Propellant:	Dehumidified air or Nitrogen (N <sub>2</sub> ), 15 Bar at 20°C
Operating temperature:	+5°C / +60°C
Total weight:	approx. 9.1 kg
Dimensions:	H 530 (+/- 5 mm) diameter 160 (+/- 2 mm)
Discharge time:	approx. 49.7 seconds
Tested on lithium batteries with a capacity of	<b>36 V   750 Wh   20,1 Ah</b>



### 22066-915 Lith-M 6 Litres



Extinguishing agent:	Lith-M FX foam
Propellant:	Dehumidified air or Nitrogen (N <sub>2</sub> ), 15 Bar at 20°C
Operating temperature:	+5°C / +60°C
Total weight:	approx. 10.0 kg
Dimensions:	H 540 (+/- 5 mm) diameter 160 (+/- 2 mm)
Discharge time:	approx. 49.7 seconds
Tested on lithium batteries with a capacity of	<b>36 V   750 Wh   20,1 Ah</b>



# Accessories

## 0875 DK

Fire cabinet and PPE storage with door for breakable panel

Dimensions  
550 W x 255 D x 682 H mm

## 9464-1

Breakable panel not included

Dimensions  
337 W x 532 H mm



## 1325

Fire cabinet and PPE storage with door for breakable panel

Dimensions  
1075 W x 500 D x 1850 H mm

## Panel

Breakable panel included

Dimensions  
295 W x 1500 H mm



## 0873 DK

Fire cabinet and PPE storage with solid door

Dimensions  
590 W x 320 D x 650 H mm



## 0925 DK

Box cabinet with door and inspection window

Dimensions  
325 W x 200 D x 602 H mm

Painted steel

Suitable for 6 kg

## 0927 DK

Box cabinet with door and inspection window

Dimensions  
325 W x 250 D x 802 H mm

Painted steel

Suitable for 5 - 9 - 12 kg

## 9194

Transparent breakable panel included

Dimensions  
179 W x 179 H mm



## 0872 DK

Fire cabinet and PPE storage with doors for breakable panels

Dimensions  
1000 W x 400 D x 950 H mm

## 3051-1

Breakable panels not included

Dimensions  
300 W x 780 H mm



## 0917 DK

Painted steel box cabinet RAL 3000 with solid door

Dimensions  
375 W x 200 D x 602 H mm



# Accessories

## CAR1029 Signage plate

Aluminium, specifically for marking fire extinguishers suitable for lithium battery fire hazards

Dimensions	H 230x310mm
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## 1862-81 Base

Provision for hose support bracket

Material:	Plastic
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## 0401 V Protective cover for portable fire extinguishers

Material:	PVC
Colour:	Green

## 1795V Protective cover for 50 litre wheeled fire extinguisher



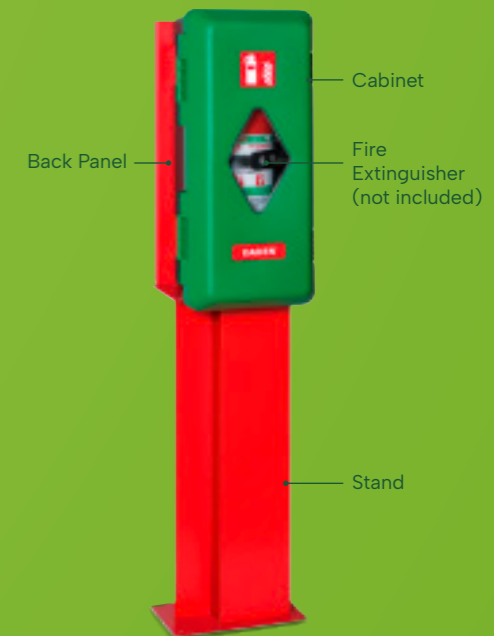
## 2295 Fire extinguisher box

Material:	Polypropylene
Closure:	Double flap with reinforced fixing points
Dimensions:	H 310x247x671 mm
TÜV Rheinland certified:	Water and dust tightness
	Resistance to hydrocarbons, oils and lubricants
	Accelerated ageing
	Compression resistance
	Flammability



## Metal post with metal backplate support for installing fire extinguisher boxes

Post:	0950DK, 0953DK (stainless steel)
Backplate:	0950DK-6
Compatible with:	2295, 1668, 1669
Material:	Fe360, thickness 3 mm
Coating:	powder coating, RAL 3000
Supplied complete with two "Viteria" kits (2 units) for installation on the post	
Weight:	approx. 5.0 kg (including fasteners)
Dimensions:	298 x 273 x 6 (h) mm
Colour:	RAL 3000



# Accessories

## 1999-21

Plastic post complete with fillable base for ballast.

Dimensions Diameter 9,4 mm - height 90 cm

Each kit includes 6 pieces



## 1999-11

Double sided generic hazard A frame sign in 3 mm expanded PVC with writable area

Dimensions 333 x 500 mm



## 1999-22

Yellow Black PVC chain

Dimensions 5.5 x 24 x 40 cm

25 m pack



## The first complete system for managing lithium battery fires.

Fire Isolator is an integrated solution for managing the fire risk caused by lithium batteries, developed to respond to the growing spread of electric vehicles and devices. It combines products, technologies and procedures to safely contain and isolate thermal runaway fires, protecting operators, environments and facilities.

### The system



### How it works



①

#### Fire blankets

The fire blanket is spread over the vehicle to smother and contain the flames, removing oxygen and preventing the fire from spreading.



②

#### Aerosol Unit

An aerosol unit is used, which acts through chemical inhibition on the fire.



③

#### Water Mist Lance Set

The lance is used to cool the battery pack, and is also effective in limiting smoke, enabling a rapid response even when toxic fumes are released from the battery.



Watch Fire Isolator in action with a test on an electric vehicle.

# Fire Blankets

## 2930-86UT Professional Use

Up to  
1700°C

High resistance fire blanket coated with silicone, specifically designed for vehicles with lithium batteries and reusable. Designed for professional use, it is ideal for emergency response in industrial and logistics environments. By using this blanket, the fire is isolated, preventing the spread of the fire and avoiding collateral damage.



Very high silica content

Can withstand temperatures up to 1200°C for over 50 hours

Resistance up to 1700°C

Tested according to standards ISO EN 13501-1 and ASTM D6413

Size 800 x 600 cm

Reusable up to 30 times



## 2930-96 900x600 cm

Up to  
1600°C

## 2930-77 700x700 cm

## 2930-33 300x300 cm

## 2930-22 200x200 cm

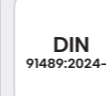
These fire blankets can be used on battery packs, scooters and bikes, operational vehicles, and cars. By using this blanket, the fire is isolated, preventing the spread of the fire and avoiding collateral damage.

Silica based materials

Can withstand temperatures up to 1200°C for over 50 hours

Resistance up to 1600°C

Reusable up to 7 times



# Fire Blankets

## 2930-86EC

Up to 1100°C

The most accessible fire blanket in the Fire Isolator range. Its breathable structure prevents gas build up under the blanket, increasing the effectiveness of the intervention. Suitable for any environment and for all types of vehicles.



Very high silica content

Can withstand temperatures up to 800°C for over 50 hours

Resistance up to 1100°C

Tested according to standards ISO EN 13501-1 and ASTM D6413

Size 800 x 600 cm

Reusable up to 3 times



# Aerosol Unit

## 2931-60

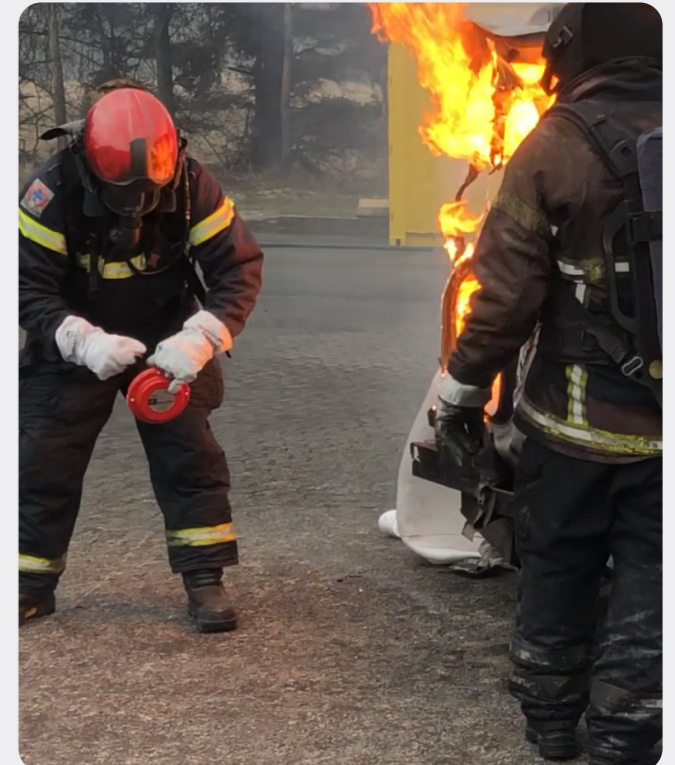
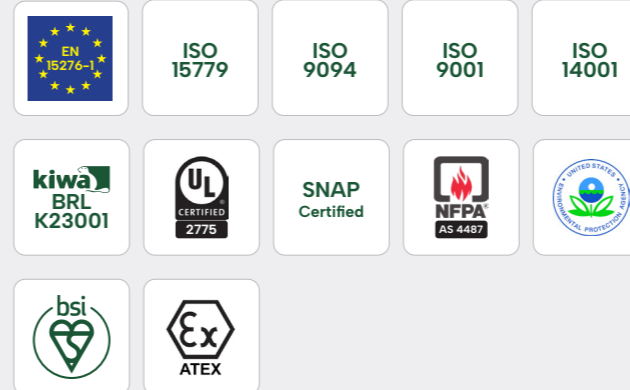
Lightweight and portable devices containing potassium nitrate, which release solid particles suspended in a gas. Through a chemical reaction, these particles interfere with the combustion process and interrupt it, helping to control the fire.



Store at temperatures between 5°C and 40°C

Volumetric coverage up to 45 m³

Harmless to humans and animals



# Accessories

## 2931-40 Water Mist Lance

The water mist lance produces a fine water fog. Used over the deployed fire blanket, it helps to cool the vehicle further.

- Stainless steel
- Adjustable length from 50 cm to 135 cm
- PE coating to prevent electric shocks
- Average flow 90 l/min at 8 bar
- Can withstand temperatures up to 1200°C for over 50 hours



## 2931-41 Water Mist Lance Firegun

A water mist lance designed for drilling into the battery pack of electric vehicles and flooding it with water.

- Stainless steel
- Length 100 cm
- Drill and adapter included
- Average flow 40 l/min at 2 bar



## 2931-90 Thermal camera

Portable, lightweight thermal camera. Designed to quickly detect thermal variations. With 3 display modes, it provides an accurate and intuitive analysis of risk areas. It is an essential tool to assess in real time whether additional interventions are needed during a lithium battery fire.

- Measurement range: -20°C to 1000°C
- Image modes: thermal, visual, fusion
- Screen size: 2.4 inch IPS (480 × 320)
- IR resolution: 32 × 32
- Temperature alarm: icon
- PC software analysis
- Weight: 0.8 kg
- Sensitivity: 0.15°C
- Image memory: 2 GB
- Protection rating: IP54
- Warranty: 1 year
- Digital camera resolution: 300,000 pixels
- Long battery life: more than 7 hours
- LED light for target focus
- High/low temperature monitoring
- High/low temperature alarm
- PC analysis software



# Accessories

## 2931-70

### Water Mist Applicator 26

Compact and lightweight mist lance (only 9.5 kg), designed to deal with electric vehicle fires in confined spaces such as underground car parks or ferries.

Thanks to its 26 full cone mist nozzles, it delivers a fine water fog that rapidly cools the vehicle and protects operators from heat, helping manage the emergency before deploying the fire blanket.

An effective solution, with a flow rate up to 250 l/min and a jet reach up to 4 metres, extendable and easy to connect to cover wider areas.



Aluminium
Length 264 cm
26 nozzles
Flow up to 250 l/min at 8 bar
Storz 65 swivel coupling for hydrant column

## 2931-71

### Water Mist Applicator 126

Mobile mist applicator designed to tackle electric vehicle fires, especially in hard to reach areas such as the underbody.

Compact and lightweight (only 8 kg), it can be easily handled by a single operator and placed under the vehicle to cool the battery quickly.

Made of aluminium, equipped with 26 full cone nozzles, and at 4 bar pressure it delivers over 137 litres per minute of water mist, limiting heat spread and improving intervention safety



Aluminium
Dimensions 80 × 50 × 10 cm
26 nozzles
Flow up to 198 l/min at 10 bar
OneStorz C02.4 connector, 4 brass guide rings Ø60

# Accessories

## 2931-72

### Water Mist Applicator 138

Compact, lightweight and easy to handle solution (only 10 kg) for suppressing vehicle fires, especially electric vehicles.

An evolution of model 126, it is longer and even more effective for cooling the underside of the vehicle, thanks to 38 full cone nozzles and a minimum flow rate of 200 litres per minute at 4 bar.

Made of aluminium, it features a non conductive pivoting handle, four brass guide rings and a Storz C02 coupling. Perfect for a rapid intervention by a single operator.



Aluminium
Dimensions 17.8 x 57 x 10 cm
38 nozzles
Flow up to 280 l/min at 10 bar
Storz C 2 connector

## 2931-73

### Water Mist Applicator 241

Mobile water mist applicator.

This is the upgraded version of the previous models and allows almost the entire underside of the vehicle to be cooled, thanks to its extended design and 41 mist nozzles.

With a weight of 30 kg, it can be positioned under the vehicle or alongside it, ensuring effective cooling with a minimum flow rate of 215 litres per minute at 4 bar. Built in aluminium, it includes a Storz C 2 connector and an insulated non conductive handle.



Aluminium
Dimensions 450 x 90 x 10 cm
41 nozzles
Flow up to 312 l/min at 10 bar
Storz C 2 connector and insulated handle

# Supplementary solutions

## 2931-50

Insulated fire axe

Weight: 2.6 kg
90 cm handle
Steel blade
Fibreglass handle with anti corrosive coating
Insulation up to 2 kV or 12 kV DC



## 2931-20

Outdoor vertical cabinet with containment panel for storing the blanket and accessories

Dimensions: 120 x 42 x 35 cm
Weight: 16 kg
Material: 0.8 mm steel
Shatterproof glass



## 2931-30

Wheeled trolley for transporting blankets

Dimensions: 105 x 45 x 25 cm
PVC coating on both sides.



## 2931-10

Horizontal storage box for blanket and accessories for marine use

Dimensions: 45 x 50 cm
Material: 0.8 mm steel



# Pre assembled kits







## Marine Kit



The Fire Isolator Marine Kit, distributed by EMME Antincendio, is the ideal solution for fire protection on ships, ferries and cargo vessels. This kit includes everything needed to manage fire safety on board, reducing risks for the vessel's structure and crew.

The Fire Isolator system enables rapid isolation of a vehicle on fire, limiting fire spread and the release of toxic fumes, ensuring maximum protection even in the most extreme conditions.

### Kit components

<p>1</p>  <p><b>2931-10</b> Horizontal box for marine use to store the blanket and accessories.</p>	<p>2</p>  <p><b>2930-96</b> Fire blanket for lithium battery fire risk.</p>	<p>3</p>  <p><b>2931-60</b> Aerosol set with case (2 pieces)</p>
<p>4</p>  <p><b>2931-40</b> Water Mist Lance Set (insulated 1000 V)</p>	<p>5</p>  <p><b>2931-50</b> Insulated fire axe</p>	<p>6</p>  <p><b>2931-30</b> Trolley for transporting blankets</p>







## Land Kit



The Fire Isolator Land Kit, distributed by EMME Antincendio, is designed for use in car parks, charging stations, workshops and civil environments where the risk of electric vehicle fires is high. This complete kit includes all the components needed to quickly isolate and contain flames, limiting damage to surrounding

areas and protecting people. Thanks to the combined use of fire blankets and the innovative aerosol fire suppression unit, the Fire Isolator system provides an effective solution for managing critical fire incidents in both civil and industrial settings.

### Kit components

<p>1</p>  <p><b>2931-20</b> Vertical box for marine use to store the blanket and accessories</p>	<p>2</p>  <p><b>2930-96</b> Fire blanket for lithium battery fire risk</p>	<p>3</p>  <p><b>2931-60</b> Aerosol set with case (2 pieces)</p>
<p>4</p>  <p><b>2931-40</b> Water Mist Lance Set (insulated 1000 V)</p>	<p>5</p>  <p><b>2931-50</b> Insulated fire axe</p>	<p>6</p>  <p><b>2931-30</b> Trolley for transporting blankets</p>

# Certifications



## British Standards Institution (BSI)

Compliance certification to British quality and safety standards. This certification ensures that products have undergone rigorous testing to guarantee reliability and performance, in line with international regulations.



## American Bureau of Shipping (ABS)

Recognised by a leading body in the maritime and offshore sector. The certification ensures that products meet the quality and safety standards required for use in maritime environments and vessels.



## Kiwa

European certification confirming compliance with strict quality and sustainability requirements. Kiwa specialises in the verification of products, processes and systems, helping to ensure safety and reliability.



## American Society for Testing and Materials (ASTM)

Certification indicating compliance with the rigorous ASTM testing standards for materials. This guarantees high quality and optimal product performance.

## DIN 91489:2024-11

### European standard for fire blankets

DIN 91489 certification confirms that EMME fire blankets meet the strict safety and effectiveness requirements in fire suppression, in accordance with German regulations. The recognition ensures high performance and reliability for professional and industrial use.



### Approval according to the American standard

The Ultimate Blanket fire blanket complies with NFPA 701, the American standard used as a benchmark for fire resistance testing of textiles. The certification confirms the product is suitable for use in critical contexts such as industrial environments, workshops and areas with a high electrical risk.





for safe storage

Exclusive to **EMME Antincendio**

# Certified safety containers for lithium battery risk.

CEMO is among the pioneers in Europe in studying risks related to lithium batteries and in designing safety cabinets for their storage.

The Safe LockEX line, developed on real tests and in line with German guidelines, meets the growing need for protection in environments such as warehouses, workshops and technical departments, where lithium batteries represent a high risk of fire and ignition.

## Plus



Ability to contain the fire inside the cabinet



Ability to contain a possible explosion inside the cabinet



Limitation of the energy load per single level



Safe LockEX system for controlled management of overpressure



Controlled ventilation with automatic shut off



Smoke and temperature monitoring with remote alarm option



Internal power outlets active when doors are open or closed



Option to integrate a fire detection system

## Note



In the absence of a unified European regulation, responsibility for risk management remains with the employer, who must adopt preventive measures and certified solutions.

## VDMA 24994 guideline Test methods and harmonised criteria for cabinet certification

### What does it require?

Testing with real batteries

Assessment of gas management released during critical events

A classification based not only on resistance to external fire, but also on the amount of energy that can be safely stored at each cabinet level

# Containment and storage

The Li Safe LockEX® Premium Plus range, certified according to VDMA 24994 in class I Q 30, offers 30 minutes of fire resistance from the outside and 60 minutes from the inside, certified internal protection and precise control of the energy load per level, in order to effectively contain risk in the event of a critical incident.

## 6232-11

Storage and charging cabinet for lithium batteries, LockEX® Premium Plus model 8/5, 230V single phase, with feet.

External dimensions: 88 L x 62 H x 66 W cm

Internal dimensions: 73 L x 53 H x 45 W cm

Weight: 89 kg

Shelf load capacity: 30 kg per shelf



## 6232-22

Storage and charging cabinet for lithium batteries, LockEX® Premium Plus model 8/10, 400V three phase, with feet.

External dimensions: 88 L x 111 H x 66 W cm

Internal dimensions: 73 L x 88 H x 53 W cm

Weight: 146 kg

Shelf load capacity: 30 kg per shelf



## 6232-21

Storage and charging cabinet for lithium batteries, LockEX® Premium Plus model 8/10, 230V single phase, with feet.

External dimensions: 88 L x 111 H x 66 W cm

Internal dimensions: 73 L x 88 H x 53 W cm

Weight: 145 kg

Shelf load capacity: 30 kg per shelf

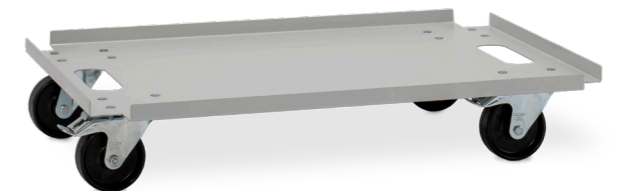


## 6232-51

Platform kit with wheels for 8/5 and 8/10 cabinets.

External dimensions: 79 L x 15 H x 59 W cm

Weight: 11.5 kg



# Containment and storage

## 6235-1

Portable container for transporting and storing mixed lithium batteries. Small, Li Safe 2 S, includes 2 pads.

External dimensions: 40 L x 30 H x 21.5 W cm
Internal dimensions: 30 L x 19 H x 9 W cm
Weight: 4.5 kg
Maximum total weight allowed: 10 kg



## 6235-3

Portable container for transporting and storing mixed lithium batteries. Large, Li Safe 2 L, includes 4 pads.

External dimensions: 50 L x 30 H x 28 W cm
Internal dimensions: 40 L x 17 H x 15 W cm
Weight: 6.7 kg
Maximum total weight allowed: 12 kg



## 6235-2

Portable container for transporting and storing mixed lithium batteries. Medium, Li Safe 3 S, includes 3 pads.

External dimensions: 40 L x 30 H x 34 W cm
Internal dimensions: 30 L x 21.5 H x 9 W cm
Weight: 5.5 kg
Maximum total weight allowed: 12 kg



## 6235-41

Mounting plate for shelving or vans for Li Safe line containers.

Dimensions: 39.5 L x 2 H x 29 W cm
Weight: 0.46 kg



# Containment and storage

## 6237-1

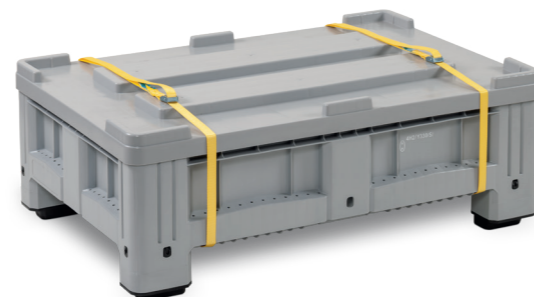
Pallet container for transporting and storing lithium batteries, small.

External dimensions: 120 L x 40 H x 80 W cm

Internal dimensions: 111.5 L x 24.5 H x 71.5 W cm

Weight: 40 kg

Internal volume: 195 L



## 6237-41

Bag of expanded glass granulate (approx. 55 L) for packing the pallet container.

Dimensions: 40 L x 80 H x 15 W cm

Weight: 12.5 kg

Shipping weight: 13 kg

Volume: 55 L



## 6237-2

Pallet container for transporting and storing lithium batteries, large.

External dimensions: 120 L x 76 H x 100 W cm

Internal dimensions: 112 L x 60 H x 92 W cm

Weight: 44 kg

Internal volume: 610 L



## 6237-42

Bag of vermiculite (approx. 50 L) for packing the pallet container.

Dimensions: 38 L x 75 H x 20 W cm

Weight: 4.5 kg

Shipping weight: 9.5 kg

Volume: 50



# Containment and storage

## 6237-51

Inlay bag for small pallet container.

Weight: 0.2 kg

Box dimensions: 23 L x 32 H x 23 W cm

Units per box: 5



## 6237-53

Plastic bag for a single battery.

Weight: 0.2 kg

Dimensions: 40 L x 0,15 H x 50 W cm

Box dimensions: 23 L x 32 H x 23 W cm

Units per box: 5



## 6237-52

Inlay bag for large pallet container.

Weight: 0.2 kg

Box dimensions: 23 L x 32 H x 23 W cm

Units per box: 5



# Technical clothing, PPE and devices for work on lithium batteries.

PENTA ESP is a global leader in electrical safety and develops complete solutions for individual and collective protection, as well as tools and equipment to work safely on hybrid and electric vehicles and on related systems.

With a strong commitment to research and development and an active presence on international standards committees (ASTM, IEC), it contributes to defining industry standards. Through the PROTECT SECURE WORK structure, it ensures an integrated approach to safety across all work phases, from making vehicles safe to live work and maintenance on energized systems.

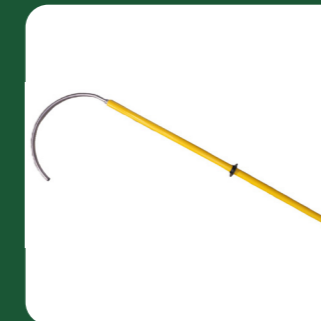


## 3 product families



### PROTECT

Personal protection: head, hands, body, feet, and collective or temporary protection.



### SECURE

Workplace safety.



### WORK

Tools and kits to carry out work safely.

## Electric arc risk

This presentation dedicates several slides to the electric arc generated by short circuits near electrical panels or batteries:

Temperatures that can reach extremely high values

A very intense pressure wave, perceptible even at a distance

Noise levels comparable to or higher than an explosion

Emission of ultraviolet rays and projection of molten metal

Effects on the individual may include first, second and third degree burns, significant damage to tissues and internal organs, as well as mechanical trauma caused by the blast wave and possible falls.

# Equipment and PPE

**5221-1**

PROTECT

Electricians' VSR arc flash helmet, Class 1, with integrated face shield and black hood insert.



**5239-DT**

PROTECT

Glove cleaning spray, 200 ml.



**5231-08**

PROTECT

0-36cm - Size 8

**5231-09**

0-36cm - Size 9

**5231-10**

0-36cm - Size 10

Touch E insulating gloves, Class 0



**5231-VR**

PROTECT

Pneumatic tester for Touch E gloves, with magnet.



# Equipment and PPE

## 5252-M

Size M

PROTECT

## 5252-L

Size L

## 5252-XL

Size XL

Class 1 arc flash protective coat, blue, with reflective bands.



## 5281-39

Size 39

PROTECT

## 5281-40

Size 40

## 5281-43

Size 43

## 5281-41

Size 41

## 5281-44

Size 44

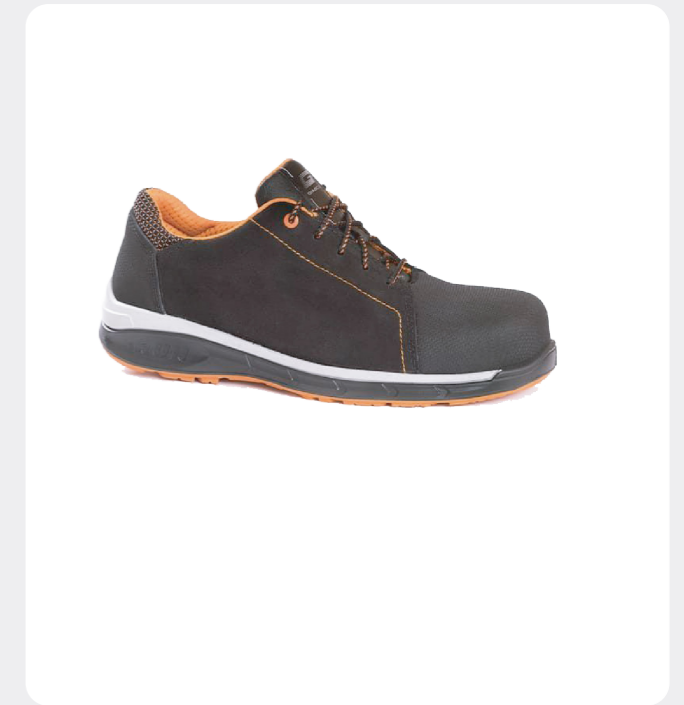
## 5281-42

Size 42

## 5281-45

Size 45

Low dielectric Flow safety shoe.



## 5251-M

Size M

PROTECT

## 5251-L

Size L

## 5251-XL

Size XL

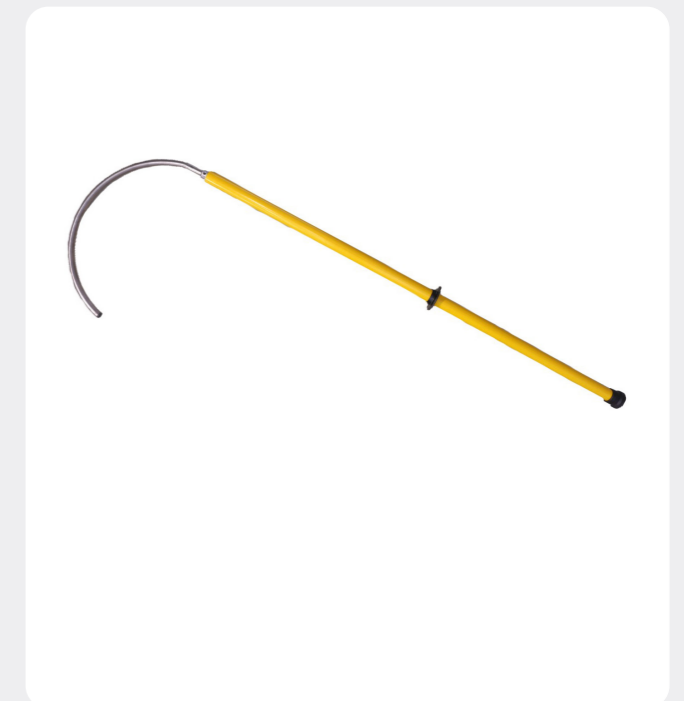
Class 1 arc flash protective coverall, blue, with reflective bands and double zipper.



## 5211-1

Switch disconnecting operating rod, L = 150 cm, with bag

SECURE



# Equipment and PPE

**5212-1**

SECURE

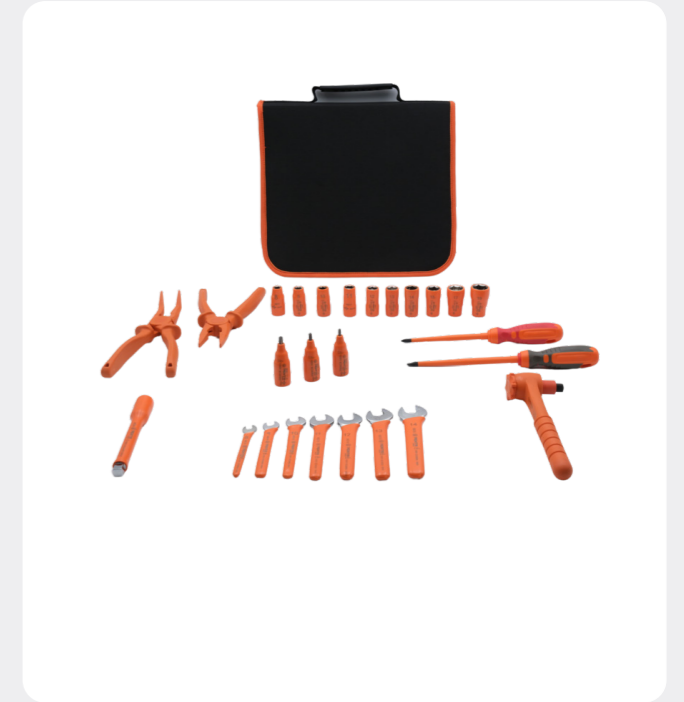
Class 0 insulating mat,  
100x60 cm.



**5213-1**

WORK

26 piece insulated tool kit for  
electric vehicles.



**5210-2**

WORK

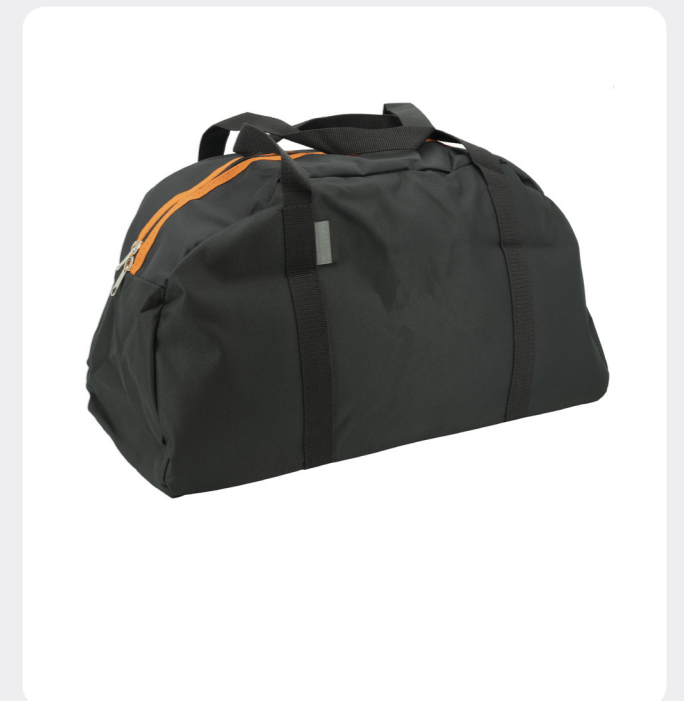
PPE transport bag with  
pockets, 70x38x30 cm.



**5210-1**

WORK

PPE transport bag,  
55x24x32cm.



# Certifications



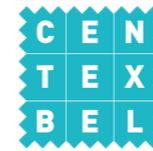
**JFO electrical gloves**  
(CE SATRA certified  
2777/18215-01/E00-00)  
**Category III – EN 60903,**  
**IEC 60903, EN 61482, EN 388**  
Natural rubber insulating  
gloves for live working.  
Certified for electrical  
resistance (Class 0)  
and electric arc protection  
(Class 1), they also offer  
protection against extreme  
cold, ozone and acids.



**Electrical insulation mat**  
(Test Report NTH Chennai  
00251B)  
**Compliant with IEC**  
**61111:2009 – Class 0**  
Insulation mat for electrical  
environments up to 1 kV  
AC, tested for dielectric  
strength, flexibility and  
marking in accordance with  
international standards.  
Certified by the Indian  
government laboratory  
NTH.



**C20B-ISOL safety shoes**  
**Category II**  
**EN ISO 20345:2011**  
**ASTM F2413-11 test**  
**SRC, FO, WRU, CI, E, P**  
Safety footwear for industrial use,  
certified for slip resistance, water  
repellency, cold protection,  
penetration and energy absorption.  
The sole is also tested for electrical  
insulation up to 1,000V, making it  
ideal for high-risk technical and plant  
engineering environments.



**ARCBOUSEII-B-BR protective suit**  
(Centexbel Certificate 033/2022/0658.02)  
**Category III – EN ISO 11611, EN ISO 11612, EN 1149-5,**  
**EN 17353, EN 13034, EN 61482-2**  
Multifunctional garment certified for protection against electric  
arcs, flames, heat, liquid chemicals and electrostatic charges.  
Complies with the most stringent European safety requirements.

**AFPRO-COM9B.G protective suit. Category III – EN**  
**17353, EN 13034, EN 11612, EN 11611,**  
**EN 1149-5, EN 61482-2, EN 13688**  
Multifunctional technical suit designed for high-risk  
environments. Certified for protection against electric  
arcs, flames, heat, liquid chemicals and electrostatic  
charges. Offers improved visibility for moderate-risk  
operational scenarios.



**VISARC VI-FS protective visor**  
(AITEK certificate 25/08107/00/0161/B)  
**EN ISO 16321-1, EN 166, EN 170, GS-ET-29**  
Visor can be mounted on a helmet for protection  
against impacts, UV rays and electric arcs. It offers  
a wide field of vision and operational comfort for  
work involving high visual and electrical risks.

**VISARC VI-BK L insulating helmet**  
(AITEK certificate 25/08046/00/0161/B)  
**EN 397, EN 50365 – Class 2**  
Dielectric helmet designed for protection against  
impacts and electrical risks in low/medium voltage.  
Certified for lateral deformation and protection  
integrated with arc flash visor.

# Before the fire, there is us.

For over fifty years, we have been committed to being your reliable, cutting-edge partner.

Historically recognised as a solid presence in the security sector, EMME Antincendio has been, is and will continue to be the point of reference for all professionals in the security sector.

Thanks to our collaboration with customers and the community, we strive to exceed every expectation; we are committed to being a beacon of innovation in the sector, every project becomes an opportunity to study and introduce new technologies and solutions, anticipating and exceeding emerging needs.

Years of work, commitment, curiosity, research and development have ensured that today EMME stands out in the market for the reliability of those who take care of every detail with expertise, the advice of those who are always at their customers' side, the uniqueness of those who study the best and most cutting-edge solutions, and the sustainability of those who take their commitment to a safer and more ecological future seriously.

These characteristics, combined with an ever-innovative vision, have allowed us to be the first Italian company in the production of fire extinguishers to develop sustainable solutions; our tenacity has allowed us to transform a company with solid Italian origins into an international reality, now present in 43 countries, capable of bringing its quality beyond the borders of the peninsula.



**+23%**  
Average growth over the last 5 years

**750.000+**  
Fire extinguishers produced each year

**12**  
Branches in Italy  
Milan, Turin, Bergamo, Padua, Florence, Arezzo, Rome, Bari, Potenza, Cagliari, Palermo, Syracuse

**13.000mq**  
Total EMME surface area in Italy

**43**  
Countries served worldwide

**80+**  
Employees and collaborators

**200+**  
Certificates obtained in the last 2 years

**24/72h**  
Average order processing time

**2.200**  
People trained each year



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