

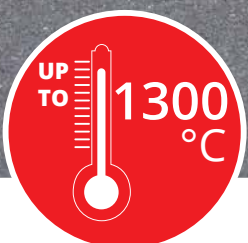
your partner for safety!

E-MOBILITY PROTECTION CONCEPT

FIRE LIMITATION BLANKETS AND
PROTECTION CONCEPTS FOR HV WORKPLACES



Certified according to
DIN SPEC 91489



PREMIUM E-MOBILITY PROTECTION
MADE IN  GERMANY.

E BATTERIES LI-ION AND LIMH

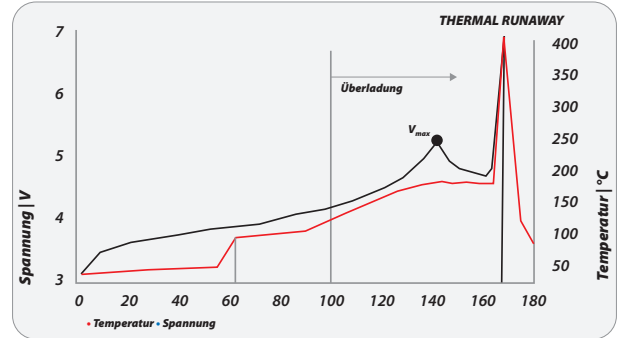
Most electric vehicles use lithium-ion technology (Li-ion) for the battery. The reason is the higher power storage capacity. This is important for electric vehicles, as only a good value enables acceptable ranges in the first place. Li-ion batteries are not only found in electric vehicles, but also in forklifts, electric bikes, laptops, mobile phones and electric tools.

However, the increasingly powerful Li-ion batteries can also be dangerous. Lithium is extremely reactive and highly flammable. There is always a fire risk when an accident occurs - the so-called THERMAL RUNAWAY.

THERMAL RUNAWAY - LI-ION AND LIMH E-BATTERY ACCIDENT

The term thermal runaway describes the destruction process of an Li-ion battery, usually triggered by overheating. The overheating of a single cell is enough to trigger a chain reaction, that also burns the neighbouring cells. The reaction temperature of an Li-ion battery is typically 850 °C.

In addition, this thermal runaway produces toxic gases and individual cells can be explosively destroyed. This leads to widespread spurring flames. Temperatures of 100 to 250 °C are sufficient to initiate such a process, depending on the installed cell.

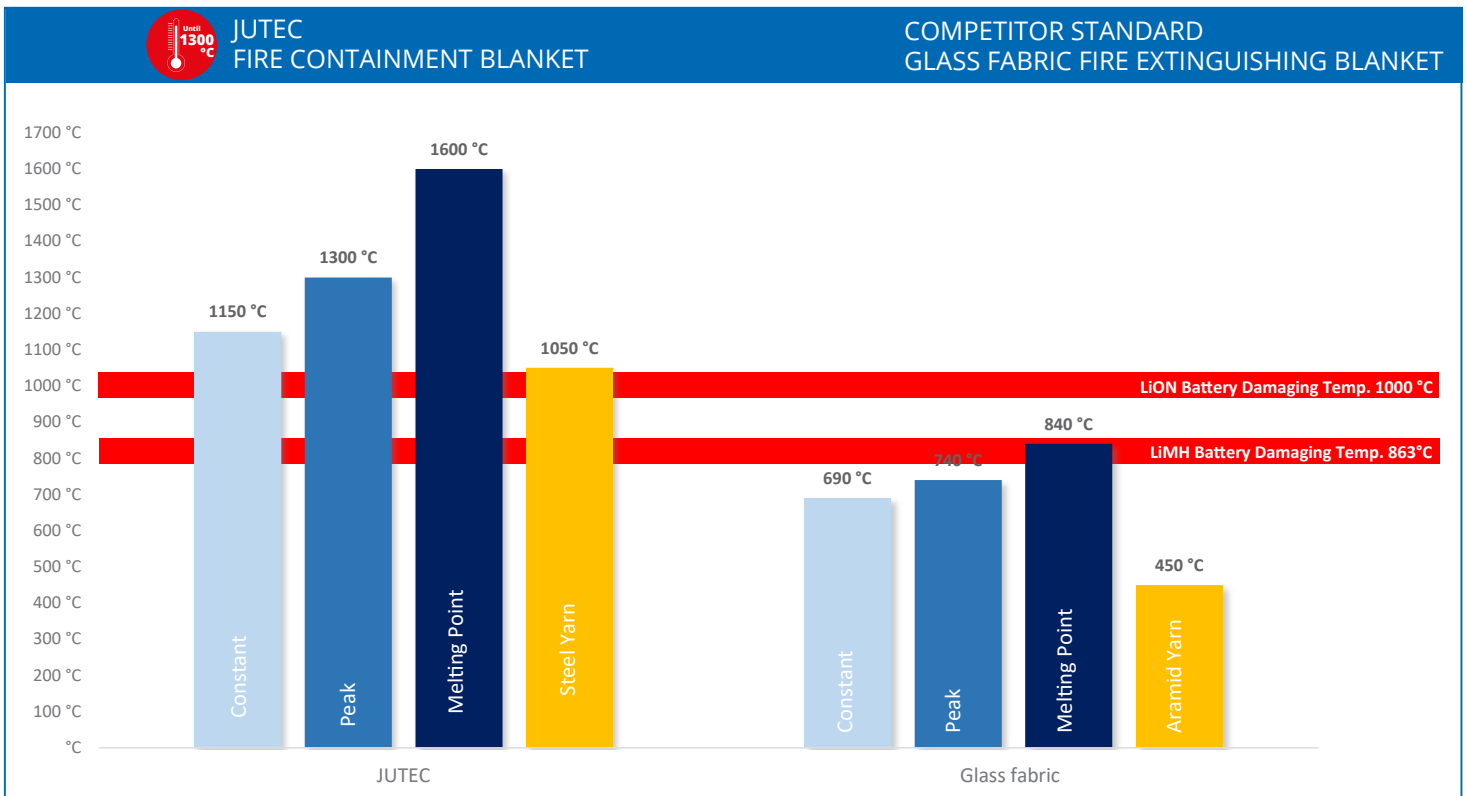


OVERHEATING OF AN LI-ION BATTERY CAN HAVE SEVERAL CAUSES:

- Mechanical stress
- Warming from the outside
- Overheating during charging
- Deep discharge
- Ingress of moisture
- Overcharging

In the event of an accident involving an Li-ion battery with a high energy density, only high-temperature fabrics offer sufficient fire-limiting and heat protection for the best possible extension of the emergency response time.

The comparison shows the temperature values of a high-purity HT special fabric with a mineral coating compared to a widely available glass fabric with a silicone coating. Temperatures above 350°C cause the silicone coating to evaporate. The red bars show typical reaction temperatures for Li-ion fires for classification of an adequate protection concept.





FEATURES OF THE JUTEC FIRE LIMITATION BLANKETS

- Made of special high-temperature fabric classified according to European fire protection test according to DIN EN 13501-1, class A1, non-combustible
- Special coating on both sides
- Electrostatic report according to DIN 54345-1, non-conductive
- Certified according to DIN SPEC 91489 (marked with *)
- GS - tested for safety (marked with *)
- Thermal application up to 1,300 °C, melting point 1,600 °C
- No fiber breakage when exposed to temperature changes, e.g. common with fiberglass blankets
- Open-pored fabric allows the use of extinguishing and sprinkler water (cooling effect)
- Limited gas permeability prevents cover ballooning in the event of an accident
- Outstanding chemical resistance
- Double seam overlap with steel thread processing
- Fabric grammage approx. 625 g/m², thickness approx. 0.7 mm (double fabric thickness available as an option)
- Registered design protected
- Four loops at the corners with special corner reinforcement, allow for easy, safe handling

FIRE CONTAINMENT CONCEPTS AS SOLUTIONS

JUTEC has developed fire protection concepts for a wide variety of Li-ion battery applications:

FIRE LIMITATION BLANKETS

- for damaged electric vehicles

HV BATTERY SAFETY CABINET

- with Fire limitation blanket

WALL CABINET OR CART

- with Fire limitation blanket for damaged electric vehicles





FIRE LIMITATION BLANKETS

The JUTEC Fire limitation blanket made of high-temperature fabrics with a special coating on both sides is flexible. Four loops on the corners with special corner reinforcement allow easy, safe handling. The blankets differ in their size and the different folds for trolleys or bags. The fire limitation blanket (marked with *) are certified according to DIN SPEC 91489:2024 and have been awarded the GS mark. The fabric is classified according to the European fire protection test according to DIN EN 13501-1, non-combustible, A1. In addition, an electrostatic report (non-conductivity) is available. The Fire limitation blankets can be delivered as a set in a rollable trolley, transport bag or wall cabinet.

ITEM DESCRIPTION

Order #	Designation	Blanket Dimensions	Cars
BS-Set-6080-T*	Fire limitation blanket and trolley in a set	6000 x 8000 mm	Audi E-Tron Hyundai Ioniq 5 VW ID.3 Tesla Model 3
BS-Set-6080-B*	Fire limitation blanket and bag in a set	6000 x 8000 mm	Audi E-Tron Hyundai Ioniq 5 VW ID.3 Tesla Model 3
BS-Set-6080-B-S	Fire limitation blanket with surface-mounted cabinet & transport bag	6000 x 8000 mm	Audi E-Tron Hyundai Ioniq 5 VW ID.3 Tesla Model 3
BS-Set-5060-T*	Fire limitation blanket and trolley in a set	5000 x 6000 mm	Smart Opel Corsa-e Mini Renault Zoe
BS-Set-5060-B*	Fire limitation blanket and bag in a set	5000 x 6000 mm	Smart Opel Corsa-e Mini Renault Zoe
BS-Set-3040-T	Fire limitation blanket and trolley in a set	3000 x 4000 mm	
BS-Set-7590-B*	Fire limitation blanket and bag in a set	7500 x 9000 mm	SUV
BS-Set-7590-T*	Fire limitation blanket and trolley in a set	7500 x 9000 mm	SUV

Defective or contaminated blankets can be reordered! Other dimensions available on request at short notice!

FOLDS & SETS:

Fire limitation blanket
B-fold for bag and cabinet



BS-Set-6080-B*
Fire limitation blanket and bag in a set



BS-Set-6080-B-S
Cabinet
1200 x 350 x 350 mm

Fire limitation blanket
T-fold for trolley



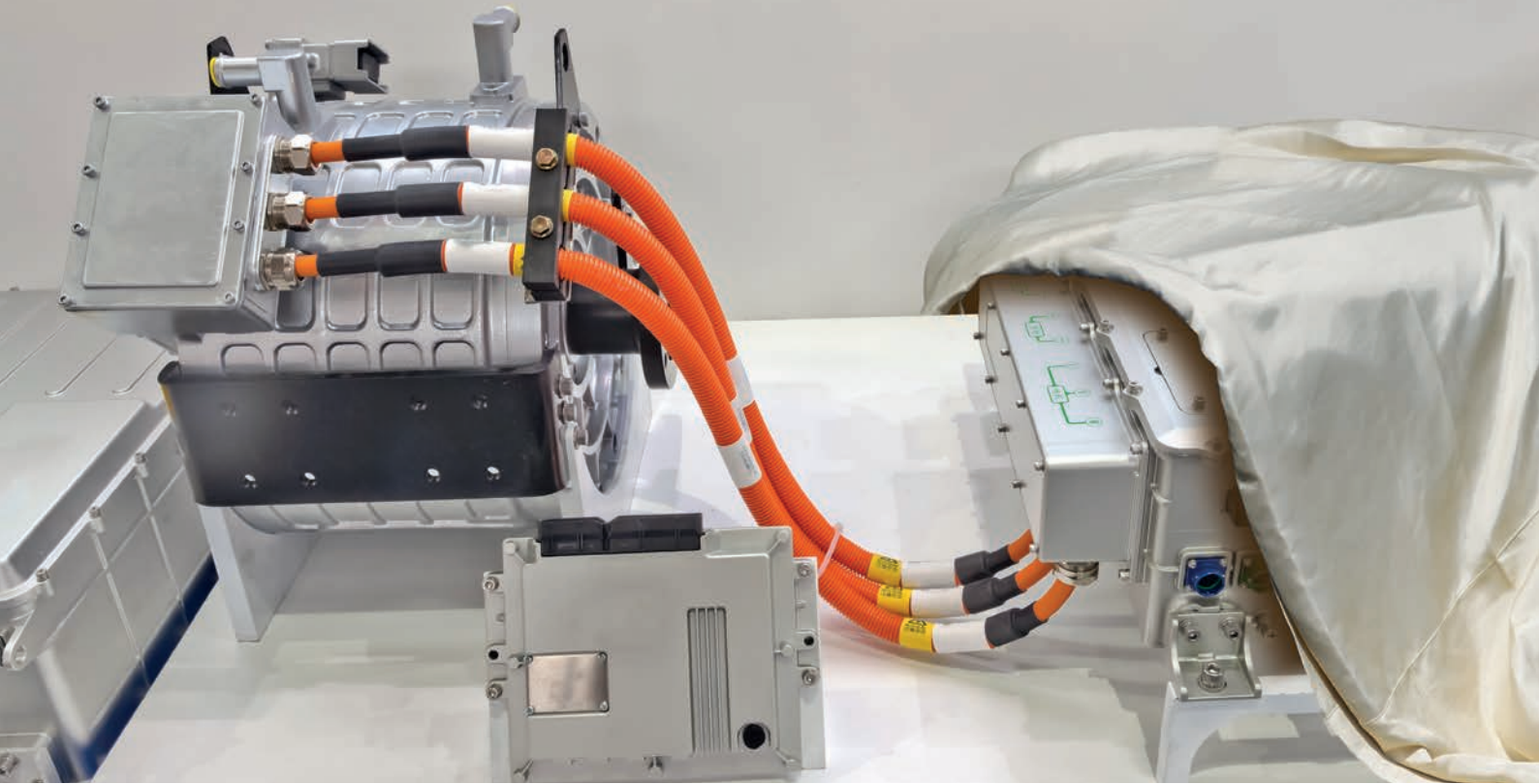
BS-Set-5060-T* | BS-Set-3040-T*
Fire limitation blanket
and trolley in a set



BS-Set-6080-T*
Fire limitation blanket
and trolley in a set



*certified according to DIN SPEC 91489:2024 and GS mark awarded.



HV BATTERY SAFETY CABINET

JUTEC has developed the HV safety cabinet especially for car workshops, where an increased number of damaged electric vehicles and dismantled HV batteries can be expected.

Surface-mounted cabinet with twist lock

W x H x D = 300 x 810 x 220 mm

Material: metal | Colour: red

Contents:

- 1 Fire limitation blanket (3000 x 2700 mm) for dismantled HV batteries

BENEFITS:

- Fire Prevention
- Defensive fire protection
- Extremely easy handling
- Everything within reach



BS-HV-Set-2730-S
Cabinet

ARTIKELBESCHREIBUNG

Order #	Designation Contents	Blanket Dimensions	Application
BS-HV-Set-2730-S	Fire limitation blanket with a surface-mounted cabinet	2700 x 3000 mm	for dismantled HV batteries
BS-HV-Set-2730-T	Fire limitation blanket with a trolley	2700 x 3000 mm	for dismantled HV batteries

Weitere Abmessungen und Variationen auf Anfrage kurzfristig lieferbar!

MADE IN  GERMANY.

SPECIAL SOLUTIONS

- The goal is to ensure a higher security barrier
- To prevent the flames from spreading
- Protection of the environment

WORKSHOP EQUIPMENT

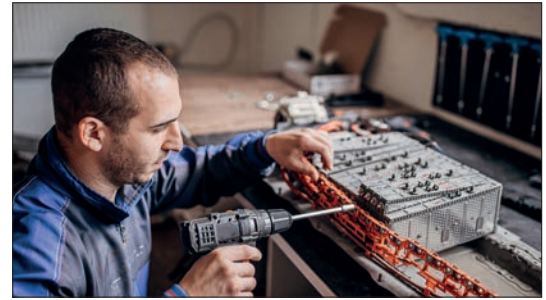
Battery workplaces

RECOMMENDATION

- HV set with fire protection blanket for battery modules, optionally also in a trolley

APPLICATION

- in case of accident - use fire limitation blanket



PARKING GARAGES | UNDERGROUND GARAGES

Hotels, airports, car parks, city halls, football stadiums

RECOMMENDATION

- Fire limitation blanket in wall cabinet
- Installation near the charging stations

APPLICATION

- Rapid deployment - extension of the assistance period
- Fast evacuation possible



FILLING STATIONS

Motorway filling stations and parking lots with charging stations

RECOMMENDATION

- Fire limitation blanket in cabinet
- Installation near the charging stations

APPLICATION

- Rapid deployment - extension of the assistance period
- Fast evacuation possible
- Prevention of flame spreading to other vehicles



FIRE BRIGADE | THW | TOWING SERVICES

Mobile use in the event of battery damage

RECOMMENDATION

- Fire protection blanket in the trolley or in bag on emergency vehicles

APPLICATION

- Securing broken-down electric vehicles directly at the place of us



CAR FERRIES | TRAIN | LOGISTICS | DISPOSAL

Vehicle transport, disposal

RECOMMENDATION

- Fire protection blanket in a trolley or bag, ceiling mounting

APPLICATION

- Electric vehicles next to vehicles can be secured, to prevent flames escaping and spreading
- Isolation of parking areas for electric vehicles





- JUTEC has many years of experience with all types of technical textiles, their processing, manufacture, and application.
- JUTEC is a certified supplier to industry in the fields of heat protection and occupational safety, as well as technical insulation. The products in this area are subject to regular testing by various institutes. JUTEC's quality management system is certified according to ISO 9001:2015.
- JUTEC has 70 industrial sewing workstations, its own pattern making department, its own CAD pattern development department, and four large-scale fabric cutting systems.

