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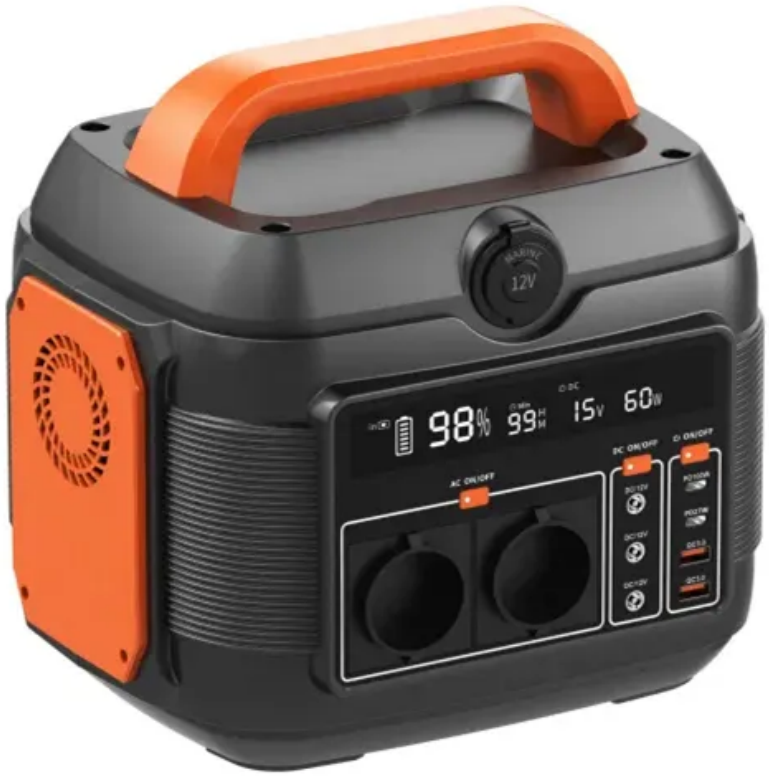
Are container energy storage batteries dangerous goods



Overview

Gard published that in the past few months, has received several queries on the safe carriage of battery energy storage systems (BESS) on ships and highlights some of the key risks, regulatory requirements, and recommendations for shipping such cargo. As explained, according to the International.

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The primary risk associated with the carriage of lithium-ion batteries is thermal runaway. This is a chemical reaction in which an increase in temperature within a battery cell causes a further, uncontrolled increase in temperature. This process can be initiated by manufacturing defects, physical.

In the past few months, Gard has received several queries on the safe carriage of battery energy storage systems (BESS) on ships. In this insight, we highlight some of the key risks, regulatory requirements, and recommendations for shipping such cargo. According to the International Energy Agency.

This research evaluated the hazards of commercially available energy storage system (ESS) types for transportation by the marine mode in enclosed vessel spaces according to the current International Maritime Dangerous Goods (IMDG) Code. Enclosed spaces, such as container cargo holds or closed.

However, due to the high safety risks associated with energy storage containers, their transportation poses new challenges to maritime safety. BESS refers to a mobile power supply device with lithium battery packs, lithium-ion battery packs, or lithium-metal battery packs installed and secured.

The energy storage sector is experiencing dynamic growth, driving increasing interest in the logistical management of various storage systems, including battery energy storage systems (BESS). The challenges associated with their transportation stem from their above-standard weight and.

Because batteries are classified as dangerous goods due to fire and explosion risk. That means stricter packaging, labelling, documentation, and carrier approvals. This guide explains everything you need to know to stay compliant and avoid costly delays – from battery classifications to. Are battery energy storage systems a threat to maritime safety?

12. March 2025 In recent years, demand for the maritime transportation of containerised Battery Energy Storage Systems (BESS) has grown significantly. However, due to the high safety risks associated with energy storage containers, their transportation poses new challenges to maritime safety.

Are battery energy storage systems safe on ships?

Gard published that in the past few months, has received several queries on the safe carriage of battery energy storage systems (BESS) on ships and highlights some of the key risks, regulatory requirements, and recommendations for shipping such cargo.

Why are batteries classified as dangerous goods?

Because batteries are classified as dangerous goods due to fire and explosion risk. That means stricter packaging, labelling, documentation, and carrier approvals. This guide explains everything you need to know to stay compliant and avoid costly delays – from battery classifications to mode-specific rules and best practices for shipping safely.

Are energy storage systems equipped with lithium-ion batteries dangerous?

Our focus in this article is therefore on energy storage systems equipped with lithium-ion batteries. Declaration of BESS Siddharth Mahajan, Senior Loss Prevention Executive, Singapore highlights that BESS with lithium-ion batteries is classed as a dangerous cargo, subject to the provisions of the IMDG Code.

What are the risks of energy storage systems?

Overweight risks Due to the large size and mass of energy storage systems, individual units usually weigh over 30 tons. They face higher risks of dropping,

impact and vibration during loading, unloading, and transportation.

Are lithium-ion batteries a dangerous cargo?

BESS with lithium-ion batteries is classed as a dangerous cargo, subject to the provisions of the IMDG Code. In the IMDG Code, there are multiple descriptions and shipping names for lithium cells and batteries, depending on their chemistry and whether they are stand-alone, within equipment, contained within vehicles or cargo transport units.

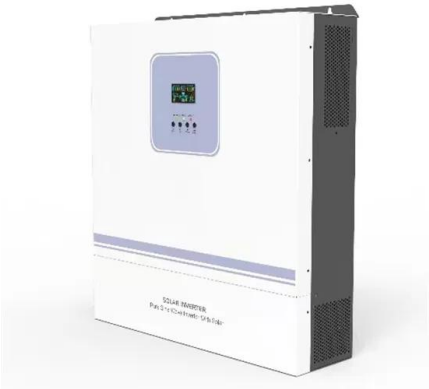
Are container energy storage batteries dangerous goods

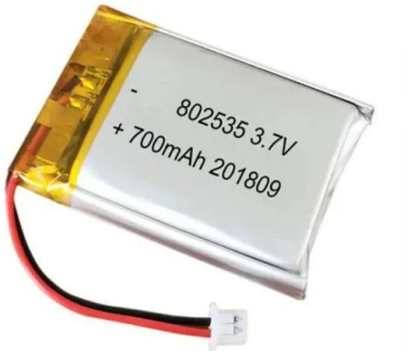
IMDG CODE 39-18: Update 2 - Lithium Batteries Installed in Container

One of the new entries in Dangerous Goods List, chapter 3.2, of IMDG Code is UN 3536 LITHIUM BATTERIES INSTALLED IN CARGO TRANSPORT UNIT lithium ion ...

Not all batteries are dangerous goods! Which batteries can be ...

(1) Except for vehicles powered by lithium batteries (pure electric or hybrid), each side and each end of the container containing lithium battery dangerous goods (two ...





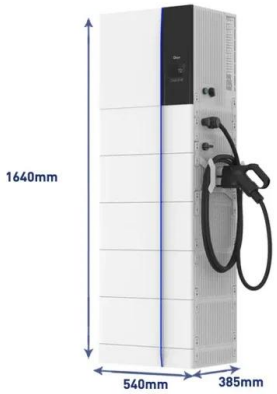
Australian Lithium Battery Shipping & Transport ...

Australian Lithium Battery Shipping Regulation by Road or Rail The Australian Code for the Transportation of Dangerous Goods by road or rail (ADGC), forms the framework of each State's Dangerous Goods ...

Battery Shipping: Classification, Best Practices, ...

These batteries are prone to fire, leakage, or

short circuits, which is why they are classified as dangerous goods (DG) and are subject to strict transport regulations.

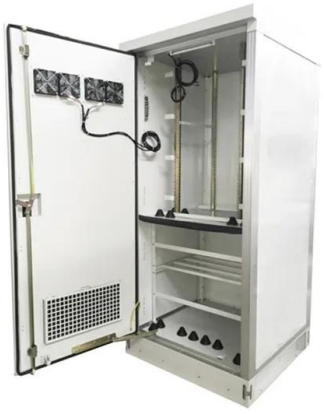


Shipping Requirements for Lithium Battery ...

Learn about the shipping requirements for lithium battery dangerous goods via sea freight, including classifications, general requirements, container packing standards, labeling, and port declaration procedures.

Research summary - Marine transport of energy storage systems ...

This research evaluated the hazards of commercially available energy storage system (ESS) types for transportation by the marine mode in enclosed vessel spaces according to the current ...

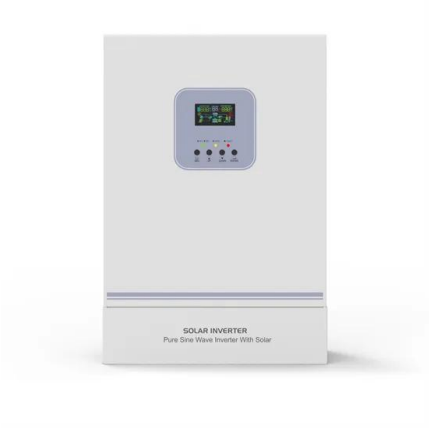


Container Battery Energy Storage System-New Trends In Energy Storage

Materials with higher energy density: The volume of container energy storage systems is limited, so increasing the energy storage capacity of a single box is a problem that needs to be solved ...

Lithium Batteries: A guide to safe transportation, ...

Lithium batteries are a common feature in our modern world, powering everything from mobile phones to vehicles. Given the potential safety and environmental risks posed by batteries, we're ...

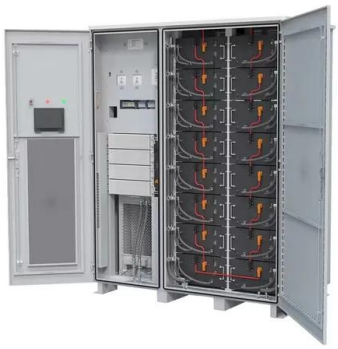


Dangerous yet uniquely challenging cargo: how does the logistics ...

The energy storage sector is experiencing dynamic growth, driving increasing interest in the logistical management of various storage systems, including battery energy storage systems ...

Storage and handing of dangerous goods

In 2003 a review of the regulation of dangerous goods led to major reform. The regulation of the storage and handling of most classes of dangerous goods will now come within the ...

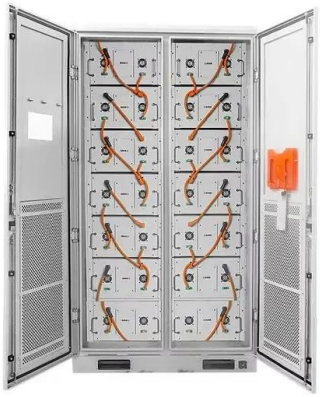


UN3481 and UN3536: Comprehensive Analysis of Dangerous ...

Since energy storage equipment powered by lithium battery will become more and more popular around the world, the international transportations of it need our special attention to avoid the ...

UN3481 and UN3536: Comprehensive Analysis of Dangerous Goods

For US3481, only lithium batteries can be loaded in containers because refrigerants in air conditioners are Class 2.1 or 2.2 dangerous goods and fire extinguishers in ...



Gard: Safe carriage of Battery Energy Storage ...

Siddharth Mahajan, Senior Loss Prevention Executive, Singapore highlights that BESS with lithium-ion batteries is classed as a dangerous cargo, subject to the provisions of the IMDG Code.

ST/SG/AC.10/C.3/2021/6

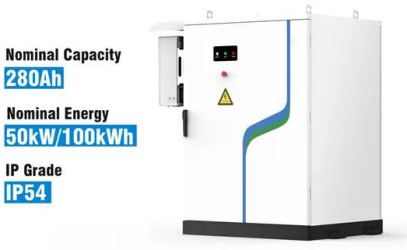
2. As a consequence, energy storage devices are sometimes not accepted for transport in cases where the containers are not cargo transport units (CTUs) within the meaning of the CSC ...

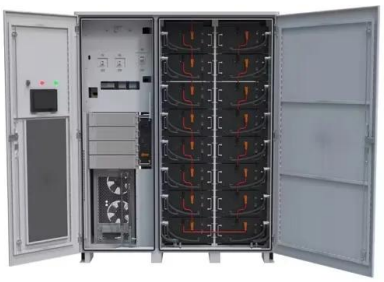
Carriage of Lithium-Ion Energy Storage Units , Britannia P& I

DECLARATION The energy storage unit typically comprises a box or container of varying sizes, within which the Lithium-ion batteries designed for energy storage are ...

Transporting batteries

This bulletin explains battery transport requirements. It does not change, create, amend or suggest deviations to the Transportation of Dangerous Goods (TDG) regulations. For specific ...



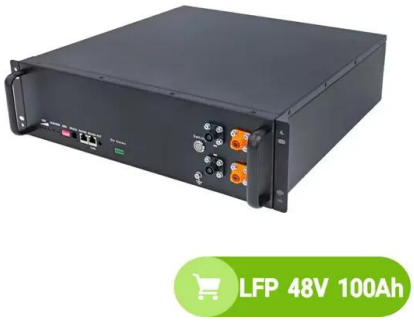


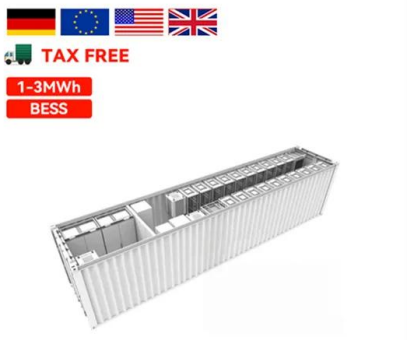
Dangerous cargo: Risks to consider when carrying lithium-ion batteries

It is clear that lithium-ion batteries can be dangerous and is why they and EVs are included in the International Maritime Dangerous Goods Code (IMDG Code), classed as a ...

Research on Safety Isolation Schemes for Lithium-Ion Battery Containers

Download Citation , Research on Safety Isolation Schemes for Lithium-Ion Battery Containers in Mixed-Storage Yards of Class 9 Dangerous Goods Containers , In recent ...



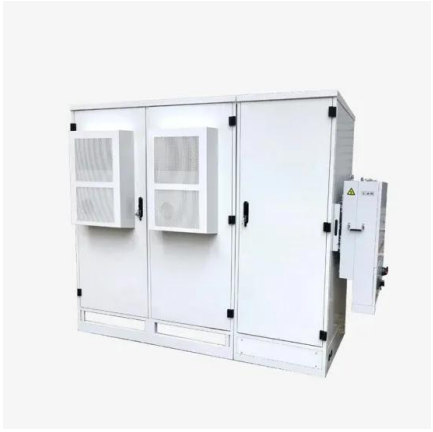


Learn About the Different Types of Battery Packaging

Discover different battery packaging types, safety rules, and how proper packaging impacts performance. Learn about lithium, solar, car battery packaging!

Regulatory Requirements - Canadian Battery Association

The Federal Transportation of Dangerous Goods (TDG) Act requires all shipments of lead batteries to conform to TDG and because lead batteries are a non ...

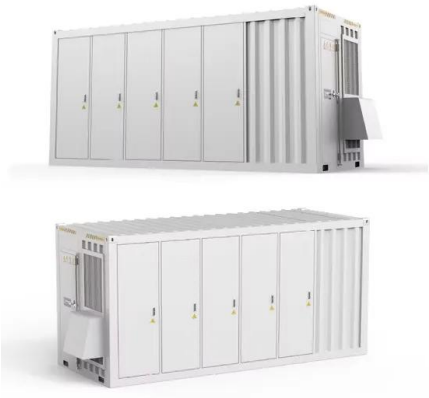


Top Special Container Manufacturer , Reliable

Seeking trusted container suppliers in China? As a leading container factory & exporter, we specialize in custom shipping containers and energy storage containers. Get expert solutions from a professional container company in ...

Transporting lithium-ion batteries: identifying and ...

Batteries and devices that contain batteries are classified as dangerous goods and have to comply with specific packaging and shipping regulations. All Li-ion batteries, equipment powered by Li-ion batteries and ...



Risks associated with transporting containerised ...

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UN3481 and UN3536: Comprehensive Analysis of Dangerous Goods

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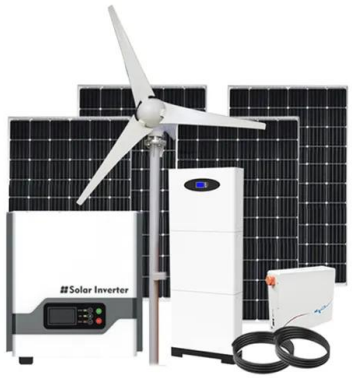

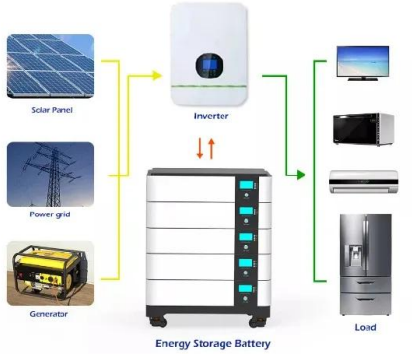

The evolving landscape of international BESS transportation

It is paramount to transport lithium-ion batteries safely. If not handled and transported correctly, lithium-ion batteries pose potential fire and explosion risks. To address ...

The evolving landscape of international BESS ...

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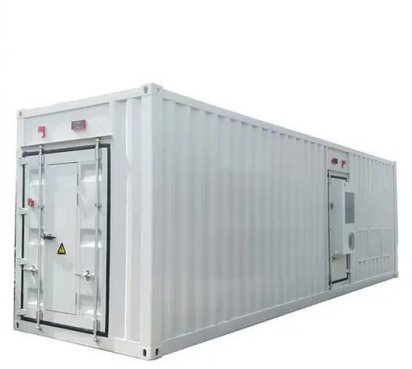
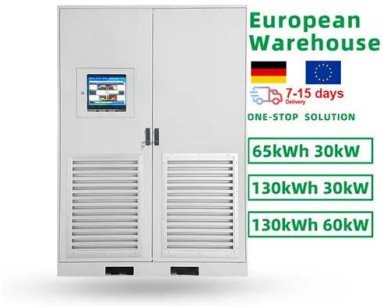


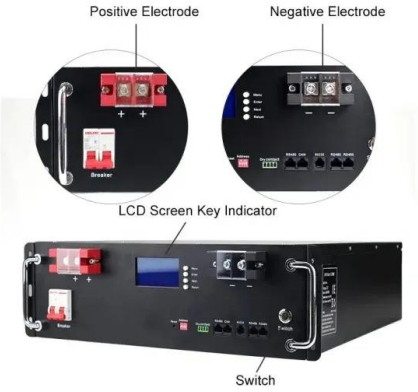
Dangerous yet uniquely challenging cargo: how does the logistics ...

The energy storage sector is experiencing dynamic growth, driving increasing interest in the logistical management of various storage systems, including battery energy ...

Battery Day 2025: Hazardous goods labeling for lithium & sodium batteries.

All labels Hazardous goods labeling for the energy sources of the future Lithium-ion batteries have long been more than just the energy storage devices in our smartphones or ...



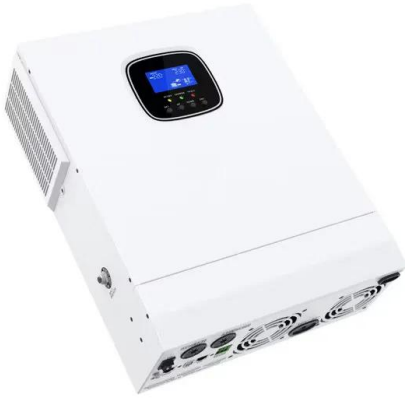


When is a battery classed as dangerous goods?

When is a battery classed as dangerous goods? At LionCare, we can help you answer this question. We are your partner for the safe storage and transport of lithium-ion batteries.

Battery Shipping: Classification, Best Practices, ...

Battery logistics is a high-stakes, high-regulations business. One misstep, and you're looking at potential fines, cargo fires, or even full-blown transport bans. Why? Because batteries are classified as ...

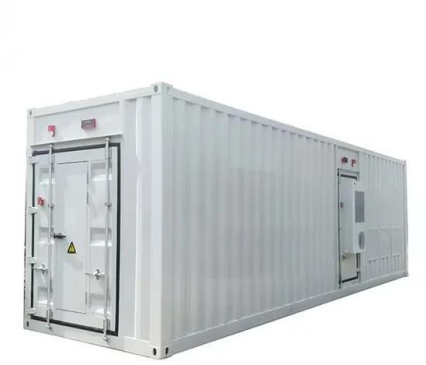


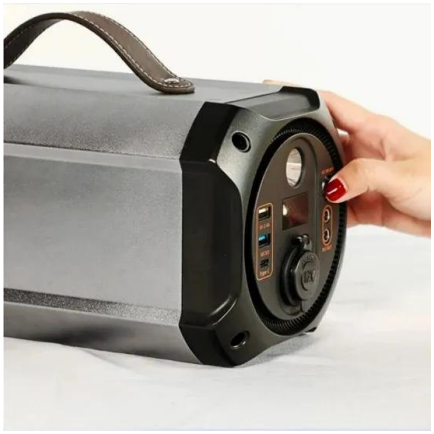
What Is The Safest Way To Store Batteries?

When you think of Dangerous Goods, you probably don't think about the batteries you use to power your daily operations. But even simple items such as the battery in your phone or the power source for ...

Dangerous yet uniquely challenging cargo: how does the logistics ...

Furthermore, due to their physical and chemical properties, the batteries are classified as potentially dangerous goods. Ships have strict limitations and capacity thresholds ...





Safe transport of battery storage systems on board ...

Siddharth Mahajan, Senior Head of Loss Prevention, Singapore, highlights that BESS with lithium-ion batteries are classified as dangerous goods under the IMDG Rules. In the IMDG rules, lithium ...

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