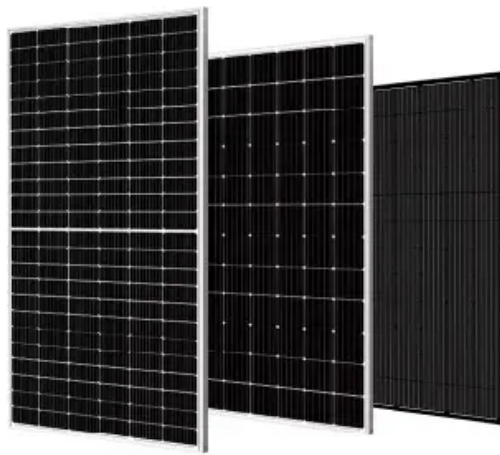


## SolarGrid Energy Solutions

# Requirements for land transportation of lithium batteries



## Overview

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This guideline details terms and definitions, lithium battery classification, labeling and marking requirements for lithium battery dangerous goods, packaging requirements for lithium battery dangerous goods, safety requirements for lithium battery dangerous goods, packing safety requirements, testing institution requirements, transportation requirements, documentation requirements, and emergency responses. What are the regulations for lithium batteries?

International, national, and regional governments, as well as other authorities, have developed regulations for air, road, rail, and sea transportation of lithium batteries and the products that incorporate these batteries. The regulations govern conduct, actions, procedures, and arrangements.

When will lithium ion batteries be available for transport?

Lithium-ion cells and batteries must be offered for transport at a state of charge not exceeding 30% of their rated capacity. This becomes a mandatory requirement on 1 January 2026.

How many G of lithium batteries are required for transportation?

32 • For highway and rail transportation only: Cells that exceed 1 g, but do not exceed 5 g, and batteries that exceed 2 g, but do not exceed 25 g, the text marking “LITHIUM BATTERIES—FORBIDDEN FOR TRANSPORT ABOARD AIRCRAFT AND VESSEL” is required.

What is a lithium battery guide for shippers?

LITHIUM BATTERY GUIDE FOR SHIPPERS A Compliance Tool for All Modes of Transportation Revised October 2024 [WWW.PHMSA.DOT.GOV](http://WWW.PHMSA.DOT.GOV) 2

INTRODUCTION This compliance resource was prepared to assist a shipper to safely package lithium cells and batteries for transport by all modes of transportation according to the latest regulatory requirements.

Are lithium batteries safe to transport in 2025?

Transporting lithium batteries safely has become a global priority. You must understand the regulations governing this process in 2025 to prevent risks and ensure compliance. Over 40 air transport incidents involving lithium batteries have occurred since 1991, with 21 on passenger aircraft.

What is the preferred transport method for lithium batteries in Europe?

Road transportation in Europe is actually the preferred transport method for lithium batteries. Being geographically well connected through its road systems, Europe has an advantage of inexpensive road transportation that is less rigidly regulated compared to air and sea. Table 15. Multilateral agreements between European countries.

## Requirements for land transportation of lithium batteries

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### 2020 Lithium Battery Guidance Document

Jan 8, 2020 · Lithium-ion batteries (sometimes abbreviated Li-ion batteries) are a secondary (rechargeable) battery where the lithium is only present in an ionic form in the electrolyte. Also ...

### Lithium Batteries

4 days ago · A lithium metal battery is usually non-rechargeable, contains metallic lithium, and features a higher energy density than other non-rechargeable batteries. Lithium metal ...



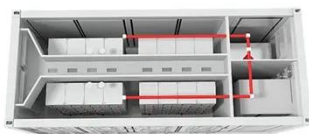
### Waterway Transportation Requirements and Document ...

Dec 4, 2023 · Understand the complex regulations for lithium battery shipping via water at Shanghai Port. This guide details detection, transport, and documentation requirements for ...

### DOT Rules for Lithium Battery Transportation

The U.S. Department of Transportation (DOT) issued new 2018 standards to strengthen the safety conditions for the shipment of lithium cells and batteries.

...



## Shanghai Port Guidelines for the Waterway Transportation of Lithium

This guideline details terms and definitions, lithium battery classification, labeling and marking requirements for lithium battery dangerous goods, packaging requirements for lithium battery ...

## Advisory Guidance; Transportation of Batteries and Battery-Powered

3 days ago · These and similar incidents are the cause of significant concern by PHMSA and FAA. Documents included with the shipment indicated the packages contained non-hazardous ...



## DOT Regulations for Lithium-Ion Battery Transport

Learn how to comply with DOT regulations for lithium-ion batteries.

Discover safety, packaging, and labeling requirements in this guide.



## Guidelines for shipment of Lithium-Ion Batteries ...

5 days ago · The Lithium-ion Batteries in Containers Guidelines seek to prevent the increasing risks that the transport of lithium-ion batteries by sea creates, ...



## All about transporting lithium batteries and IoT ...

Oct 11, 2024 · 2. Lithium cells and batteries when installed in equipment. a. Special Provision Chapter 3.3, 188 (e), etc. Care must be taken to understand ...

## Lithium battery transport

Feb 9, 2023 · Disclaimer Dangerous goods transport is complex and situational. While dangerous goods transport is well-harmonised within Australia, you need to ensure the

transport complies ...



## Battery Testing & Requirements for Transportation of Lithium Batteries

Classified as a class-9 dangerous goods by the United Nations, batteries need to meet requirements specified in UN 38.3 Regulation which details the specifics that must be fulfilled ...

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Aug 1, 2025 · ??????????????????  
Technical requirements for transport safety and intermodal transport of traction lithium batteries



## Safety Requirements for Transportation of Lithium ...

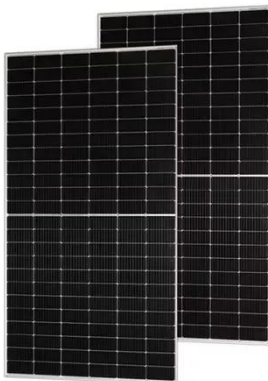
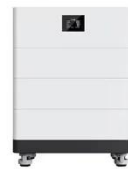
Jul 17, 2017 · This paper reviews the international and key national (U.S., Europe, China, South Korea, and Japan) air, road, rail, and sea transportation

requirements for lithium batteries. This ...



## Transportation - U.S. Army Batteries

Consult your Installation Transportation Office (ITO) or the local shipping agent, as appropriate, to ensure compliance with all applicable transportation regulations. In some jurisdictions the ...



????????????

Jul 10, 2024 · ??????????????????  
 Technical requirements for traction lithium battery transport safety and intermodal transportation ( ????? )  
 ?????????, ??? ...

## Batteries in Transport - Applicable U.S. Hazardous ...

Jun 29, 2022 · IV. Lithium ion and Lithium Metal Cells and Batteries Lithium ion and lithium metal cells and batteries are listed as Class 9 Miscellaneous

hazardous materials in the U.S. and ...



### **Lithium Battery Guide**

Nov 21, 2024 · This compliance resource was prepared to assist a shipper to safely package lithium cells and batteries for transport by all modes of transportation according to the latest ...

### **SAE International Publishes Aircraft Guidelines ...**

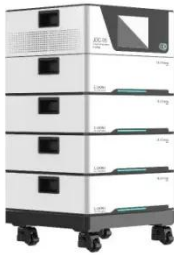
Dec 17, 2024 · The SAE AS6413(TM) Standard: Performance-Based Package Standard for Lithium-Ion Cylindrical Cells as Cargo on Aircraft outlines specific ...



### **AC 92-2-1 (Rev0) 30 December 2022 Advisory Circular**

Jan 3, 2023 · 2 LITHIUM BATTERIES INCLUDING THOSE PACKED WITH OR CONTAINED IN EQUIPMENT 2.1 Lithium batteries are classified as dangerous

goods according to the ICAO ...



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## How to Ship Lithium-Ion Battery Materials Safely ...

Mar 22, 2025 · Navigate global shipping regulations for lithium-ion battery materials. Understand IATA, IMO, and ADR compliance to ensure secure and ...



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## Lithium-ion battery transport

May 20, 2025 · Why is the transport of lithium-ion batteries classified as dangerous goods? Lithium-ion batteries are classified dangerous goods ...

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

Oct 30, 2024 · Lithium batteries are a common feature in our modern world, powering everything from mobile phones to vehicles. Given the potential ...



### OEM service

Hot Colors:



Color can be customized  
more questions just do not hesitate to contact us

LOGO Position: (Screen printing)

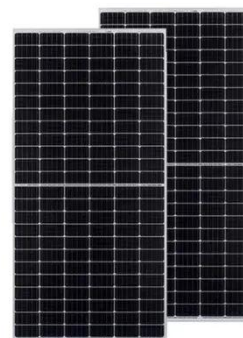


## How to Comply with Lithium Shipping Requirements: A ...

Jul 21, 2025 · The core objectives of Lithium Shipping Requirements are two - fold: ensuring safety and maintaining legality. These requirements are designed to safeguard the lives and ...

## Transporting batteries

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



## Lithium battery transport: all you need to know

Oct 18, 2024 · - Land Transport: Depending on the country, land transport may require batteries to be classified and transported in accordance

with local ...



## A Complete Guide to Lithium Battery ...

Understand 2025 lithium battery transportation rules, including packaging, labeling, and compliance to ensure safe and legal shipping across all modes.



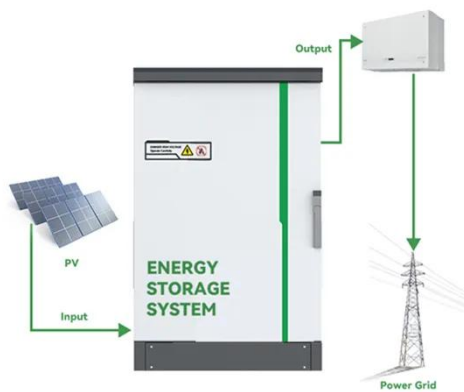
## Battery guidance document

Feb 3, 2025 · From 1 January 2026, lithium-ion batteries that are packed with equipment and vehicles powered by lithium ion or sodium ion batteries must be offered for air transport with ...

## Transportation Regulations for Lithium and Lithium Ion ...

May 4, 2019 · The international transportation of primary lithium (non-rechargeable) and rechargeable lithium ion (including polymer) cells and

batteries is regulated by the ...



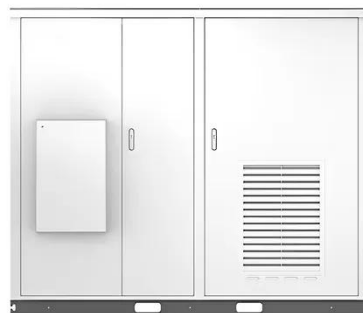
## What You Need to Know About Transporting Lithium Batteries

The transport of lithium batteries is governed by the regulations of the "Accord européen relatif au transport international des marchandises dangereuses par route" (ADR), a treaty that sets out ...

## Understanding Battery Transportation Regulations

Transporting Batteries by Land, Sea, and Air  
Transporting batteries, whether by land, sea, or air, presents its own unique set of challenges. Safety is always ...

Solar



## 2022 Lithium Battery Guidance Document

Feb 26, 2023 · Lithium-ion batteries (sometimes abbreviated Li-ion batteries) are a secondary (rechargeable) battery

where the lithium is only present in an ionic form in the electrolyte. Also ...



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## Safety Requirements for Transportation of ...

May 2, 2019 · The demand for battery-powered products, ranging from consumer goods to electric vehicles, keeps increasing. As a result, batteries are ...



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## Certification for Importing Lithium Batteries in ...

Nov 1, 2024 · Importing lithium batteries into Canada is a complex but important process that requires strict adherence to regulatory standards. This article ...

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## Department of Transportation

Nov 28, 2022 · SUMMARY: PHMSA, in consultation with the Federal Aviation Administration (FAA), is modifying the requirements governing the transportation of lithium cells and

batteries. ...



## Transporting & Shipping Lithium Batteries by ...

Feb 28, 2023 · Here's a step-by-step process for shipping lithium ion batteries internationally: 1. Determine the type of lithium battery being shipped There's ...

## Lithium battery transport: all you need to know

Dec 20, 2022 · The growing demand for electrification has led to the introduction of regulations, classifications and certifications for lithium battery transport.



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