



DG Shipping Guide #29 – ADR
LITHIUM ION BATTERIES
(shipped alone or packed with equipment)
(Special Provision 188)

Revision Date: 10/22/2024

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ADR Shipping Instructions for GROUND Transportation

UN3480, LITHIUM ION BATTERIES, 9
UN3481, LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, 9
(Special Provision 188 → Small, excepted cells & batteries)

ONLY TRAINED HAZMAT EMPLOYEES MAY SHIP LITHIUM BATTERIES USING THIS GUIDE.

Some batteries are regulated when shipped or offered for transportation. If the battery is restricted, then all applicable hazardous materials regulations must be met. This guide provides information to assist you in how to ship the battery by road in the ADR Contracting Parties.



How can I tell if the battery is regulated?

Batteries normally have the size listed directly on the battery case which will help you identify whether or not it can be shipped without special packaging and package marking; in other words, shipped as non-restricted in transportation.



These instructions have been specifically prepared for the shipment of **lithium ion batteries (≤ 100 Wh)** and **lithium ion batteries packed with equipment, UN3480, UN3481**; effective January 1, 2025; ADR 2025.

DO NOT USE THESE SHIPPING INSTRUCTIONS FOR OTHER BATTERY TYPES.

DESCRIPTION

All employees are responsible for compliance with applicable domestic and international dangerous goods transport regulations. All employees must be dangerous goods trained prior to using this shipping template. All information in this shipping template is accurate through the date of revision and must be validated against the regulations yearly and updated as regulations change.



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Items

(Identify and insert the description of items that may be shipped utilizing this template in this section.)

SHIPPING BY ADR AGREEMENT

Shipping Location:

Transport by Road within ADR Contracting Parties

Shipping Company:

(Identify in this section the carriers used and carrier requirements)
(i.e. Motor Carrier operators.)

NOTE:

Damaged, defective or recalled cells or batteries, that have the potential of producing a dangerous evolution of heat, fire, or short circuit (including those being returned to the manufacturer for safety reasons) and are offered for road transport must be prepared in accordance with the provisions detailed in ADR Packing Instruction P908.

CLASSIFICATION

UN Number and Proper Shipping Name
(select the most appropriate)

- UN3480 LITHIUM ION BATTERIES
- UN3481, LITHIUM ION BATTERIES PACKED WITH EQUIPMENT

Battery Testing Data

LITHIUM ION CELLS OR BATTERIES MUST MEET THE REQUIREMENTS OF EACH TEST IN THE *UN Manual of Tests and Criteria, Part III, subsection 38.3.*

Lithium Battery Test Summary

A test summary complying with the requirements of the UN Manual of Tests and Criteria, Part III, Subsection 38.3, Paragraph 38.3.3.5 is required to prove all cells/batteries have been properly tested. Test Summary is not a transport document and is not required to be provided as a transport document. However, carriers may request a copy be provided.

Site testing data:

(Insert the location of battery testing documentation and /or attached to the shipping instructions)

Lithium ion Battery Wh Marking

Lithium ion batteries manufactured after 31 December, 2011 must be marked with the Watt hour rating on the outside case.

Special Provisions

- UN3480 – 188, 230, 310, 348, 376, 377, 387, 636, 677
- UN3481 – 188, 230, 310, 348, 360, 376, 377, 387, 390, 670, 677

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CLASSIFICATION

Cell/Battery Limit and Maximum gross mass of package

Lithium ion cell ≤ 20 Wh
Lithium ion battery ≤ 100 Wh

Packages containing LITHIUM ION BATTERIES (not contained in or packed with equipment) must not exceed 30 kg gross mass.

PACKAGING

Packing Instruction

Special Provision 188, Excepted

Protect to prevent short circuits

The site must identify and insert information on how this will be done for applicable shipments.

(i.e. place a single battery in a plastic bag and then place in a package.)

Cells and Batteries shall be protected so as to prevent short circuits. THIS INCLUDES PROTECTION AGAINST CONTACT WITH CONDUCTIVE MATERIALS WITHIN THE PACKAGING THAT COULD LEAD TO SHORT CIRCUIT.

Each battery containing cells or a series of cells connected in parallel must be equipped with an effective means, as necessary, to prevent dangerous reverse current flow (e.g. diodes, fuses).

Inner Packaging

Lithium cells and batteries must be placed in INNER PACKAGING that completely enclose the cell/battery then placed in an outer packaging.

Outer Packaging

The package must be a STRONG OUTER PACKAGING (does not require UN specification packaging); which conform to the provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.5; capable of withstanding a 1.2m drop test in any orientation without damage to cells or batteries contained therein.

Packing Provisions

Must comply with the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.5, including:

- Good quality packaging to withstand the shocks and loading normally encountered during transport.
- Constructed and closed to prevent loss of contents.
- Closed in accordance with the manufacturer's instructions.
- No dangerous residue on outside.
- Cushioning material
- Parts of packaging which are in direct contact with DG will not react or cause a dangerous effect during the normal conditions of transport

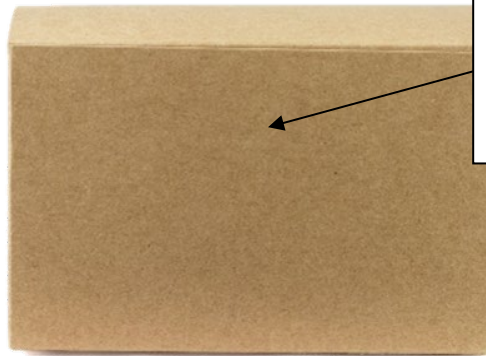
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PACKAGING

- Inner packagings must be packed in outer packaging to prevent breakage, puncture or leakage of contents

Type of Packaging

(Insert the type of packagings to be used. In addition, insert closure instructions or the location of the closure instructions to be used.)



Strong Outer Packaging –
capable of 1.2 m drop
test

MARKING / LABELLING

Marking

Lithium battery mark

Add UN3480 or UN3481 as appropriate if not already indicated.

Note: A telephone number may remain on the mark through December 31, 2026 but is no longer required.



Labelling

Not required



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Example of completed package for transport by ADR, UN3481, LITHIUM ION BATTERIES PACKED WITH EQUIPMENT:



DOCUMENTATION

Document type	Shipping document not required.
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TRAINING REQUIREMENTS

Training Requirements	Employees must be informed of the requirements of this shipping guide before offering small lithium batteries for transport. It is recommended that employees receive hazardous material general awareness training as well prior to preparing and offering lithium batteries for transport.
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STORAGE

Storage Location & Special Considerations	<i>(Insert storage requirements or special considerations.)</i>
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REFERENCES

ADR 2025

Applicable from January 1, 2025

Part 1

1.3 – Training of persons involved in the carriage of dangerous goods
1.4 – Safety obligations of the participants

Part 2

2.2.9.1.7 – Lithium batteries

Part 3

3.3 – Special provisions applicable to certain articles or substances (SP 188)

Part 5

5.2 - Marking and Labelling

Part 6

6.1 – Provisions for the construction and testing of packagings

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