KÄRCHER

TEMPLATE FOR THE LABELLING OF DANGEROUS GOODS PACKAGES



For batteries ≤100Wh p. 2-5
(retail packages with or without layout)



For batteries >100Wh p. 6-13
(retail packages with or without layout)



For batteries for different types of packaging p. 14-22
(cartons, pallets, etc.)

FAQ p. 22-23

02/24

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DANGEROUS GOODS LABELLING FOR BATTERIES ≤100WH

(from retail packages with or without layout)

V x Ah = Wh (Ex.: 18 V x 2,5 Ah = 45 Wh)

1

One single Li-Ion Battery p. 4
(for example: battery pack as special accessory, starter kit)

A type-approved packaging is not needed.
A normal, strong outer packaging with or without layout is sufficient.

2

A Li-Ion Battery contained in equipment (=device) p. 5
or
a Li-Ion Battery packed with equipment (=device)

One single Li-Ion Battery
(for example: LMO 18-36 Battery Set; HV 1/1 Bp Pack)

A type-approved packaging is not needed. A normal,
strong outer packaging with or without layout is sufficient.

DEFINITION DANGEROUS GOODS LABEL

for batteries or devices ≤100 Wh



Placement
Minimum dimension 100mm (width) x 100mm (height)

If the biggest side of the packaging box is smaller than 100mm (width) x 100mm (height), the dangerous goods label might be reduced in size but must have at least the following minimum dimension: 100mm (width) x 70mm (height).

UN number
The UN number depends on the product:
Single Lithium ion battery: UN3480
Lithium ion battery in relation with a device: UN3481
Character height: min. 12mm

Shaded area
Color red
Height min. 5mm

The symbol
The symbol has to be black and appears on a white background or appropriately contrasting background.

1

One single Li-Ion Battery
(for example: battery pack as special accessory, starter kit)

A type-approved packaging is not needed.
A normal, strong outer packaging with or without layout is sufficient



100x70mm



100x100mm

2

A Li-Ion Battery contained in equipment (=device)
or a Li-Ion Battery packed with equipment (=device)

One single Li-Ion Battery
(for example: LMO 18-36 Battery Set; HV 1/1 Bp Pack)

A type-approved packaging is not needed.
A normal, strong outer packaging with or without layout is sufficient.



100x70mm



100x100mm

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DANGEROUS GOODS LABELLING FOR BATTERIES >100Wh

(retail packages with or without layout)

V x Ah = Wh (Ex.: 36 V x 5,0 Ah = 180 Wh)

3a 3b **A single Li-Ion Battery** **p. 9/10**
(Ex. battery as special accessories, starter kit)

The battery will be placed in a type-approved packaging. The type approved packaging will be placed in a normal, strong outer packaging with layout.
--> ***Labelling refers to the normal strong outer packaging with layout.***

4a 4b **A single Li-Ion Battery** **p. 11/12**
The battery is placed in a type-approved packaging
(with or without a printed layout)

5a 5b **A Li-Ion Battery packed with equipment (device, not charger!)** **p. 13/14**
--> Not made in China
(Ex: K 2 Battery; T 9/1 Bp Pack)
The inner box (=battery packaging box) is an UN-approved packing and will be placed in a normal, strong packaging with or without layout (=device packaging).
--> ***Labelling refers to the packaging of the device.***

6a 6b **A Li-Ion Battery packed with equipment (device, not charger!)** **p. 15/16**
--> Made in China
(Ex. LMO 36-46 Battery Set)
The inner box (= battery packaging) is an UN-approved packing and will be placed in a CIQ-approved packing with or without layout (=device packaging).
--> ***Labelling refers to the packaging of the device.***

7a 7b **A Li-Ion Battery integrated in equipment** **p. 17/18**
(Ex. BR 35/12)
A type-approved carton is not needed. A normal, strong outer packaging with or without layout is sufficient.

DEFINITION DANGEROUS GOODS LABEL

for batteries or devices > 100 WH



Placement
Minimum dimension 100mm edge length.

A reduction in size is only permitted if the width and height of the largest side of the packaging box is less than 14.4 cm. A proportional reduction is possible. The dangerous goods label has to be placed on a white background. The margin of 5mm must be adhered to.

UN number
The character height has to be at least **12mm.**

The UN number depends on the product:
Single Lithium ion battery: UN3480
Lithium ion battery in relation with a device: UN3481

Exceptions:
- Packaging boxes with ≤ 30L or 30Kg net weight - at least 6mm
- Packaging boxes with ≤ 5L or 5Kg - appropriate size

The colour is not fixed. Normally, the UN number will be printed BLACK. This label has to be placed on an appropriately contrasting background. The UN number should be placed next to the proper shipping name.

Proper shipping name
The proper shipping name such as “Lithium ion batteries” or “Lithium ion batteries contained in equipment” or “Lithium ion batteries packed with equipment” should have the following dimensions:
The character height has to be at least **12mm**.

Exceptions:
- Packaging boxes with ≤ 30L or rather 30kg net - at least 6mm
- Packaging boxes with ≤ 5L or rather 5kg - proper size

The proper shipping name can be written in upper or lower case, but has to be in English.

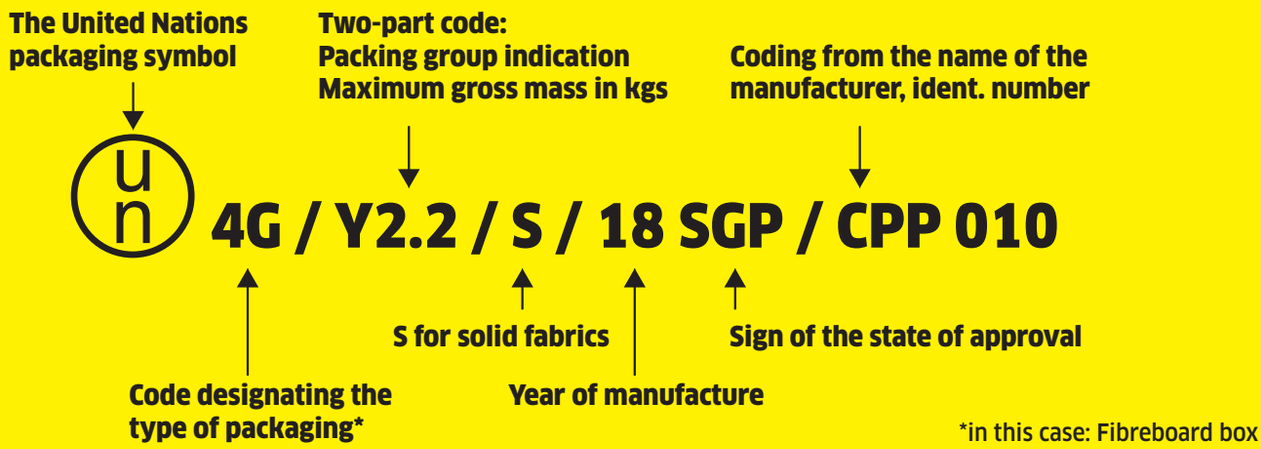
Decleration of weight
The declaration of weight refers to the “Nettogewicht GG” in SAP (tab: basic data 2).
--> Weight is determined in coordination between Battery-product manager and dangerous goods management
In case of multiple batteries: total net: x.xx kg

General packing provisions
Each packaging consists of an inner and an outer packaging.
Batteries must be protected to prevent short circuits. The cells or batteries must be in an inner packaging that completely encloses the cells or batteries. This can be done, for example, with a foil bag or comparable materials. The inner packaging must be placed in a strong, rigid outer packaging.
UN-approved packaging must be used for batteries > 100 watt hours.

Type approval / UN approval
The Type Approval Code is provided by the packaging manufacturer and is only necessary for batteries > 100 WH. It will be awarded by the competent authority (in Germany: BAM = Bundesanstalt für Materialforschung und -prüfung)
The UN Approval Code should have the following dimensions:
The character height has to be at least 12mm.

Exceptions:
- Packaging boxes with ≤ 30L or rather 30kg net - at least 6mm
- Packaging boxes with ≤ 5L or rather 5kg - proper size

Code for designating types of packagings



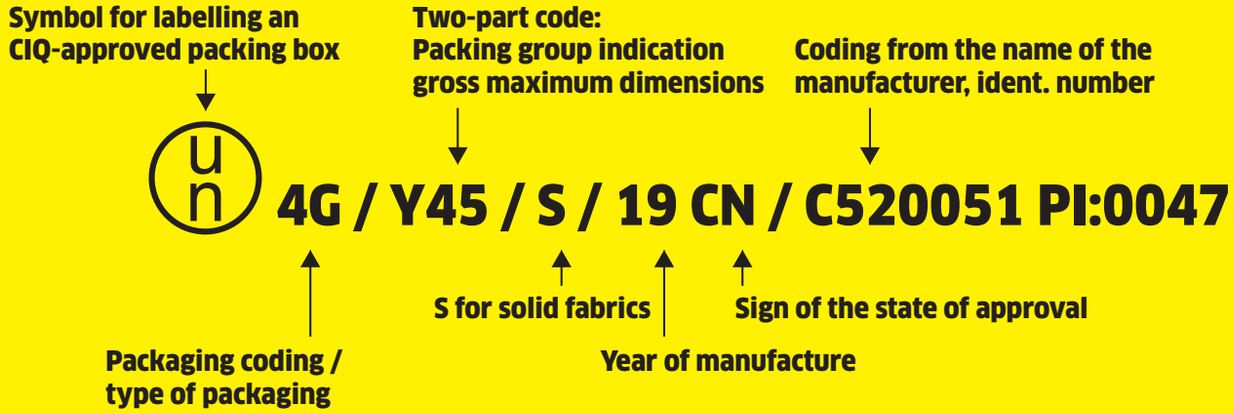
*in this case: Fibreboard box

Warning:

If a type approved packaging is necessary, the corresponding approval documents must be available.

The labelling (Ex. UN-4G/Y40/S/15/D/BAM15273-WSG) only applies to the specially tested packaging box; it is not allowed to be repeated on any other (untested) outer packaging box.

CIQ approval/packaging
A CIQ-approved packaging is a Chinese specification. The packaging is authorized by the Chinese authority (China Commodity Inspection Bureau) for the transport of batteries and devices > 100 WH
This rule **must be applied** when the production plant is in China.
This rule **does not apply** when the prodution plant is not in China, but the product is sold in China.



3a

A single Li-Ion Battery > 30kg
(Ex. battery as special accessory, starter kit)

The battery will be placed in a type-approved approved packaging.
The type-approved packaging will be placed in a normal, strong outer packaging with layout.

--> ***Labelling refers to the normal strong outer packaging box with layout.***

Warning:
If the product is made in China and the packaging will be shipped without further outer packaging, see details Case D (Page 18).



■ **Weight = "NET WEIGHT GG" in SAP (tab: basic data 2)**
In case of multiple batteries: total net: x.xx kg
--> must be individually briefed (product management is responsible)

140x140mm
(edge length 100mm)

*suggested placement. Please ensure to display all relevant labels on one side.

3b

A single Li-Ion Battery ≤ 30L / 30kg
(Ex. battery as special accessory, starter kit)

The battery will be placed in a type-approved approved packaging.
The type-approved packaging will be placed in a normal, strong outer packaging with layout.

--> ***Labelling refers to the normal strong outer packaging box with layout.***

Warning:
If the product is made in China and the packaging will be shipped without further outer packaging, see details Case D (Page 18).



- **Weight = "NET WEIGHT GG" in SAP (tab: basic data 2)**
  In case of multiple batteries: total net: x.xx kg
  --> must be individually briefed (product management is responsible)

140x140mm
(edge length 100mm)

4a

A single Li-Ion Battery > 30kg
The battery is placed in a type-approved packaging
(with or without a printed layout)



■ **Weight = "NET WEIGHT GG" in SAP (tab: basic data 2)**
In case of multiple batteries: total net: x.xx kg
--> must be briefed individually (product management is responsible)

■ **= Must be briefed individually (packaging development is responsible)**

140x140mm
(edge length 100mm)

4b

A single Li-Ion Battery ≤ 30L / 30kg
The battery is placed in a type-approved packaging
(with or without a printed layout)



- **Weight = "NET WEIGHT GG" in SAP (tab: basic data 2)**
  In case of multiple batteries: total net: x.xx kg
  --> must be briefed individually (product management is responsible)

- **= Must be briefed individually (packaging development is responsible)**

140x140mm
(edge length 100mm)

5a

A Li-Ion-Battery packed with equipment > 30kg (device, not charger!)
--> Not made in China
(Ex: K 2 Battery; T 9/1 Bp Pack)

The inner box (=battery packaging box) is an UN-approved packing
and will be placed in a normal, strong packaging with or without layout (=device packaging).
--> ***Labelling refers to the packaging of the device.***

Warning:
Word “OVERPACK” is not needed - specific case when battery is packed with device



Weight = “NET WEIGHT GG” in SAP (tab: basic data 2)
In case of multiple batteries: total net: x.xx kg
--> must be briefed individually (product management is responsible)

140x140mm
(edge length 100mm)

5b

A Li-Ion-Battery packed with equipment ≤ 30L / 30kg (device, not charger!)
--> Not made in China
(Ex: K 2 Battery; T 9/1 Bp Pack)

The inner box (=battery packaging box) is an UN-approved packing
and will be placed in a normal, strong packaging with or without layout (=device packaging).
--> ***Labelling refers to the packaging of the device.***

Warning:
Word “OVERPACK” is not needed - specific case when battery is packed with device



- **Weight = “NET WEIGHT GG” in SAP (tab: basic data 2)**
  In case of multiple batteries: total net: x.xx kg
  --> must be briefed individually (product management is responsible)

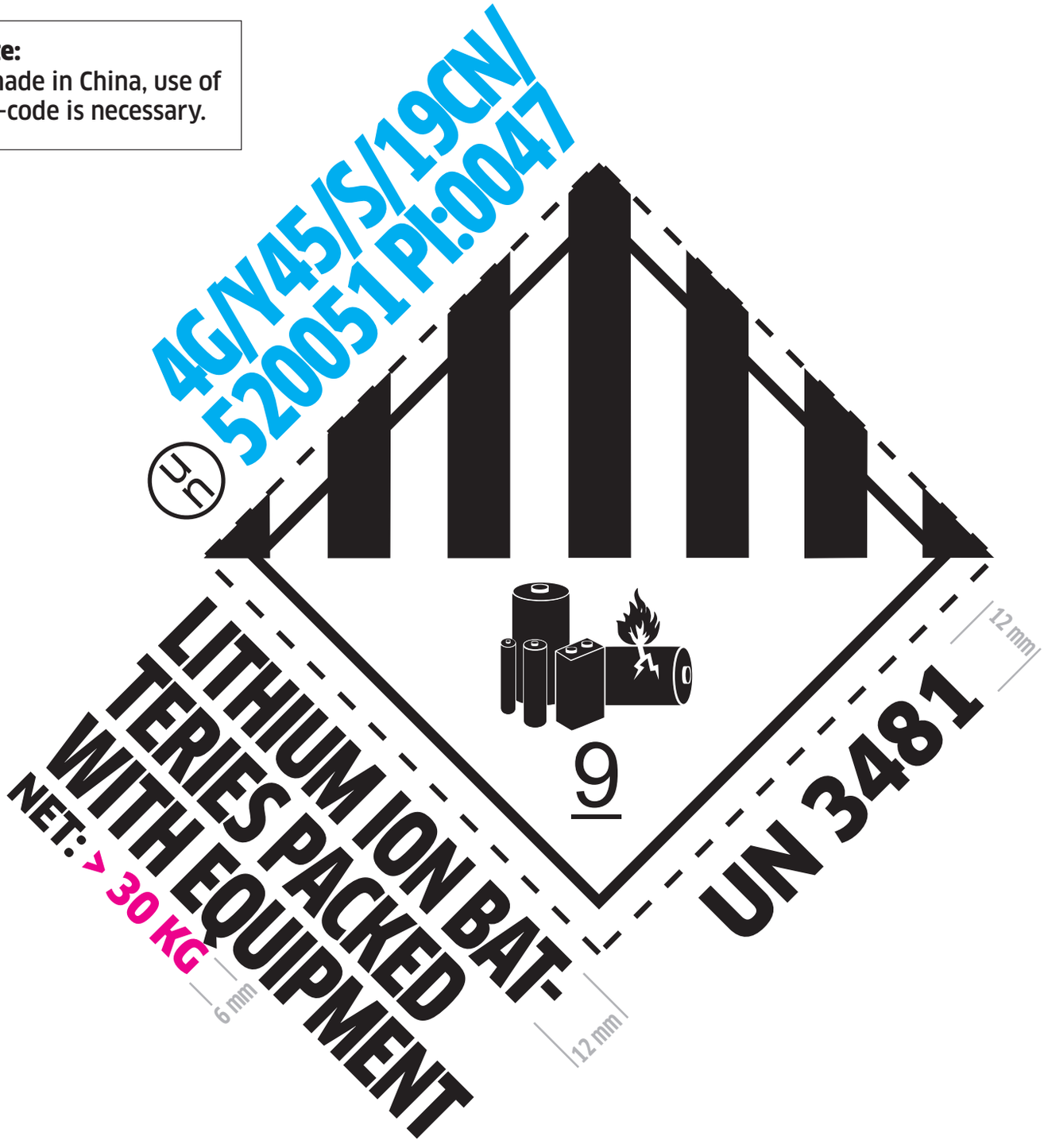
140x140mm
(edge length 100mm)

6a

A Li-Ion battery packed with equipment > 30kg (device, not charger!)
--> Made in China
(Ex. LMO 36-46 Battery Set)

The inner box (= battery packaging box) is an UN-approved packing and will be placed in a CIQ-approved packing with or without layout (=device packaging).
--> ***Labelling refers to the packaging of the device.***

Note:
If made in China, use of CIQ-code is necessary.



■ **Weight = "NET WEIGHT GG" in SAP (tab: basic data 2)**
In case of multiple batteries: total net: x.xx kg
--> must be briefed individually (product management is responsible)

■ **= Must be briefed individually (packaging development is responsible)**

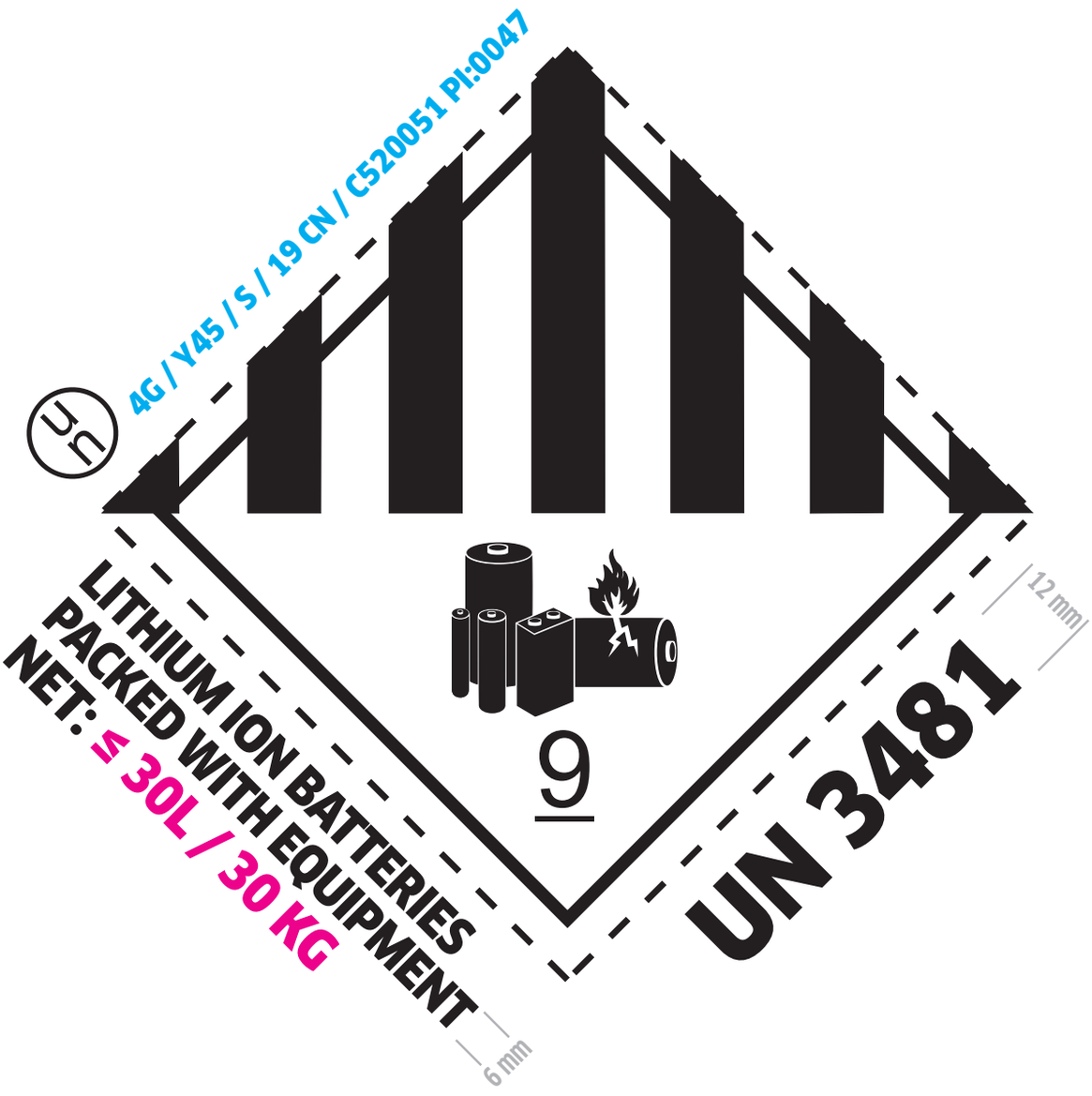
140x140mm
(edge length 100mm)

6b

A Li-Ion battery packed with equipment ≤ 30L / 30kg (device, not charger!)
--> Made in China
(Ex. LMO 36-46 Battery Set)

The inner box (= battery packaging box) is an UN-approved packing and will be placed in a CIQ-approved packing with or without layout (=device packaging).
--> ***Labelling refers to the packaging of the device.***

Note:
If made in China, use of CIQ-code is necessary.



- **Weight = "NET WEIGHT GG" in SAP (tab: basic data 2)**
  In case of multiple batteries: total net: x.xx kg
  --> must be briefed individually (product management is responsible)

- **= Must be briefed individually (packaging development is responsible)**

140x140mm
(edge length 100mm)

7a

A Li-Ion battery contained in equipment > 30kg
(Ex. BR 35/12)

A type-approved carton is not needed.
A normal, strong outer packaging with or without layout is sufficient.



- **Weight = “NET WEIGHT GG” in SAP (tab: basic data 2)**
  In case of multiple batteries: total net: x.xx kg
  --> must be briefed individually (product management is responsible)

140x140mm
(edge length 100mm)

7b

A Li-Ion battery contained in equipment ≤ 30L / 30kg
(Ex. BR 35/12)

A type-approved carton is not needed.
A normal, strong outer packaging with or without layout is sufficient.



- **Weight = "NET WEIGHT GG" in SAP (tab: basic data 2)**
  In case of multiple batteries: total net: x.xx kg
  --> must be briefed individually (product management is responsible)

140x140mm
(edge length 100mm)

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DANGEROUS GOODS LABELLING FOR BATTERIES WITH DIFFERENT KINDS OF PACKAGING

(outer boxes, pallets...)

For batteries ≤100Wh

A **A single Li-Ion-Battery** p. 20
(Ex. battery as special accessory, starter kit)

B **A single Li-Ion-Battery contained in equipment** p. 21
(Ex. WV 2, BVP)

C **A single Li-Ion-Battery packed with equipment** p. 22
(Ex. LMO 18-36 Battery Set, HV 1/1 Bp)

For batteries >100Wh

D **A single Li-Ion-Battery** p. 23
(Ex. Battery as special accessory, starter kit)

E **A single Li-Ion-Battery packed with equipment** p. 25
(Ex. K 2 Battery Set)
Battery in type-approved packaging

F **A Li-Ion-Battery contained in equipment** p. 26
(ex. BR 35/12 Bp Pack)

A single Li-Ion-Battery
(Ex. battery as special accessory, starter kit)

PACKED AS

LABELLING

Single packaging (with or without layout)
(contains a Li-Ion-Battery in a foil bag)



1



Outer box
(contains multiple boxes (with/without layout)



1*



OVERPACK

***WITH** OVERPACK

Pallet
(contains multiple outer boxes wrapped with foil)



1*



OVERPACK

***WITH** OVERPACK

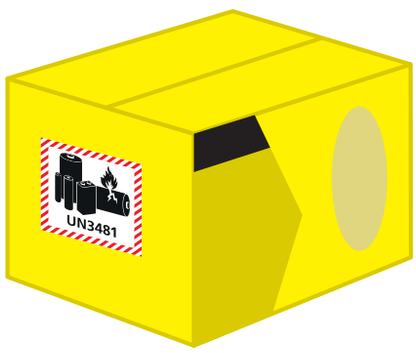
B

A single Li-Ion-Battery contained in equipment
(Ex. WV 2, BVP)

PACKED AS

LABELLING

Single packaging (with or without layout)
(contains Li-Ion-battery integratedin equipment)



2



Outer box
(contains multiple single boxes with or without layout)



2*



OVERPACK

***WITH** OVERPACK

Pallet
(contains multiple outer boxes surrounded by stretch foil)



2*



OVERPACK

***WITH** OVERPACK

C

A single Li-Ion-Battery packed with equipment
(Ex. LMO 18-36 Battery Set, HV 1/1 Bp)

PACKED AS

Brown packaging
(contains single Li-ion-Battery in foil bag)

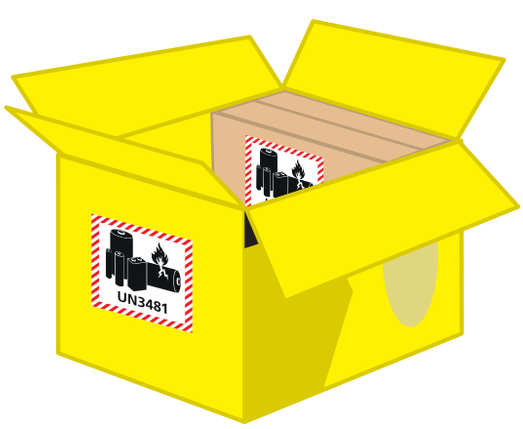


LABELLING

1



Single box (with or without layout)
(contains equipment + battery in brown box)



2



Note:
In this case, “OVERPACK” is not needed

Pallet
(contains multiple boxes (with or without layout)
surrounded by stretch foil)



2*



OVERPACK

***WITH** OVERPACK

D

A single Li-Ion-Battery
(Ex. Battery as special accessory, starter kit)

PACKED AS

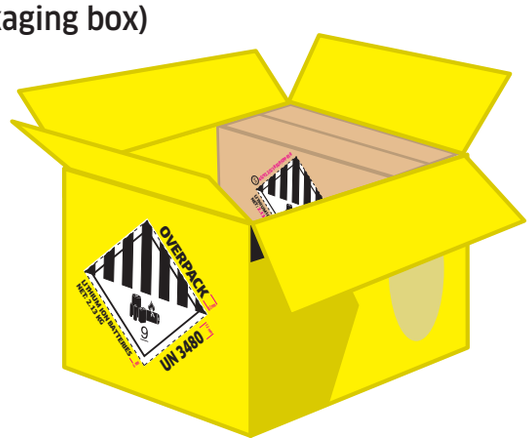
LABELLING

Brown packaging box (type-approved packaging box)
contains a single battery in foil bag)





Single packaging box (with layout)
(contains one battery in type approved brown packaging box)





When made in china and shipped without any outer packaging box, contact the dangerous goods department.

Outer packaging box
(contains multiple packaging boxes with layout or approved brown packaging boxes)



3*



*WITHOUT NET: > 30 KG

If made in China:

6*



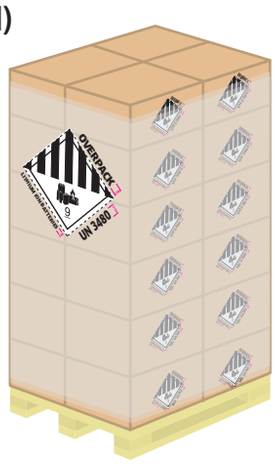
*WITHOUT NET: > 30 KG
***WITH** OVERPACK

D

A single Li-Ion-Battery
(Ex. Battery as special accessory, starter kit)

PACKED AS

Pallet
(carries multiple **outer packaging boxes** surrounded by stretch foil)



LABELLING



*WITHOUT NET: > 30 KG

E

A single Li-Ion-Battery packed with equipment
(Ex. K 2 Battery Set)
Battery in type approved packaging

PACKED AS

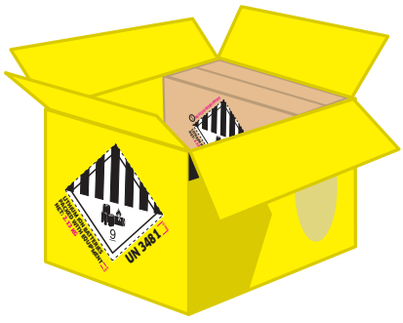
Brown packaging (=type approved packaging)
(contains single battery wrapped in foil bag)



LABELLING



Single packaging box (with or without layout)
(contains battery in brown box + additional equipment)



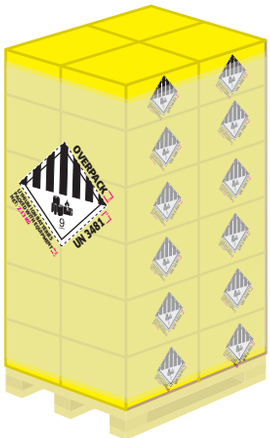


If made in China:

6



Pallet
(contains multiple box with or without layout)





***WITH** OVERPACK
*WITHOUT NET: > 30 KG

F

A Li-Ion-Battery contained in equipment
(Ex. BR 35/12 Bp Pack)

PACKED AS

Packaging with or without layout
(no type-approved packaging needed)
(contains battery in equipment)

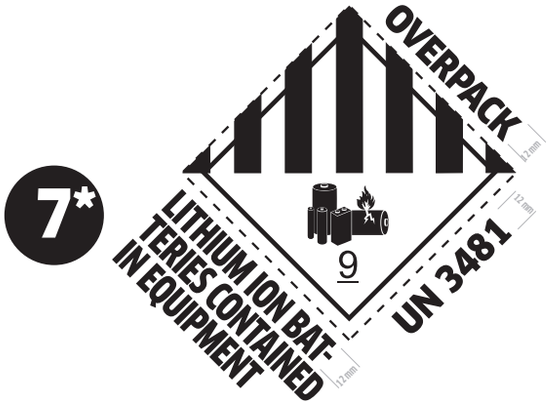


Outer box
(contains multiple boxes with our without layout)



LABELLING





***WITH** OVERPACK
*WITHOUT NET: > 30 KG

FAQ

Definitions
Equipment=device
Equipment in connection with Lithium ion cells or Lithium ion batteries means the device for which the battery or cell are designated. Due to this definition a charger is not an equipment.
Battery= accumulator/battery pack

What weight should be used?
“NET WEIGHT GG” in SAP (tab: basic data 2). This weight is referring to the battery pack. The weight will be set in coordination between product management and dangerous goods management.

What does OVERPACK mean ? (ADR/IMDG-Code (/IATA))
The usage of an overpack packaging does not serve for the safety of the contained dangerous goods. Overpack means an enclosure used to contain one or more packages, consolidated into a single unit easier to handle and stow during carriage.

Overpacks have to be marked with all necessary signs and dangerous goods labels regarding the labelling of the dangerous goods inside the package.
In conclusion, all dangerous goods labels have to be repeated on the overpack. Multiple identical labels have to be repeated only once. In addition the word “OVERPACK” (character height at least 12mm) has to be displayed.

Note: it is not allowed to repeat the UN type-approval code on the overpack packaging if the overpack packaging is not tested as the packaging with type approval.

What is a UN-approved packaging?
It is neccessary for batteries >100Wh.
For a safe transport of dangerous goods the product is only allowed to be packed in tested and approved packaging. Unless the legal specification intends otherwise, a UN-approved or type-approved packaging needs to be used.
A type approval can only be granted by the competent authority (in Germany: BAM= Bundesanstalt für Materialforschung und -prüfung). The Kärcher department for packaging development is responsible for the testing, approval and quality assurance of packaging boxes for the transport of dangerous goods.

Note: The meaning of the coding of a type-approved packaging box can be found on page 8.

Where can I find which information has to be written on a type-approved packaging box?
Type-approved packaging boxes are only needed for batteries > 100 Wh.
The different cases are explained on page 6 and following pages, the definition of a dangerous goods label can be found on page 7.

What do the abbreviations mean?
CIQ: China Inspection and Quarantine Bureau
UN: United Nations

What if a packaging box with layout is a type-approved packaging box?
A type approved packaging box is only needed for batteries > 100 Wh.
That case is explained in case 4 (page 10)

What is a CIQ-number, that is needed for products „made in China" with >100Wh ?
For further information read page 8.

FAQ

Contact persons:

Dangerous goods management:
Thomas Häußermann
Vanessa Klemenz

Productmanagement:
Markus Stanulla
Britt Napoleone

Packaging layout:
Christian Napoleone

Packaging:
CCK-P (appropriate contact person)