

This packing instruction applies to UN Nos. 3090, 3091, 3480, 3481, 3551 and 3552 transported for disposal or recycling, either packed together with or packed without non-lithium batteries.

- (1) Cells and batteries must be packed in accordance with the following:
 - (a) The following packagings are authorised, provided that the general provisions of **4.1.1** and **4.1.3** are met;
Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2); and
Jerricans (3A2, 3B2, 3H2).
 - (b) Packagings must conform to the packing group II performance level.
 - (c) Metal packagings must be fitted with an electrically non-conductive lining material (e.g., plastics) of adequate strength for the intended use.
- (2) However, lithium ion or sodium ion cells with a watt-hour rating of not more than 20 Wh, lithium ion or sodium ion batteries with a watt-hour rating of not more than 100 Wh, lithium metal cells with a lithium content of not more than 1 g and lithium metal batteries with an aggregate lithium content of not more than 2 g may be packed in accordance with the following:
 - (a) In strong outer packaging up to 30 kg gross mass meeting the general provisions of 4.1.1, except 4.1.1.3, and 4.1.3.
 - (b) Metal packagings must be fitted with an electrically non-conductive lining material (e.g., plastics) of adequate strength for the intended use.
- (3) For cells or batteries contained in equipment, strong outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use, may be used. Packagings need not meet the requirements of 4.1.1.3. Equipment may also be offered for transport unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained.
- (4) In addition, for cells or batteries with a gross mass of 12 kg or more employing a strong, impact resistant outer casing, strong outer packagings constructed of suitable material and of adequate strength and design in relation to the packagings capacity and its intended use, may be used. Packagings need not meet the requirements of 4.1.1.3.

NOTE: *The packagings authorised in (3) and (4) may exceed a net mass of 400 kg (see 4.1.3.3)*

Additional requirements:

1. Cells and batteries must be designed or packed to prevent short circuits and the dangerous evolution of heat.
2. Protection against short circuits and the dangerous evolution of heat includes, but is not limited to,
 - a) individual protection of the battery terminals,
 - b) inner packaging to prevent contact between cells and batteries,
 - c) batteries with recessed terminals designed to protect against short circuits, or
 - d) the use of an electrically non-conductive and non-combustible cushioning material to fill empty space between the cells or batteries in the packaging.
3. Cells and batteries must be secured within the outer packaging to prevent excessive movement during transport (e.g. by using a non-combustible and electrically non-conductive cushioning material or through the use of a tightly closed plastics bag).