

**COMMITTEE OF EXPERTS ON THE TRANSPORT OF
DANGEROUS GOODS AND ON THE GLOBALLY
HARMONIZED SYSTEM OF CLASSIFICATION
AND LABELLING OF CHEMICALS**

Sub-Committee of Experts on the
Transport of Dangerous Goods

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Item 4 of the provisional agenda

ELECTRIC STORAGE SYSTEMS

Revision of Packing Instruction 903:Revision to ST/SG/AC.10/C.3/2009/31

Transmitted by the expert from the United Kingdom¹

1. The Sub-Committee will recall that the expert from the United Kingdom presented ST/SG/AC.10/C.3/2009/9 during the June 2009 session. This paper drew on the work carried out by the International Civil Aviation Organization (ICAO) dangerous goods panel in developing separate packing instructions which would differentiate between batteries and cells, batteries and cells packed with equipment and batteries and cells packed in equipment, see ICAO packing instructions 965-970.

2. These new ICAO packing instructions made the clear distinction that the packaging of batteries and cells contained in equipment ~~or~~ and the outer packaging of batteries and cells packed with equipment does not have to be UN type tested, but batteries and cells transported by themselves had to ~~undergo the full rigour of UN testing~~ be packed in UN tested packaging. The expert from United Kingdom argued that the current P903 in the Model Regulations did not make this clear distinction and his paper put forward amendments to this packing instruction to reflect this difference.

3. When he presented his paper, the expert from the United Kingdom made it clear that the proposals which it contained should be regarded as in draft as ~~there were~~ further changes had been made at the ~~recent~~ ICAO panel meeting in May. The revised packing instruction below takes into account these new developments as well as comments by the Dangerous Goods Advisory Council (DGAC) and the International Air Transport Association (IATA). The expert from the United Kingdom asks that the Sub-Committee consider and agree these revised proposals.

¹ In accordance with the programme of work of the Sub-Committee for 2009-2010 approved by the Committee at its fourth session (refer to ST/SG/AC.10/C.3/68, para. 118 (c) and ST/SG/AC.10/36, para. 14).

P903	PACKING INSTRUCTION	P903
This instruction applies to UN Nos. 3090, 3091, 3480 and 3481.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1) For UN 3090 and 3480:		
(a) Packagings		
Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);		
Jerricans (3A2, 3B2, 3H2);		
Boxes (4A, 4B, 4C1, 4C2, 4D, 4F, 4G, 4H2)		
Packagings shall conform to the packing group II performance level.		
Cells and batteries shall be packed in packagings so that the cells and batteries are protected against damage that may be caused by the movement or placement of the cells or batteries within the packaging.		
(b) Batteries exceeding 12kg gross mass		
Batteries or cells of a gross mass of 12kg or more, employing a strong, impact resistant outer casing, and assemblies of such batteries or cells, may be:		
<ul style="list-style-type: none"> (i) packed in strong outer packagings, in protective enclosures (e.g., in fully enclosed or wooden slatted crates); or (ii) unpackaged on pallets or other handling devices 		
Batteries or cells shall be secured to prevent inadvertent movement, and the terminals shall not support the weight of other superimposed elements. Packagings need not meet the requirements of 4.1.1.3		
(2) For UN 3091 and 3481		
(a) Cells or batteries packed with equipment		
When batteries or cells <u>cells or batteries</u> are packed together with equipment, they shall be packed in packagings as permitted for UN 3090 and 3480.		
<u>They shall:</u> e packagings containing the cells and batteries be placed in packagings shall conforming to the packing requirements in part 1(a) of this packing instruction., then placed with the equipment in an outer packaging or		
- be placed in packagings that completely enclose the cell or battery, then placed with equipment in a package conforming to the requirements in part 1(a) of this packing instruction		
<u>The equipment must be secured against movement within the outer packaging</u>		
<u>For the purpose of this packing instruction, “equipment” means apparatus requiring the lithium ion batteries with which it is packed for its operation</u> Cells and batteries shall be packed in packagings so that the cells and batteries are protected against damage that may be caused by the movement or placement of the cells or batteries within the packaging.		

(b) Cells or batteries contained in equipment

When cells ~~and~~or batteries are contained in equipment, the equipment shall be packed in strong outer packagings [meeting the requirements of 4.1.1.1](#) in such a manner as to prevent accidental operation during transport. Packagings for [cells or](#) batteries ~~or cells~~ contained in equipment need not meet the requirements of 4.1.1.3.

Additional requirement:

Cells and batteries shall be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit.