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**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****Fifty-third session**

Geneva, 25 June-4 July 2018

Item 3 of the provisional agenda

**Listing, classification and packing****Revision of packing instruction P801****Transmitted by the expert from Canada\*****Introduction**

1. At the forty-ninth, fifty-first and fifty-second sessions of the Sub-Committee, the expert from Canada presented formal and informal documents proposing modifications to packing instruction P801.
2. At its fifty-second session, the Sub-Committee held further discussions on the revision of packing instruction P801 (see ST/SG/AC.10/C.3/104, paragraph 52). Several experts shared the Canadian expert's concern regarding persons having trouble understanding and complying with the existing requirements of P801 as expressed in formal proposal ST/SG/AC.10/C.3/2017/44 and informal proposals INF.52 and INF.61 (fifty-second session). Some experts were in favour of informal document INF.61 while others had some minor suggestions for further improvement. The Sub-Committee invited the expert from Canada to consider submitting a revised proposal to the fifty-third session. This formal proposal (ST/SG/AC.10/C.3/2018/21), reflects the outcome of the discussions raised during the fifty-second session and the work done subsequently.
3. The main change in this formal proposal compared to the proposals presented at the forty-nine, fifty-first and fifty-second sessions, is the modification to include only the general provisions references that packagings listed in packing instruction P801 are required to meet.
4. Other changes to current packing instruction P801 brought forward in this proposal include:
  - (a) Modification of the structure of the packing instruction;
  - (b) Modification and clarification of certain packaging requirements such as the potential for release of electrolyte or the protection against short-circuits;

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\* In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

- (c) Clarification of the requirements for the transport of batteries in what is currently referred to as “battery boxes”; and
  - (d) Modification of special packing provision PP16 of packing instruction P003 to permit the transport of used UN 2800 Batteries, wet, non-spillable in stainless steel or plastics bins in accordance with packing instruction P801(4).
5. To summarize what has been identified and discussed during prior sessions, the current packing instruction P801:
- (a) Does not address batteries that are likely to leak electrolyte. Batteries may be likely to leak electrolyte because of damage to their casing or by design if they are of the flooded type with vented caps. The potential release of electrolyte should be minimized to promote the safe handling and transport of batteries.
  - (b) Permits the transport of used batteries loosely in “battery boxes”. However, it is not clear to the expert from Canada how used batteries can be transported loose and meet the additional requirements listed in P801 (e.g., packaged or secured to prevent inadvertent movement). Furthermore, the concept of “battery box” is not consistent with the definition of a box found in sub-section 1.2.1 of the Recommendations.
  - (c) Requires that every battery transported under this packing instruction be protected against short-circuits. However, this requirement might be overly stringent for used batteries transported for disposal or recycling, which are likely to contain little to no charge.
6. At the fifty-second session, the expert from Canada proposed modifications to the general provisions references listed in packing instruction P801. Some delegations questioned whether general provision 4.1.1 could apply to stainless steel and plastics bins, since they may not be considered as “packagings” if they do not have covers. However, if we apply that same logic to the other packagings currently listed in packing instruction P801, wooden slatted crates and pallets would not be considered as packagings and thus, could not be required to comply with general provision 4.1.1.
7. Lastly, as expressed by some delegations at the fifty-second session and building on the requirements of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), the expert from Canada is proposing to amend special packing provision PP16 in packing instruction P003 to permit the transport of used UN 2800 batteries in stainless steel or plastics bins in accordance with packing instruction P801(4).

## Proposal

8. Amend packing instruction P801 in 4.1.4.1 of Chapter 4.1 to read as follows (new text is underlined and deleted text ~~struck through~~):

P801	PACKING INSTRUCTION	P801
This instruction applies to <del>new and used batteries assigned to</del> UN Nos. 2794, 2795 or 3028		
The following packagings are authorized, provided that the <del>general</del> provisions of <u>4.1.1.1, 4.1.1.2, 4.1.1.6</u> <del>4.1.1, except 4.1.1.3, and 4.1.3</del> are met:		
<ul style="list-style-type: none"> <li>(1) Rigid outer packagings;</li> <li>(2) Wooden slatted crates;</li> <li>(3) Pallets.</li> </ul> <p><u>Additionally, the following conditions shall be met:</u></p> <ul style="list-style-type: none"> <li>(a) <u>Batteries stacks shall be in tiers separated by a layer of electrically non-conductive material;</u></li> <li>(b) <u>Battery terminals shall not support the weight of other superimposed elements;</u></li> <li>(c) <u>Batteries shall be packaged or secured to prevent inadvertent movement;</u></li> <li>(d) <u>Batteries shall not leak under normal conditions of transport or appropriate measures shall be taken to prevent the release of electrolyte from the package (e.g. individually packaging batteries or other equally effective methods); and</u></li> <li>(e) <u>Batteries shall be protected against short circuits.</u></li> </ul>		
<ul style="list-style-type: none"> <li>(4) <del>Used storage batteries may also be transported loose in</del> <u>Stainless steel or plastics bins may be used to transport used batteries</u> <del>battery boxes capable of containing any free liquid.</del></li> </ul> <p><u>Additionally, the following conditions shall be met:</u></p> <ul style="list-style-type: none"> <li>(a) <u>The bins shall be resistant to the electrolyte contained in the batteries;</u></li> <li>(b) <u>The bins shall not be filled to a height greater than the height of their sides;</u></li> <li>(c) <u>The outside of the bins shall be free of residues of electrolyte contained in the batteries;</u></li> <li>(d) <u>Under normal conditions of transport, no electrolyte shall leak from the bins;</u></li> <li>(e) <u>Measures shall be taken to ensure that filled bins cannot lose their content; and</u></li> <li>(f) <u>Measures shall be taken to prevent short circuits.</u></li> </ul>		
<b>Additional requirements:</b>		
<ul style="list-style-type: none"> <li>1. <del>Batteries shall be protected against short circuits</del></li> <li>2. <del>Batteries stacked shall be adequately secured in tiers separated by a layer of electrically non-conductive material.</del></li> <li>3. <del>Battery terminals shall not support the weight of other superimposed elements.</del></li> <li>4. <del>Batteries shall be packaged or secured to prevent inadvertent movement.</del></li> </ul>		

9. Amend special provision PP16 in packing instruction P003 in 4.1.4.1 of Chapter 4.1 to read as follows (new text is underlined):

“PP16 “For UN2800, batteries shall be protected from short circuit within the packaging. Used batteries may be transported in accordance with packing instruction P801 (4).”.