



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-SECOND MEETING

Montréal, 5 to 16 October 2009

Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2011-2012 Edition

WATT HOUR MARKING ON LITHIUM ION BATTERIES

(Presented by the Dangerous Goods Advisory Council)

SUMMARY

This paper proposes to permanently exempt small lithium ion batteries manufactured before 1 January 2009 from the Watt Hour marking

Action by the DGP: To provide for practical implementation of the lithium ion battery Wh marking requirement, the DGP is invited to agree that the 31 December 2010 limiting date for batteries manufactured before 1 January 2009 be removed from Section II of Packing Instructions 965, 966 and 967 consistent with the recent UN amendment, as shown in the appendix..

1. INTRODUCTION

1.1 Based on an amendment included in the 16th revised edition of the UN Model Regulations, the text in Section II of Packing Instructions 965, 966 and 967 reads:

- 2) for lithium ion batteries, the Watt-hour rating is not more than 100 Wh;
 - the Watt-hour rating must be marked on the outside of the battery case except for those batteries manufactured before 1 January 2009, **which may be transported in accordance with the provisions of this section and without the marking until 31 December 2010;**

1.2 The June 2009 UN Sub-Committee meeting subsequently modified this requirement, deciding that batteries manufactured before 1 January 2009 may continue to be transported without a watt-hour marking after 31 December 2010. The change was made in recognition of problems marking existing batteries would pose to consumers and industry. The Subcommittee's approach is consistent with the manner in which similar requirements have been implemented in the past. The change has the effect of eliminating the above bolded text.

APPENDIX

PROPOSED AMENDMENT TO THE TECHNICAL INSTRUCTIONS

PACKING INSTRUCTION 965

Passenger and cargo aircraft for UN 3480

This entry applies to lithium ion or lithium polymer batteries in Class 9 (Section I) and lithium ion or lithium polymer batteries subject to specific requirements of these Instructions (Section II).

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SECTION II

Lithium ion cells and batteries offered for transport are not subject to other additional requirements of these Instructions if they meet the requirements of this section.

Lithium batteries, identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons).

Lithium ion cells and batteries may be offered for transport if they meet the following:

- 1) for lithium ion cells, the Watt-hour rating (see Attachment 2) is not more than 20 Wh;
- 2) for lithium ion batteries, the Watt-hour rating is not more than 100 Wh;
— the Watt-hour rating must be marked on the outside of the battery case except for those batteries manufactured before 1 January 2009, ~~which may be transported in accordance with the provisions of this section and without the marking until 31 December 2010;~~
- 3) each cell or battery is of the type proven to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, section 38.3.

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PACKING INSTRUCTION 966

Passenger and cargo aircraft for UN 3481 (packed with equipment) only

This entry applies to lithium ion or lithium polymer batteries packed with equipment in Class 9 (Section I) and lithium ion or lithium polymer batteries packed with equipment subject to specific requirements of these Instructions (Section II).

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SECTION II

Lithium ion cells and batteries (including lithium polymer) packed with equipment offered for transport are not subject to other additional requirements of these Instructions if they meet the requirements of this section.

Lithium batteries, identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons).

Lithium ion cells and batteries may be offered for transport if they meet the following:

- 1) for lithium ion cells, the Watt-hour rating (see Attachment 2) is not more than 20 Wh;
- 2) for lithium ion batteries, the Watt-hour rating is not more than 100 Wh;
— the Watt-hour rating must be marked on the outside of the battery case except for those batteries manufactured before 1 January 2009, ~~which may be transported in accordance with the provisions of this section and without the marking until 31 December 2010;~~
- 3) each cell or battery is of the type proven to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, section 38.3.

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PACKING INSTRUCTION 967

Passenger and cargo aircraft for UN 3481 (contained in equipment) only

This entry applies to lithium ion or lithium polymer batteries contained in equipment in Class 9 (Section I) and lithium ion or lithium polymer batteries contained in equipment subject to specific requirements of these Instructions (Section II).

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SECTION II

Lithium ion cells and batteries (including lithium polymer) contained in equipment offered for transport are not subject to other additional requirements of these Instructions if they meet the requirements of this section. Lithium batteries, identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport (e.g. those being returned to the manufacturer for safety reasons).

Lithium ion cells and batteries may be offered for transport if they meet the following:

- 1) for lithium ion cells, the Watt-hour rating (see Attachment 2) is not more than 20 Wh;
- 2) for lithium ion batteries, the Watt-hour rating is not more than 100 Wh;
— the Watt-hour rating must be marked on the outside of the battery case except for those batteries manufactured before 1 January 2009, which may be transported in accordance with the provisions of this section and without the marking until 31 December 2010;
- 3) each cell or battery is of the type proven to meet the requirements of each test in the UN *Manual of Tests and Criteria*, Part III, section 38.3.

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