



DANGEROUS GOODS PANEL (DGP)

TWENTY-FIFTH MEETING

Montréal, 19 to 30 October 2015

Agenda Item 5: Development of a comprehensive strategy to mitigate risks associated with the transport of lithium batteries including development of performance-based packaging standards and efforts to facilitate compliance

SECTION II OF PACKING INSTRUCTIONS 965 AND 968 FOR UN 3090 AND UN 3480

(Presented by the International Coordination Council for Aerospace Industries Associations (ICCAIA))

SUMMARY

This information paper supports the proposals in DGP/25-WP/21 and DGP/25-WP/29 to exclude the provisions of Section II from Packing Instructions 965 and 968 for lithium ion batteries (UN3480) and lithium metal batteries (UN3490).

As recommended at the last international multidisciplinary lithium battery transport coordination meeting, the operator should perform a full risk assessment before carrying lithium batteries as cargo. To enable them to do so, all lithium batteries need to be fully declared.

1. INTRODUCTION

1.1 This information paper refers to the threat related to current cargo compartment fire protection standards and the transport of lithium batteries as cargo described in DGP/25-IP/6 (which supports DGP/25-WP/24). It focuses on the specific issue linked to lithium batteries packaged in accordance with Section II of Packing Instructions 965 and 968, which are not required to be fully declared (hence providing very limited visibility for the operator on the quantity of Section II lithium batteries carried).

1.2 Because of the very limited cargo compartment fire protection capabilities against fires involving a ‘high density’ of lithium batteries, there are the following problems:

- a) the sensitivity of the wording ‘high density’ following the test results of the Federal Aviation Administration (FAA) William J. Hughes Technical Centre this summer (“The aircraft hazards of flammable gasses produced by lithium batteries in thermal runaway”); and
- b) the common practice of large shipments/high density of Section II lithium batteries, e.g. overpacks.

In order to eliminate these problems, it is important to include Section II lithium batteries of Packing Instructions 965 and 968 when applying mitigation strategies.

1.3 As an example, Section II of Packing Instruction 965 allows an energy density of eight cells with a maximum watt-hour rating of 20 Wh each = 160 Wh or two batteries with a maximum watt-hour rating of 100 Wh each = 200 Wh per package. This allowable energy density is greater than the energy contained in the cells during the FAA tests mentioned above.

2. DISCUSSION

2.1 Based on the arguments above and the recommendation of the Third International Multidisciplinary Lithium Battery Transport Coordination Meeting that each operator should perform a full risk assessment before carrying lithium batteries as cargo, which is further supported by recommendations from manufacturers which produce aircraft used for carriage of commercial cargo, the regulatory framework needs to be written to allow the operator to conduct the recommended risk assessment.

2.2 To enable a holistic risk assessment to be completed, the operator must be aware of all lithium batteries, including Section II lithium batteries, carried as cargo in the cargo compartments. As long as Section II lithium batteries do not have to be declared (in contrast to the requirements for Section IA and IB lithium batteries), these lithium batteries will not be considered in any risk assessment.

2.3 We support the essential regulatory changes as proposed in DGP/25-WP/21 and DGP/25-WP/29 to eliminate Section II from Packing Instructions 965 and 968 so as to enable the operator, with this step, to complete a full risk assessment and consequently to implement any further mitigation means, if necessary.

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