



NOTE DE TRAVAIL

GROUPE D'EXPERTS SUR LES MARCHANDISES DANGEREUSES (DGP)

VINGT-CINQUIÈME RÉUNION

Montréal, 19 – 30 octobre 2015

Point 5 : Élaboration d'une stratégie globale pour réduire des risques liés au transport de piles au lithium, incluant la mise au point de normes d'emballage fondées sur la performance et des initiatives pour faciliter la conformité

**TRANSPORT DE PILES ET DE BATTERIES AU LITHIUM IONIQUE
COMME FRET AÉRIEN**

(Note présentée par M. Rogers)

(Faute de ressources, seuls le résumé et l'appendice ont été traduits)

RÉSUMÉ

La présente note de travail contient une proposition officielle dont l'objet est d'interdire le transport de piles et de batteries au lithium ionique à bord d'aéronefs de passagers.

Suite à donner par le Groupe DGP : Le Groupe DGP est invité à envisager d'interdire le transport de piles et de batteries au lithium ionique à bord d'aéronefs de passagers comme l'indique l'appendice à la présente note.

1. INTRODUCTION

1.1 At the DGP Working Group Meeting in April 2015 (DGP-WG/15, Montréal, 27 April to 1 May 2015), International Coordinating Council of Aerospace Industries Associations (ICCAIA), in cooperation with the International Federation of Air Line Pilots' Associations (IFALPA), presented a working paper addressing the transport of lithium ion batteries on passenger aircraft. One of the recommendations was that high density packages of lithium ion batteries and cells (UN 3480) not be transported as cargo on passenger aircraft until such time as safer methods of transport were established and followed.

1.2 In part because no concise definition of "high density" was presented in April, no further action was taken at that time to address the recommendation to not transport high density shipments of lithium ion batteries. The working group agreed, however, to convene a third international multidisciplinary lithium battery coordination meeting to address the transport provisions for lithium batteries, which was held in Montréal from 28 to 30 July 2015.

1.3 A single definition of high density in terms of numbers of batteries, cells, or packages is not available, due to the various chemistries, packaging configurations, states of charge, and other variables allowed by the Technical Instructions for the transport of lithium ion batteries. Additionally, the configuration of the cargo compartment in which the batteries are transported, including compartment volume and fire protection features, is not considered. A “high density” shipment is therefore any shipment that may overwhelm the aircraft fire suppression system in the cargo compartment being used if a single cell or battery in the shipment goes into thermal runaway or is ignited by an external fire.

1.4 The propensity to overwhelm an aircraft’s fire suppression system is determined by the energy available in each cell or battery, and the likelihood that a fire in a cell or battery will propagate to other cells or batteries in the shipment. As such, a single large format battery may be considered high density, as may a single package of 5 kg of lithium ion batteries, which may contain as many as 250 individual cells.

1.5 Additionally, no provisions exist within the Technical Instructions to limit placing multiple packages of lithium ion batteries together in a single cargo compartment, whether or not as part of an overpack. This could result in packages that would otherwise not be considered high density forming a high density shipment within a single cargo compartment under the current provisions.

1.6 The preferable method to prevent shipments of lithium ion batteries from potentially overwhelming an aircraft’s fire suppression system is therefore to develop a packaging standard that contains the hazardous effects of a fire to within the package while protecting the package from an external fire, and one which prevents propagation of a fire between packages. Following the latest multidisciplinary meeting in July, it is expected that an independent standard writing group will develop such a standard over the next few years. Until that standard is developed and implemented, shipments of lithium ion batteries (UN 3480) should not be carried aboard passenger aircraft.

2. ACTION BY THE DGP

2.1 The DGP is invited to prohibit shipments of UN 3480 — **Lithium ion batteries** on passenger aircraft, as shown in the appendix to this working paper.

APPENDICE

PROPOSITION D'AMENDEMENT DE LA PARTIE 3 DES INSTRUCTIONS TECHNIQUES

Partie 3

LISTE DES MARCHANDISES DANGEREUSES,
DISPOSITIONS PARTICULIÈRES ET
QUANTITÉS LIMITÉES ET EXEMPTÉES

(...)

Chapitre 2

AGENCEMENT DE LA LISTE DES
MARCHANDISES DANGEREUSES (TABLEAU 3-1)

(...)

Tableau 3-1. Liste des marchandises dangereuses

Matière ou objet	N° ONU	Classe ou division	Risques subsidiaires	Étiquettes	Divergences des États	Dispositions particulières	Groupe d'emballage ONU	Quantité exemptée	Aéronefs de passagers et aéronefs cargos		Aéronefs cargos seulement	
									Instruction d'emballage	Quantité nette maximale par colis	Instruction d'emballage	Quantité nette maximale par colis
1	2	3	4	5	6	7	8	9	10	11	12	13
Piles au lithium ionique (y compris les piles au lithium ionique à membrane polymère)	3480	9		Marchandises dangereuses – Piles au lithium	US 3	A88 A99 A154 A164 A183 A206		E0	Voir 965 INTERDIT		Voir 965	
(...)												