



工 作 文 件

危险品专家组 (DGP)

第二十四次会议

2013年10月28日至11月8日，蒙特利尔

议程项目2： 拟定对《危险物品安全航空运输技术细则》(Doc 9284号文件)的修订建议，以便纳入2015年—2016年版

特殊规定 A123

(由 J. McLaughlin 提交)

摘要

本工作文件提议只对9伏特以上的电池才要求注明遵守特殊规定 A123。

由危险品专家组采取的行动：请危险品专家组修订特殊规定 A123，仅对超过9伏的电池，才注明“不受限制”字样和特殊规定号 A123。

1. INTRODUCTION

1.1 Shippers must indicate on the air waybill when a substance or article is exempted from the requirements of the Technical Instructions by the prescribed conditions of a special provision. This requirement is intended to serve as an additional check on the shipper to ensure compliance.

1.2 Special Provision A123 applies to “Batteries, electric storage”. Examples of such batteries are alkali-manganese, zinc-carbon, nickel-metal hydride and nickel-cadmium batteries. These batteries are widely available (AAA, AA, C, D, and 9 volt are most common size batteries) and are used in a variety of consumer devices such as flashlights, toys, games and smoke detectors. Prior to transport, these batteries and devices with installed batteries must be protected from short circuit and unintentional activation. The words not-restricted and the special provision number A123 must be provided on an air waybill when an air waybill is used.

1.3 The requirements of Special Provision A123 apply to all batteries and devices, including those that pose little to no risk in transportation (e.g. 1.5 volt alkaline batteries and devices powered by such batteries). Our experience with dry batteries (up to 9 Volts) indicates that undischarged dry batteries pose a hazard in transportation, but that hazard is negligible and can be minimized through short circuit protection, while spent or used dry cell batteries pose virtually no risk of generating a dangerous amount of heat or short circuits. The U.S. Hazardous Materials Regulations includes the provision of A123 (49 CFR §172.102 Special Provision A130), but applies the “not restricted” documentation requirement only to batteries exceeding 9 volts. The 9 volt threshold was based on test data demonstrating the effects of various types, sizes, and configurations of common consumer dry cell batteries when intentionally short circuited. The data represents the maximum temperature observed when undischarged alkaline and carbon zinc batteries; AA, AAA, D (1.5V) were placed randomly into a container, lantern (6V) battery sizes intentionally short circuited; and 12 D cell batteries connected in series (19.4V) and intentionally short circuited:

Battery Type	Maximum Temperature (Celsius)
Alkaline AA/AAA	28.5
Carbon Zinc AA/AAA	26.2
Alkaline Lantern	151.2
Carbon Zinc Lantern	137.8
D Cell connected in series (12 batteries)	109.4

1.4 Taking into account the data does not address all dry cell chemistries, and limited configurations and voltage levels, the U.S. DOT adopted a measured approach by applying the “not restricted” statement only to consignments containing batteries exceeding 9 volts. This addressed the practical challenges for additional documentation requirements on common small consumer batteries while maintaining focus on additional safety measures for larger batteries.

1.5 While it is important to ensure all batteries are protected from short circuits and devices protected from unintentional activation, the additional requirement to indicate compliance with Special Provision A123 appears unnecessarily burdensome in the case of low voltage dry cell batteries.

1.6 For dry batteries greater than 9 volts, a notification on an air waybill or other shipping document is appropriate. This threshold would apply the notification requirements to higher voltage batteries that pose a comparatively greater risk in transport if short circuited but would largely exempt individual consumers from this requirement.

附录

《技术细则》第 3 部分的修订提案

第 3 部分

危险物品表，特殊规定和限制数量与例外数量

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第 3 章

特殊规定

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表 3-2 特殊规定

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A123

本条目适用于在表 3-1 中未另行列出的“Batteries, electric storage”（蓄电池）。此种电池如：碱锰电池、锌碳电池、镍氢电池和镍镉电池。具有潜在放热危险性的任何带电电池或以电池为动力的装置、设备或车辆都必须做好运输准备，以防止下列情形：

- a) 短路现象（例如：对于电池，对裸露的电极做有效的绝缘处理；对于设备，断开电池的连接，对裸露的电极做绝缘保护）；和
- b) 意外启动。

对于电压超过 9 伏的电池，在发布航空货运单时，货运单上必须标明“不受限制”的字样和特殊规定号 A123。

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