



香港特別行政區政府
民航處

Civil Aviation Department

The Government of the Hong Kong Special Administrative Region

Dangerous Goods Advisory Circular DGAC 2/2021

Recommendations to enhance packaging for cargo with lithium ion or metal batteries contained in equipment

This Department (“the CAD”) noted that the packaging of certain air shipments declared to be lithium ion or metal batteries in compliance with Section II of PI967 or PI970 under the International Civil Aviation Organisation’s Technical Instructions for the Safe Transport of Dangerous Goods by Air (“ICAO TIs”) may not be able to provide adequate protection to the equipment contained therein (e.g. use of soft-padded envelopes), while it is difficult for cargo acceptance staff to determine if the equipment can afford equivalent protection to the built-in batteries. Besides, the packages concerned are often loosely placed in overpacks¹ of nylon bags which also contain assorted commodities and are shipped in bulk.

2. In this connection, the CAD hereby introduces two recommendations for adoption by the air cargo industry in addition to the requirements stipulated under the ICAO TIs. When an overpack is used for packages prepared in accordance with Section II of PI967 or PI970 –

- i. the packaging materials for the overpack should be **strong rigid** (e.g. carton box of adequate strength). **Nylon bags alone should not be considered as strong rigid** (see Figure 1A). They may only be used as an extra layer of protection for strong rigid overpacks of PI 967 and PI 970 Section II lithium battery shipments (see Figure 1B);

and

- ii. the packages concerned should be **secured within the overpack** in order to provide further assurance on the protection of the lithium ion or metal batteries contained in equipment therein (see Figure 1C).

¹ The ICAO TIs defines overpack as “an enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage”. A unit load device is not considered as an overpack.

3. The CAD hereby strongly urges all stakeholders in the air cargo industry especially shippers to adopt the above-mentioned enhanced packaging measures with a view to providing further protection to cargo with lithium batteries contained in equipment and ensuring aviation safety.



A.



B.



C.



D.

Figure 1. Illustration of enhanced packaging measures

Reminder to industry

4. In addition, the CAD would also like to remind the air cargo industry to keep up the various risk mitigating measures being taken, some of which are described below –

Shippers, freight forwarders and aircraft operators

- i. Handling lithium battery shipments with care, and preventing cargo packages from rough handling (such as impact, crush, etc.) or falling from height;

and

- ii. In case of doubt, documented clarification from the shippers about the actual contents of the shipments should be sought, and appropriate checks on such shipments should be conducted with documented evidence to demonstrate on record that due diligence has been exercised by the parties concerned.

Aircraft operators

- iii. Taking into consideration factors such as quantity of lithium battery shipments, types of lithium batteries, the risk profiles of lithium battery suppliers and their quality control systems, etc. when conducting safety risk assessment for the transport of lithium batteries;

and

- iv. Applying additional checking on certain shipments, taking into account results of the safety risk assessment and relevant quality control activities, and previous occurrence record of relevant parties, etc., as appropriate.

5. Should there be any query regarding this circular, please contact the Dangerous Goods Office at 2910 6856 or 2910 6857.

– END –

Issue date: 3 August 2021

An electronic version of this circular can be downloaded at
<http://www.cad.gov.hk/english/DGAC.html>