



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 2/2012

Safe Transport of Lithium Batteries

Over the past six months, we have received four reports from foreign civil aviation authorities and airlines where lithium batteries on flights departed from Hong Kong caught fire at their destinations after unloading from the aircraft. Although all the fires were subsequently extinguished and no person was injured, the incidents revealed serious deficiencies on the part of the shippers.

All the lithium batteries involved were either **“misdeclared”** or **“undeclared”**.

In one case, the consignment contained fully regulated Class 9 lithium ion batteries INCORRECTLY declared and consigned as “excepted” lithium ion batteries. The other three cases involved UNDECLARED excepted lithium ion or lithium metal batteries. Moreover, for all cases, the consignments did not comply with their respective ICAO Technical Instructions Packing Instructions.

Figures 1 to 4 are photographs of the subject lithium batteries mentioned above.

Figure 1a – External appearance of the fully regulated lithium ion battery



Figure 1b – Damage after the fire



Figure 1c – Labeling, outer and inner packagings of an identical package



Figure 2 – Short circuit and the resulting fire damage of an undeclared package of lithium metal button cells



Figure 3 – Fire damage of an undeclared lithium ion battery for computer



Figure 4 – Fire damage of two undeclared lithium ion cells sent inside an envelope



In view of the serious potential hazards associated with misdeclared / undeclared lithium batteries, we would like to remind all shippers and freight forwarders consigning lithium batteries to comply with the followings:

1. Defective, waste or untested batteries must not be transported
2. Lithium batteries must be tested to the safety standards of the UN Manual of Tests and Criteria, Part III, subsection 38.3
3. The Watt-hour (Wh) rating must be marked on the outside of the battery case

4. The types of lithium batteries must be accurately shown on the air transport documents and packages
5. Lithium batteries must be protected from short circuit by using proper inner packaging and the equipment installed with lithium batteries must be protected from inadvertent activation
6. The outer packaging must protect the lithium batteries from damage caused by falling from a height of up to 1.2 m (4 ft)
7. Lithium ion batteries rated 100 Wh and more must be declared and consigned as Class 9 dangerous goods, ie. fully regulated
8. The outer packaging of a fully regulated lithium batteries consignment must meet Packing Group II performance standards for UN specification packagings
9. The shippers and freight forwarders of fully regulated lithium batteries must have attended and passed a Dangerous Goods Regulations training course within the past 24 months

Shippers and freight forwarders are required by law to ensure that the dangerous goods they consign are properly classified, packed, marked, labelled and declared. Persons consigning misdeclared, undeclared or forbidden dangerous goods are liable to a maximum fine of \$250,000 and imprisonment for 2 years.

Should you have any query about this circular, please contact Safety Officers (Dangerous Goods) at 2182 1221 or 2182 1214.

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