



International Civil Aviation Organization

ELECTRONIC BULLETIN

For information only

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GUIDANCE FOR SHIPMENT OF LITHIUM BATTERIES BY AIR

1. This is to advise ICAO Member States of the ICAO Dangerous Goods Panel's (DGP) concerns involving the transport of lithium batteries by aircraft, and to request States' assistance in helping to ensure their safe transport. Lithium batteries are commonly transported both as cargo and in carry-on or checked baggage, and are transported in packaged form as well as installed in or packed with equipment.

2. As the demand for lithium batteries increases so do the risks associated with their transport, especially aboard aircraft. Since their introduction to the marketplace, a number of air transport-related incidents and numerous additional incidents not related to transportation involving lithium batteries and devices powered by lithium batteries have been reported. These incidents involved both passenger and cargo aircraft and occurred in flight as well as prior to loading and after unloading. Several incidents have involved fire aboard aircraft and in some instances have led to emergency landings.

3. The incidents have led the DGP to more comprehensively assess the risk posed by the transport of lithium batteries by air and to work actively to mitigate that risk. The DGP recognizes that a multi-faceted approach is necessary in order to comprehensively address the issue. Specifically, the DGP believes that clear and robust regulatory requirements, outreach to affected industries and enhanced compliance efforts are key to reducing the likelihood of future incidents.

4. The ICAO *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) contain specific requirements for the proper preparation and transport of lithium batteries. Recently the DGP developed these requirements further, with particular emphasis on the following:

- a) increased packaging standards;
- b) enhanced hazard communication to communicate the presence of lithium batteries in transportation, including a new handling label shown below;
- c) forbidding the transport by air of damaged or defective lithium batteries; and
- d) requiring the reporting of all incidents involving the transport of lithium batteries to the appropriate national authority.



*Place for "Lithium ion battery" and/or Lithium metal battery"

Lithium battery handling label

5. Compliance with the detailed requirements of the Technical Instructions is critical to promoting the safe transport of lithium batteries. Consequently, the DGP has worked to promote outreach to affected industries by publishing guidance on how to comply with the applicable requirements, which can be found at: <http://www.icao.int/anb/FLS/DangerousGoods/>. Additional guidance is available on Member State websites, such as: <http://safetravel.dot.gov/index.html>.

6. States are reminded of their responsibility to establish an inspection, surveillance and enforcement system aimed at all involved in the transport chain with the goal of achieving full compliance with the dangerous goods regulations. To ensure the highest safety standards relating to lithium batteries are achieved, it is imperative that States:

- a) engage with their affected industry to promote awareness of existing requirements;
- b) actively enforce the existing requirements of the Technical Instructions pertaining to the transport of lithium batteries;
- c) ensure persons engaged in the transport of lithium batteries have received training or instruction as required by the Technical Instructions; and
- d) ensure incidents involving lithium batteries are reported to the appropriate national authority and brought to the attention of the ICAO DGP.

7. States are encouraged to work individually and collectively to address this important safety issue and to promote the safe transport of lithium batteries by air.

Issued under the authority of the Secretary General