



Lithium Batteries Risk Mitigation Guidance for Operators

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1st | Edition

Some lithium battery-powered mobility aids are collapsible and are specifically designed to allow batteries to be removed by the user. For this type of mobility aid, the following additional requirements apply:

- batteries must be removed from the mobility aid according to the manufacturer's instructions;
- batteries must be carried in the passenger cabin;
- the battery terminals must be protected from short circuit by insulating the terminals (e.g., by taping over exposed terminals);
- the battery must be protected from damage (e.g., by placing it in a protective pouch provided by the passenger);
- the battery must not exceed 300 Wh;
- One spare battery not exceeding 300 Wh or two spares not exceeding 160 Wh each may also be carried;
- the pilot-in-command must be informed of the location of the batteries.



Figure 4.2 – Collapsible lithium battery powered mobility aid

Portable Medical Electronic Devices

Portable medical electronic devices such as automated external defibrillators (AED), nebulizers, continuous positive airway pressure (CPAP), etc. containing lithium metal or lithium ion cells or batteries are permitted in carry-on baggage or on the person of the passenger, subject to the following conditions:

- they must be carried for medical use;
- batteries and cells must meet all standards of the *United Nations Manual of Tests and Criteria*
- each installed or spare battery must not exceed the following:
 - for lithium ion batteries, a Watt-hour rating of not more than 160 Wh;
 - for lithium metal batteries, a lithium content of not more than 8 grams.
- no more than two spare batteries per passenger, which must be individually protected against short circuit.

TABLE 2.3.A
Provisions for Dangerous Goods Carried by Passengers or Crew
(Subsection 2.3) (continued)

The pilot-in-command must be informed of the location				
Permitted in or as carry-on baggage				
Permitted in or as checked baggage				
The approval of the operator is required				
Lithium Batteries: Portable electronic devices containing lithium metal or lithium ion cells or batteries, including medical devices such as portable oxygen concentrators (POC) and consumer electronics such as cameras, mobile phones, laptops, tablets and power banks, when carried by passengers or crew for personal use (see 2.3.5.9). Batteries must not exceed 2 g for lithium metal batteries and 100 Wh for lithium ion batteries.	NO	YES	YES	NO
Lithium batteries, spare/loose with a Watt-hour rating exceeding 100 Wh but not exceeding 160 Wh for consumer electronic devices and PMED or with a lithium content exceeding 2 g but not exceeding 8 g for PMED only. Maximum of two spare batteries in carry-on baggage only. These batteries must be individually protected to prevent short circuits.	YES	NO	YES	NO
Lithium battery-powered electronic devices. Lithium ion batteries for portable (including medical) electronic devices, a Wh rating exceeding 100 Wh but not exceeding 160 Wh. For portable medical electronic devices only, lithium metal batteries with a lithium content exceeding 2 g but not exceeding 8 g.	YES	YES	YES	NO
Matches, safety (one small packet) or a small cigarette lighter that does not contain unabsorbed liquid fuel, other than liquefied gas, intended for use by an individual when carried on the person. Lighter fuel and lighter refills are not permitted on one's person or in checked or carry-on baggage.	NO	ON ONE'S PERSON		NO
<i>Note: "Strike anywhere" matches, "Blue flame" or "Cigar" lighters are forbidden.</i>				
Mobility Aids: Battery-powered wheelchairs or other similar mobility devices with non-spillable wet batteries or with batteries which comply with Special Provision A123 or A199, (see 2.3.2.2).	YES	YES	NO	NO
Mobility Aids: Battery-powered wheelchairs or other similar mobility devices with spillable batteries or with lithium batteries (see 2.3.2.3 and 2.3.2.4 for details).	YES	YES	NO	YES
Mobility Aids: Battery-powered mobility aids with lithium ion batteries (collapsible), lithium-ion battery must be removed and carried in the cabin (see 2.3.2.4(d) for details).	YES	NO	YES	YES
Non-radioactive medicinal or toiletry articles (including aerosols) such as hair sprays, perfumes, colognes and medicines containing alcohol; and	NO	YES	YES	NO
Non-flammable, non-toxic aerosols in Division 2.2, with no subsidiary risk, for sporting or home use.	NO	YES	NO	NO
The total net quantity of all above mentioned articles must not exceed 2 kg or 2 L and the net quantity of each single article must not exceed 0.5 kg or 0.5 L. Release valves on aerosols must be protected by a cap or other suitable means to prevent inadvertent release of the contents.				
Oxygen or air, gaseous, cylinders required for medical use. The cylinder must not exceed 5 kg gross weight.	YES	YES	YES	YES
<i>Note: Liquid oxygen systems are forbidden for transport.</i>				
Permeation devices, must meet A41 (see 2.3.5.16 for details).	NO	YES	NO	NO
Portable electronic devices containing non-spillable batteries, batteries must meet A67 and must be 12 V or less and 100 Wh or less. A maximum of 2 spare batteries may be carried (see 2.3.5.13 for details).	NO	YES	YES	NO
Radioisotopic cardiac pacemakers or other devices, including those powered by lithium batteries, implanted into a person or fitted externally, or radiopharmaceuticals contained within the body of a person as the result of medical treatment.	NO	ON ONE'S PERSON		NO
Security-type attaché cases, cash boxes, cash bags, etc. incorporating dangerous goods, such as lithium batteries and/or pyrotechnic material, except as provided in 2.3.2.6 are totally forbidden. See entry in 4.2-List of Dangerous Goods.		FORBIDDEN		
Specimens, non-infectious packed with small quantities of flammable liquid, must meet A180 (see 2.3.5.14 for details).	NO	YES	YES	NO
Thermometer, medical or clinical, which contains mercury, one (1) per person for personal use, when in its protective case.	NO	YES	YES	NO
Thermometer or barometer, mercury filled carried by a representative of a government weather bureau or similar official agency (see 2.3.3.1 for details).	YES	NO	YES	YES

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