

BRÜEL & KJÆR PRODUCT SAFETY

Lithium-ion batteries

General	<p>Lithium-ion (Li-ion) batteries represent the most advanced re-chargeable battery technology in general use today and are found in handheld electrical equipment like mobile phones, cameras, portable PCs, as well as all modern Brüel & Kjær sound level meters and other measuring equipment.</p> <p>The energy density of Li-ion batteries exceeds that of traditional rechargeable battery technologies – this requires some attention during transport, use and waste-handling.</p>
Transportation	<p>All Li-ion Battery Packs supplied by Brüel & Kjær are classified as UN 3480/UN 3481, and</p> <ul style="list-style-type: none"> • Comply with applicable transportation regulations including <ul style="list-style-type: none"> ○ IATA "Dangerous Goods Regulation" (International Air Transport Association) ○ ICAO "Technical Instructions..." (International Civil Aviation Organisation) ○ CAAC "Transport regulations for Lithium batteries" (Civil Aviation Administration of China) ○ IMDG Code (International Maritime Dangerous Goods), and ○ IEC 62281 "Safety of primary and secondary lithium cells and batteries during transport" • Have been tested according to the UN "Regulation on the Transport of Dangerous Goods" Sec. 38.3 • Have a rated capacity of less than 100 Wh corresponding to an equivalent Lithium content of less than 8 g - i.e. need not to be handled as Dangerous Goods <p>When travelling by air Li-ion spare batteries must be in carry-on luggage - they are not allowed as checked-in luggage. Batteries installed in equipment are not covered by this restriction.</p> <p>Before shipping a Li-ion battery, either as spare battery or as part of an instrument, make sure that it isn't damaged in any way.</p>
Use	<p>Charging Brüel & Kjær supplied Li-ion batteries must only be done by inserting it into the original product, or charging it with a dedicated Brüel & Kjær Li-ion charger.</p> <p>Instruments with batteries being charged will become warm, especially when constantly charged and/or being inside a suitcase or the like. A temperature sensor will automatically shut down charging before it becomes too warm.</p>
Ageing	<p>The ageing of Li-ion batteries is influenced by three main factors:</p> <ul style="list-style-type: none"> • the time since the cells were manufactured, • the temperature of the battery above 0°C, and • the number of times it has been charged. <p>Li-ion batteries will typically last for 2-4 years or up to 1000 charge/discharge cycles depending on the conditions of use and storage (e.g. storage at 25°C will permanently reduce the capacity by 20% per year).</p> <p>When the battery is no longer able to hold a useful amount of charge, it is time to exchange the battery with a new one.</p>
Waste Handling	<p>Avoid any contact with the Li-Ion cells inside the Battery Pack - wear gloves and safety glasses if it can not be avoided.</p> <p>Discarded batteries should be disposed of locally by using the appropriate local return and collection systems.</p>

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