

PRODUCT DATA SHEET



The products referenced herein are exempt article and are not subject to OSHA's Hazard Communication Standard requirements for preparation of material safety data sheets. This information sheet is provided as a service to our customers.

Section 1- Product Information

Manufacturer

Mpower Solutions Ltd
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Identity: Lithium Ion Batteries (Li-Ion)

Models: All

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Example MSDS for a Lithium Ion battery used in a mobile phone

Section 2- Material Ingredient Information

Important Note: The battery pack and enclosed cells should not be opened, disassembled, crushed, burned, or exposed to high temperatures (>60°C, 140°F). Exposure to the following ingredients contained within the battery could be harmful under some circumstances. In case of exposure to cell contents, wash affected area for at least 15 minutes with generous amounts of water and seek medical attention. Fires involving these types of battery packs should be flooded with water or use CO₂, Foam or Dry Chemical extinguishing media.

Mpower Battery Packs are composed of Li-Ion cells from various manufactures. Li-Ion cells are generally composed of the following ingredients:

Positive electrode:	Lithiated metal oxides (LiCoO ₂ or LiMn ₂ O ₄)
Negative electrode:	Graphitic carbon
Binders:	Polyvinylidene difluoride and/or polytetrafluoroethylene
Electrolyte:	Lithium salt (lithium hexafluorophosphate) Organic solvents including one or more of the following: Ethylene carbonate, diethylcarbonate, dimethylcarbonate, ethylmethylcarbonate, and propylene carbonate.

Li-Ion cells are not manufactured to contain lithium metal.

Section 3

All Mpower Li-Ion batteries contain recyclable materials. Recycling options available in your local area should be considered when disposing of this product. Do not dispose of in fire.

Section 4

Mpower Li-Ion battery packs are not subject to the requirements of the U.S. Department of Transportation (DOT) subchapter C, Hazardous Material Regulations because these battery packs meet the exceptions under 173.185 (b). They are considered to be non-dangerous by the International Civil Aviation Organisation (ICAO) and the International Air Transport Association (IATA) because they meet all the requirements of Special Provision A45 as described by both organisations. They are considered to be non-dangerous by the International Maritime Dangerous Goods regulation (IMDG) because they meet the requirements of UN3090. They are considered non-dangerous because they meet the requirements of the UN directive ST/SG/AC.10/27/Add.2

The requirements for shipping these batteries, in all modes of transportation, are that they be separated from each other to prevent short-circuits and to prevent movement that could lead to short-circuits. Products must also be packed in strong packaging that can withstand the rigors normal to transportation. These products are labeled in accordance to Voluntary Air Transportation Communications Program (VATCP) for cargo shipments of Li-Ion batteries and cells.

Notice: The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Mpower makes no warranty expressed or implied with respect to this information and recommendations and disclaims all liability from reliance on it. "Equivalent lithium content" information is available from Mpower on request.