

TCL Batteries

Material Safety Data Sheet for TCL High power Polymer Li-ion Battery

Document Number:TCL-085

Model No. PL-063496 Capacity : 2050mAh, 7.6Wh (Polymeer Li-ion Battery)

Section I

Manufacturer's Name : TCL Hyperpower Batteries Inc

Address : No.3, Hechang Dongliu Rd.,Huitai Industrial Zone,Huicheng District ,Huizhou City, Guangdong China.

Emergency Telephone Number : 0752-2367999

Date of prepared and revision : 1 June 10

Section II - Hazardous Ingredients /Identity Information

Hazardous Components: None of the ingredients in this product is considered to be hazardous by OSHA

Description: Approximate % of total weight

Lithium Cobalt Oxide : ~32%

Carbon : ~16%

LIPF6 : ~14.7%

Ni Metal : ~4.4%

Al Metal : ~9.0%

Cu Metal : ~11.0%

PP : ~6.0%

The equivalent lithium content calculated by $0.3 \times 2050\text{mAh}/1000 = 0.615\text{g}$ is not more than 1.5g.

Each battery is of type proved to meet the requirements of each test in the UN Manual of Tests and Criteria.

Section III - Physical / Chemical Characteristics

Appearance : Prismatic Battery

Nominal voltage: 3.7 volts

Section IV- Fire and Explosion Hazard

- 1) Extinguishing Method : Since vapor, generated from burning batteries may make eyes, nose and throat irritate, be sure to extinguish the fire on the windward side. Wear the respiratory protection equipment in some cases.
- 2) Fire extinguishing agent: Plenty of water and alcohol-resistant foam are effective.

Section V - Stability and Reactivity

Since batteries utilize a chemical reaction they are actually considered a chemical product. As such, battery performance will deteriorate over time even if stored for a long period of time without being used. In addition, the various usage conditions such as charge, discharge, ambient temperature, etc. are not maintained within the specified ranges the life expectancy of the battery may be shortened or the device in which the battery is used may be damaged by electrolyte leakage.

Section VI - Health Hazard & Toxicity Class

Class name : Not applicable for regulated class.

Hazard : It may cause heat generation or electrolyte leakage if battery terminals contact with other metals. Electrolyte is flammable. In case of electrolyte leakage, move the battery from fire immediately.

Toxicity : Vapor generated from burning batteries, may make eyes, skin and throat irritate.

Section VII - First Aid Measures

The product contains organic electrolyte. In case of electrolyte leakage from the battery, actions described below are required.

- 1) Eye contact : Flush the eyes with plenty of clean water immediately,. Take a medical treatment.
- 2) Skin contact : Wash the contact areas off immediately with plenty of water and soap. If appropriate procedures are not taken, this may cause sores on the skin.
- 3) Inhalation : Remove to fresh air immediately. Take a medical treatment.

Section VIII –Measures for electrolyte leakage from the battery

- 1) Take up with absorbent cloth.
- 2) Move the battery away from the fire.

Section IX - Handling and Storage

- 1) Batteries should be handled and stored carefully to avoid from short circuits in transport.
- 3) Do not store the batteries at high temperature and direct sunlight. Please also avoid the places of high humidity. Be sure not to expose the battery to condensation, water drop or not to store it under frozen condition.
- 4) Do not let water penetrate into packaging boxes during their storage.
- 5) The battery will be stored at room temperature.

Section X - Exposure Controls / Personal Protection

- 1) Provide appropriate ventilation system such as local ventilator in the storage.
- 2) Gas mask for organic gases, safety goggle, safety glove.

Section XI - Ecological Information

Mercury (Hg) and Cadmium (Cd) are neither contained nor used in battery.

Section XII - Disposal Method

When the battery is worn out, dispose of it under the ordinance of each local government or the law issued by relating government.

Disposal of the worn out battery may be subjected to Collection and Recycling Regulation.

Section XIII -Transportation Information

- 1) Each package must be marked indicating that it contains lithium-ion batteries and that special procedures should be followed in the event that package is damaged.

- 2) Each shipment must be accompanied with a document indicating that the package contain lithium-ion batteries and special procedures should be followed in the event a package is damaged.
- 3) Each package is capable of withstanding 1.2m drop test in any orientation without damaged to cells contained therein, without shifting of the contents so as to allow cell to cell contact and without release of contents.
- 4) During the transportation of a large amount of cells by ship, trailer or railway, do not leave them in the place of high temperature and do not allow them to be exposed to condensation.
- 5) During the transportation do not allow package to be fallen down or damaged.
- 6) The packages are comply with all of the requirements set out in Section II of Packing Instructions 965, 966 and 967 for lithium ion batteries and Section II of Packing Instructions 968, 969 and 970 for lithium metal batteries in the 51st edition of the IATA DGR

Section XIV - Regulatory Information

IATA Dangerous Goods Regulation 51th Edition Effective 1 Jan 2010

Section XV - Other Information

- 1) UN Recommendations on the Transportation of Dangerous Goods Model Regulations
- 2) IATA Dangerous Goods Regulation 51th Edition Effective 1 Jan 2010