Material Safety Data Sheet

1. Product & Company Identification

Product:	Rechargeable LiPo battery
Manufacturer:	Conrad Electronic SE
Nominal voltage:	2x 3,7 V (2 separate cells)
Nominal capacity:	350 mAh
Address:	Klaus-Conrad-Str. 1, D-92240 Hirschau
Telephone:	+49 (0) 9604 / 40 - 8988
Date of issue:	30.05.2014

2. Composition / Information on ingredient

Hazardous ingredients	Chemical formula	CAS No.	Weight (%)
Lithium cobalt oxide	LiCoO2	12190-79-3	31.6
Graphite	C	7782-42-5	17.1
Organic electrolyte			13.2
Polypropylene	C3H6	9003-07-0	2.8
Copper	Cu	7440-50-8	6.5
Aluminium	Al	7429-90-5	28.8

3. Hazardous identification

Health Hazards (Acute and Chronic)

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. Contact of electrolyte and extruded lithium with skin and eyes should avoided.

Sign/symptoms of Exposure

A shorted lithium battery can cause thermal and chemical burns upon contact with the skin.

4. First aid measures

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. Use oxygen if available.

Ingestion: Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

5. Fire fighting measures

Flash point: N/A

Auto-Ignition Temperature: N/A

Extinguishing Media: Dry chemical, CO2.

Special Fire-Fighting Procedures

Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards

Cell my vent when subjected excessive heat-exposing battery contents.

Hazardous Combustion Products

Carbon monoxide,carbon dioxide,lithium oxide fumes.

6. Accidental release measures

Steps to be Taken in case Material is Released or Spilled

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. With a cloth and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

Waste Disposal Method

It is recommended to discharge the battery to the end, handing in the abandoned batteries to related department unified,dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental protection agency and/or federal EPA.

7. Handling and storage

The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients they contain in the hermetically sealed container.

Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire.

Do not crush or puncture the battery, or immerse in liquids.

Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change, Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

Other precautions

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

8. Exposure Controls / Personal Protection

Respiratory Protection

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting batteries. Respiratory protection is not necessary under conditions of normal use.

Ventilation

Not necessary under conditions of normal use.

Protective Gloves

Not necessary under conditions of normal use.

Other protective clothing or Equipment

Not necessary under conditions of normal use.

Personal protection is recommended for venting batteries:

Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

9. Physical and chemical properties

Nominal voltage: 3.7 V

Appearance Characters: quadrate, odorless, solid, battery.

10. Stability and Reactivity

Stability: Under normal use, good stability

Conditions to Avoid: Heating, mechanical, abuse and electrical abuse.

Hazardous Decomposition Products: N/A

Hazardous Polymerization: N/A

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons.

11. Toxicological information

Inhalation, skin contact and eye contact are possible when the battery is opened, Exposure to internal contents, the corrosive fumes will be very irritation to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

12. Ecological information

When promptly used or disposed the battery odes not present environmental hazard. When disposed, keep away from water, rain and snow.

13. Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

If batteries are still fully charged or only partially discharged, they can be considered a reactive hazardous waste because of significant amount of uncreated or unconsumed lithium remaining in the spent battery. The batteries must be neutralized through an approved secondary treatment facility prior to disposal as a hazardous waste. Recycling of battery can be done in authorized facility, through licensed waste carrier.

14. Transport information

The polymer lithium ion batteries has passed the test UN38.3

According to packing instruction PI965~PI967 section II of IATA DGR 55th Edition for transportation or the special provision 188 of IMDG.

The products are not subject to dangerous goods.

More information concerning shipping, testing, marking and packaging can be obtained from Label master at http://www.labelmaster.com.

Separate Lithium-ion batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain.

Transport Fashion: By air ,by sea.

15. Regulatory Information

Law Information

Dangerous Goods Regulation

Recommendations on the Transport of Dangerous Goods Model Regulations

International Maritime Dangerous Goods

Technical Instructions for the Safe Transport of Dangerous Goods

Classification and code of dangerous goods

Occupational Safety and Health Act (OSHA)

Toxic Substances Control Act (TSCA)

Consumer Product Safety Act (CPSA)

Federal Environmental Pollution Control Act (FEPCA)

The Oil Pollution Act (OPA)

Superfund Amendments and Reauthorization Act Title III(302/311/312/313) (SARA)

Resource Conservation and Recovery Act (RCRA)

Safety Drinking Water Act (CWA)

California Proposition 65

Code of Federal Regulations (CFR)

In accordance with all Federal,State and Local laws.

16. Additional information

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that person receiving it shall made his own determination of the suitability of the material for his particular purpose.

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