MSDS Report

Samples : Lithium Ion Rechargeable Battery

Client Unit : Shanxi Zhongdao Energy Co., Ltd.

Clint Address: No.1729,Lanhua Road, Economic & Development Area, Jincheng, Shanxi Province

Shenzhen SCS Technology Co.,Ltd

http://www.scsemc.com

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

Product name: Lithium Ion Rechargeable Battery
Model: Prismatic And Cylindrical Type
Manufacture Shanxi Zhongdao Energy Co., Ltd.
Address: No.1729,Lanhua Road, Economic & Development Area, Jincheng, Shanxi Province
Post Code: 048000
Tel: 86-356-6969555
Emergency Telephone: 86-356-6969555
Fax: 86-356-6965238

Section 2 – Composition/Information on Ingredient

Pure ☐ Admixture ☐
Composition:

Chemical composition	Molecule formula	CAS No.	Weight（%）
Nickel plated steel	Fe	12597-69-2	5
Nickel-Aluminum plate	Al	7429-90-5	5
PTFE	-[-CF_2-]$_n$-	9002-84-0	0.4
Polyethylene	-[-CH_2- CH_2-]$_n$-	9002-88-4	0.2
Polypropylene	-[-CH2-CH(CH3)-]$_n$-	9003-07-0	0.4
Lithium Cobaltite (LiCoO2)	LiCoO2	12190-79-3	34
Aluminum	Al	7429-90-5	5
Graphite	C	7782-42-5	18
Copper	Cu	7440-50-8	13
Nickel plate	Ni	7440-02-0	2
Ethylene Carbonate	$C_5H_{10}O_3$	105-58-8	9
Lithium Hexafluorophosphate	LiPF6	21324-40-3	8

Section 3 – Hazards Identification

Fatalness grade:
In accordance with Directive 1999/45/EC, the sample belongs to dangerous.
Invasion route:
Skin touch: /
Eyes touch: /
Inhalation: /
Ingestion: /
Health hazards:
In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte.
Environment hazards: /
Burn & burst danger:
Don't immerse the battery in water and seawater. Please put it in cool and dry environment if no using.
Do not use and leave the battery near a heat source as fire or heater
Being charged, using the battery charger specifically for that purpose
Don't reverse the positive and negative terminals
Don't connect the battery to an electrical outlet directly.
Don't discard the battery in fire or heater.
Don't connect the positive and negative terminal directly with metal objects such as wire.
Do not transport and store the battery together with metal objects such as necklaces, hairpins.
Do not strike , throw or trample the battery.
Do not directly solder the battery and pierce the battery with a nail or other sharp object.

Section 4 – First Aid Measures

Skin touch:
Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.
Eyes touch:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. 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.

Section 5 – Fire Fighting Measures

Danger characteristic:
Batteries may burst and release hazardous decomposition products when exposed to a fire situation.
Extinguishing Media: CO_2, CO .
Fire-Fighting method & media:
The staff must equipped with filtermask(full mask) or isolated breathing apparatus. The staff must wear the clothes which can defence the fire and the toxic gas.
Cut off the fire source.
Batteries that are leaking should be handle with rubber gloves.
Avoid direct contact with electrolyte.
Prevented the spillage to flow into restrictive space like the sewer and the drainage channel.
A small amount of can cover with sand vermiculite or other inertia materials to adsorb.
Fire-Fighting media: Fire extinguisher or sand.

Section 6 – Accidental Release Measures

Emergency treatment:
Cut off the fire source.
It is suggested that the staff wear self-contained breathing apparatus and dress in usual working clothes.
Don’t touch the spillage directly.
Shut off the divulgence source as soon as possible.
Prevented the spillage to flow into restrictive space like the sewer and the drainage channel.
Small amount of divulgence:
Absorb with sandy clay, vermiculite or other inert material.
Massive divulgence:
Build diking or dig pit to accept.
Shift with the pump into the tanker or the special collector, recycle or transport to waste treatment place for handling.

Section 7 – Handling and Storage

Handling:

Don’t put batteries into fire, or heat them.
When fixing the batteries, don’t put the positive and negative charges in reverse.
Don’t connect the batteries with metal (e.g. lead) directly, or it will cause batteries short circuit.
No stabbing, no beating, no trampling or other means to strike batteries.
No damage with the sealing (including folding the seal, cutting it, etc.).
No dismantling the batteries, and no altering them.
Do not put batteries in water.
When charging the batteries, don’t use the unqualified equipments, and follow the correct introduction.
Don’t mix using different kind, type, old-new batteries.
Don’t put heating, tympany, transmutative and electrolyte leaking batteries in the charge equipment.

Storage:

Keep the sample in the well-ventilated place.
Don’t let the batteries be affected with damp.
Be sure to store them in a place that is dry and subject to little temperature change.
Do not place in high temperature circumstance.
Do not store in disorderly fashion, or allow metal objects to mixed with stored batteries.
Don’t store batteries for long with no charging.
For long period storage, please charge batteries for 0.5h with 0.8C first.

Section 8 – Exposure Controls, Personal Protection

Maximum admissible concentration:
No standard yet
Monitoring Method: N/A
Engineering Control:
Tightly closed. To supply with sufficient partial air exhaust.
Respiratory Protection:
Wear self-contained breathing filtermask(full mask) if the density exceed in the air. Wear breathing apparatus under the condition of emergency rescue or evacuation.
Eyes Protection:
Have been mentioned in the respiratory protection.
Body Protection:
Wear rubberized fabric antigas clothes.
Hands Protection:
Wear rubber gloves.
Other Protections:
No smoking, dining and drinking water in the workplace.
Keep good habit of hygiene.

Section 9 – Physical and Chemical Properties

Flash Point: N/A
Appearance: White
Boiling Point: N/A
Proportion: N/A
Acid Value: N/A
PH Value: N/A
Permission of solvent inhalation: N/A
Solubility: Don't soluble in water.

Section 10 – Stability and Reactivity

Stability: This product is stable.
Conditions to Avoid: N/A
Hazardous Polymerization: /
Hazardous Reactions: will not occur.
Hazardous Decomposition Products: N/A

Section 11 – Toxicological Information

Acute Toxicity: N/A
Sub-acute and Chronic Toxicity: N/A
Irritation: N/A
Sensitization: N/A
Mutagenicity: N/A
Carcinogenicity: N/A
Others:
In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte.

Section 12 – Ecological Information

Eco-toxicity: N/A
Biodegradable: N/A
Non-biodegradable: N/A
Bioconcentration or biological accumulation: N/A
Other harmful effects: when promptly used or disposed the battery does not present environmental hazard, when disposed, keep away from water, rain an snow.

Section 13 – Disposal Considerations

Nature of waste: N/A
Waste disposal methods:
Refer to National or Local regulations before handling.
It is suggested that use the method of controlled burning.
Attention abandoned: N/A

Section 14 – Transport Information

Number of dangerous goods: N/A
UN Number: N/A
Packaging Mark: N/A
Packaging Method: N/A
Transport Attentions:
The lithium-ion battery(Prismatic And Cylindrical Type)have pass the test UN38.3, according to the report No.: SGS1011150351 and SGS1011150352 . According to section II of PACKING INSTRUCTION 965~970 of IATA DGR 51st Edition for transportation. This product is not subject to dangerous goods.
Separate LI-ion batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport. Take in cargo of then without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain.
Transport Fashion: By air.

Section 15 – Regulatory Information

Regulatory Information: N/A

Section 16 – Additional Information

References: N/A
Guidance departments: N/A
Data audit unit: N/A
Laws Help: N/A
Other 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 the person receiving it shall make his own determination of the suitability of the material for his particular purpose.
MSDS Creation Date: November 11,2010