Report No.：I02143018133D~1

MSDS Report

Sample Description & Model	Rechargeable Lithium Iron Phosphate Battery YS24-18-N
Applicant	
Address	

Material Safety Data Sheet

According to ISO11014:2009 & GB/T16483-2008

Section 1 - Chemical Product and Company Identification

Chemical product identification

Sample Description: Rechargeable Lithium Iron Phosphate Battery

Sample Model:YS24-18-N

Section 2 - Hazards Identification

Classification of the substance or mixture

Classification according to GHS

Not a dangerous substance according to GHS.

Label elements

Labelling according to Regulation (EC) No 1272/2008[CLP]

Hazard pictogram(s): No available

Signal word: No available

Hazard statement(s): No available

Precautionary statement(s):

Prevention: No available

Response: No available

Disposal: No available

Other hazards No information available.

Section 3 - Composition, Information on Ingredients

Chemical characterization: Mixture

Chemical Composition	CAS No.	EC#	Weight (%)
Ferrous Phosphate Lithium	15365-14-7	---	30~40
Aluminum	7429-90-5	231-072-3	2~10
Nickel	7440-02-0	231-853-9	1~5
Carbon	1333-86-4	231-153-3	10~20
Copper	7440-50-8	231-159-6	5~10
PP Polypropylene	9003-07-0	---	2~5
PVC Polyvinyl Chloride	9002-86-2	208-750-2	2~5
Paper	---	---	2~5
EC Ethylene Carbonate	96-49-1	202-510-0	10~15
DMC Dimethyl Carbonate	616-38-6	210-478-4	
EMC Ethyl Methyl Carbonate	623-53-0	---	
Lithium Hexafluorophosphate	21324-40-3	244-334-7	
PC Propylene Carbonate	108-32-7	203-572-1	

Section 4 - First Aid Measures

Description of first aid measures

General information No special measures required.

After eye contact

Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.

After skin contact

Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

After inhalation

Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.

After swallowing

Do not induce vomiting. Get medical attention.

Information for doctor:

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Section 5 - Fire Fighting Measures

Flammability: Not available.

Extinguishing media

Suitable extinguishing agents

Use extinguishing agent suitable for local conditions and the surrounding environment . Such as dry powder , CO_2.

Special hazards arising from the substance or mixture

Battery may burst and release hazardous decomposition products when exposed to a fire situation. Lithium ion batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperature(>150℃(302℉)), when damaged or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

Advice for firefighters

Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Environmental precautions

Do not allow material to be released to the environment without proper governmental permits.

Steps to be taken in case material is spilled or released

Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, placed the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water.

Waste disposal method

All waste must refer to the United Nations, the national and local regulations for disposal.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7 - Handling and Storage

Handling

Precautions for safe handling

Consumption of food and beverage should be avoided in work areas.

Wash hands with soap and water before eating, drinking.

Ground containers when transferring liquid to prevent static accumulation and discharge.

Information about fire and explosion protection

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

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles

Store in a cool, dry, well-ventilated place.

Information about storage in one common storage facility

Keep away from heat, avoiding the long time of sunlight.

Further information about storage conditions

Keep container tightly sealed.

Specific and use

No further relevant information available.

Section 8 - Exposure Controls, Personal Protection

Control parameters

Not data available

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Respiratory Protection

Use suitable respirator when high concentrations are present.

Personal Protection

Protection of hands

Protective gloves

Eye protection

Tightly sealed goggles

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

General information

Appearance:	Blue.
Form:	Prismatic.
Odour:	Odorless.
pH:	Not available.

Change in condition

Melting point:	Not available.
Boiling point:	Not available.
Freezing point	Not available.
Flash point:	Not available.
Flammability:	Not available.
Ignition temperature:	Not available.
Decomposition temperature:	Not available.
Self-igniting:	Not available.
Danger of explosion:	Not available.

Explosion limits

Lower:	Not available.
Upper:	Not available.
Oxidizing properties:	Not available.
Vapour pressure:	Not available.
Density:	Not available.
Relative density:	Not available.
Vapour density:	Not available.
Evaporation rate:	Not available.
Solubility in/Miscibility with water:	Not available.
n-octanol/water partition coefficient:	Not available.
Viscosity	Not available.
Dynamic:	Not available.
Kinematic:	Not available.

Other information:

Voltage	24V
Electric capacity	18Ah
Electric Energy	460Wh

Section 10 - Stability and Reactivity

Reactivity: Data not available.

Chemical stability: Stable**.**

Possibility of hazardous reactions： Data not available.

Conditions to Avoid

Flames, sparks, and other sources of ignition, incompatible materials.

Incompatibilities

Oxidizing agents, acid, base.

Hazardous Combustible Products

Carbon monoxide, carbon dioxide, lithium oxide fumes.

Hazardous Polymerization

N/A.

Section 11 - Toxicological Information

Information on toxicological effects

Acute toxicity

LD/LC50 Values relevant for classification:
Not available.

Primary irritant effect

No further relevant information available.

Sensitization:

No further relevant information available.

Additional toxicological information:

Toxicological, metabolism and distribution:

No further relevant information available.

Acute effects (acute toxicity, irritation and corrosivity):

No further relevant information available.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):

No further relevant information available.

Section 12 - Ecological Information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behaviour in environmental systems

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Ecological effects

Additional ecological information

General notes:

Do not allow material to be released to the environment without proper governmental permits.

Other adverse effects: No further relevant information available.

Section 13 - Disposal Considerations

Waste treatment methods

Recommendation:

Consult state, local or national regulations to ensure proper disposal.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

Section 14 - Transport Information

UN Number	
IATA	UN3480
IMDG	UN3480
UN Proper shipping name	
IATA	Lithium Ion Batteries.
IMDG	Lithium Ion Batteries.

Transport hazard class(es)	
IATA	9
IMDG	9
Packing group	
IATA	Ⅱ
IMDG	Ⅱ
Environmental hazards	
Marine pollutant:	No
Special precautions for user	Not applicable.

Transport information: The Rechargeable Lithium Iron Phosphate Battery (YS24-18-N) has passed the test UN38.3, according to the report ID: I090931197 21D.
Watt-hour exceeds the standard, so it belongs to dangerous goods. Cargo Aircraft Only. The goods are packaged according to the packaging Instruction 965 section IA of IATA DGR 55th Edition for transportation.

Watt-hour exceeds the standard, so it belongs to dangerous goods. The goods are packaged according to the special provision 188 of IMDG (36-12).

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.

Section 15 - Regulatory Information

This Material Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture

Composition	CAS#	TSCA	EC#	EINECS
Ferrous Phosphate Lithium	15365-14-7	Listed	---	Not Listed
Aluminum	7429-90-5	Listed	231-072-3	Listed
Nickel	7440-02-0	Listed	231-853-9	Listed
Carbon	1333-86-4	Listed	231-153-3	Listed
Copper	7440-50-8	Listed	231-159-6	Listed
PP Polypropylene	9003-07-0	Listed	---	Not Listed
PVC Polyvinyl Chloride	9002-86-2	Listed	208-750-2	Listed
EC Ethylene Carbonate	96-49-1	Listed	202-510-0	Listed
DMC Dimethyl Carbonate	616-38-6	Listed	210-478-4	Listed
EMC Ethyl Methyl Carbonate	623-53-0	Listed	---	Not Listed
Lithium Hexafluorophosphate	21324-40-3	Listed	244-334-7	Listed
PC Propylene Carbonate	108-32-7	Listed	203-572-1	Listed

Section 16 - Additional Information

Issue Time: 2020-1-30

Issue Department: Technical department

Modification record:

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Other Information:

ACGIH: （American Conference of Governmental Industrial Hygienists）; BCF:（Bioconcentration Factor）; BOD:（Biochemical oxygen demand）; CAS:（Chemical Abstracts Service）; DSL:（the Domestic Substances List of Canada）; EC:（European Commission）; EC50:（Median effective concentration）; ENCS（MITI No.）:（Existing and New Chemical Substances of Japan）; IARC:（International Agency for Research on Cancer）;IATA:（International Air Transport Association）; IECSC:（Inventory of Existing Chemical Substances in China）;IMDG:（International Maritime Dangerous Goods）; LC50:（Lethal concentration, 50 percent kill）;LD50:（Lethal dose, 50 percent kill）; NDSL:（the Non-domestic Substances List of Canada）; NIOSH:（US National Institute for Occupational Safety and Health）; NOEC: (No observed effect concentration）; NTP:（US National Toxicology Program）;OSHA:（US Occupational Safety and Health）; PC-STEL:（Permissible concentration-time weighted average）; PC-TWA: （Permissible concentration-short time exposure limit）;PEL: (Permissible Exposure Level); REL:（Recommended Exposure Limit）; RTECS:（Registry of Toxic Effects of Chemical Substances）; STEL:（Short Term Exposure Limit）; TDG:（Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations）; TLV:（Threshold Limit Value）; TOC:（Total Organic Carbon）; TSCA:（Toxic Substances Control Act of USA）;TWA:（Time Weighted Average）

End of report