MSDS Report

Report No.:BL032042A1

Li-ion 13S 48V 33.8Ah MU2
MegaUMPF®2 Battery

According to GB/T16483-2008&ISO11014:2009

Section 1 - Identification

Product information		
Sample name	Li-ion 13S 48V 33.8Ah MU2	
Sample Receiving date	12-12-2020	S/N 347705
SKU	32042	
EAN number	8719992322046	

Company information		
Company name	BatteryLabs B.V.	
Address	Wassenaarseweg 75-332	
Zip code	2223LA	
City	Katwijk(ZH)	
Country	The Netherlands	
Telephone	+31 71 5690514	
Emergency telephone	+31 6 15326671	
E-mail	thomas@batterylabs.nl	

Section 2 - Hazard(s) identification

Emergency overview: No information available
GHS: Not a dangerours substance according to GHS

GHS Label elements		
Hazard pictorgrams	Not available	
Signal word	Not available	
Hazard statements	Not available	

Precautionary statement(s)		
Prevention	Not available	
Response	Not available	
Safe storage	Not available	
Disposal	Not avaialble	

Physical and chemical risk: No information available
Health hazard: No information available
Environmental hazards: No information available
Other hazards: No information available

Section 3 - Composition/information on ingredients

Classification of the substance or mixture: ☐substance ☒mixture

Chemical compostion	CAS No.	EC#	Weight(%)
$(Li(NiCoMn)O_2)$	182442-95-1	--	15-35
Carbon	7440-44-0	231-153-3	10-25
Al	7429-90-5	231-072-3	5-10
Cu	7440-50-8	231-159-6	10-20
Graphite	7782-42-5	231-955-3	1-2
Electrolyte	--	--	5-15
Silicon Rubber	--	--	2-10
PE	9002-88-4	200-815-3	0-2
Al	7429-90-5	231-072-3	1-5
Ni	7440-02-0	231-853-9	1-5
ABS	9003-56-9	--	8-10
PC	25037-45-0	201-245-8	2-5
Stainless steel	65997-19-5	266-048-1	1-5
Ag	7440-22-4	231-131-3	0-1

Note:

CAS: Chemical Abstracts Service (Division of the American Chemical Society)

EC#: European Inventory of Existing Commercial Chemical Substances

"--": No data

Section 4 - First Aids Measures

General information: No special measures required

After inhalation: Move victim to a fresh air area. Administer artificial respiration if breathing is difficult. Seek medical attention.

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

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

After swallowing: Do not induce vomiting. Get medical attention.

Acute and delayed affect: No relevant information.

Health effects: No relevant information.

To protect the rescuers advice: No relevant information.

To the doctor's advice: Need timely medical treatment and special symptoms, no relevant information.

Section 5 - Fire Fighting Measures

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°C(302°F)), when damaged abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in close proximity.
Attention extinguishing method and protect measures: Wear self-contained respirator. Wear fully protective suit.

Section 6 - Accidental Release Measures

Homework personnel protective measures, protective equipment and emergency disposal 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 and Waste disposal method: 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. All waste must refer to the United Nations, the national and local regulations for disposal.
To prevent the secondary disasters prevention measures: 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

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

Section 8 - Exposure Controls, Personal Protection

Occupational exposure limit

Ingredients with limit values that require monitoring at the workplace	
12190-79-3 Lithium Cobalt Oxide	
TLV (USA)	0.02mg/m^3
MAK(Germany	0.1mg/m^3

Note:TLV ： Threshold Limit Value

Biological limit: no relevant details information.
Detection: no relevant details information.
Engineering control: 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	
Hand protection	Eye protection
Protective gloves	Tightly sealed goggle
	

Section 9 - Physical and Chemical Properties

Information based on basic physical and chemical properties	
Appearance	Blank
Form	Prismatic
Odor	Odorless

Electrical properties information	
Voltage	46.8V
Cell Voltage	3.6V
Electric capacity	33.8Ah
Watt-hour	1581.84Wh

Section 10 - Stability and Reactivity

Chemical Stability: Stable in normal cicumstances
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.

Section 11 - Toxicological Information

Information on toxicological effects

Acute toxicity LD/LC50 Values relevant for classification: Not available.

LC50:（lethal concentration, 50 percent kill）

LD50:（lethal dose, 50 percent kill）

Skin irritation/corrosion: No further relevant information available.
Eyes stimulus/corrosion: No further relevant information available.
Breathing or skin irritation: No further relevant information available.
Germ cell respectively: No further relevant information available.
Carcinogenicity: No further relevant information available.
Reproductive toxicity: No relevant details information.
Specific target organ system toxicity disposable contact: No further relevant information available.
Specific target organ system toxicity, repeated contact: No further relevant information available.
Inhalation hazard: No further relevant information available.
Potentially harmful effects: No further relevant information available.

Section 12 - Ecological Information

Ecological 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: No further relevant information available.
General notes: Do not allow material to be released to the environment without proper governmental

Section 13 - Disposal Considirations

Waste treatment methods and Recommendation: Consult state, local or national regulations to ensure proper disposal.
Uncleaned packaging and Recommendation: Disposal must be made according to official regulations.

Section 14 - Transport Information

Item	IATA	IMDG
UN Numer	UN3480	UN3480
UN proper shipping name	Lithium Ion Batteries	Lithium Ion Batteries
Transport hazard class(es)	9	9
Packaging group	II	II
Marine pollutant	No	

IATA: (International Air Transport Association)
IMDG : (International Maritime Dangerous Goods)

Transport information: The Lithium Battery (Li-ion 13S 48V 33.8Ah MU2 UN38.3) complies to standards according to UN38.3.

According to the Packing Instruction 965 section IA of IATA DGR 59th Edition for transportation. IMDG (38-16)188

According to the special provision 188 of IMDG (38-16) or the <<Recommendations On The Transport Of Dangerous Goods-Model Regulations>> (20th). The package is subjected 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, by road.

Section 15 - Regulatory Information

(EC)No. 1907/2006.

This Material Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006. The following laws, regulations, rules and standards of the substance or mixture of management to do the corresponding provisions:

Chemical compostion	CAS No.	IECSC	TSCA	DSL/NDSL	EINECS/ELINCS/NLP
$(Li(NiCoMn)O_2)$	182442-95-1	Listed	Listed	Not Listed	Not Listed
Carbon	7440-44-0	Listed	Listed	DSL	Listed
Al	7429-90-5	Listed	Listed	DSL	Listed
Cu	7440-50-8	Listed	Listed	DSL	Listed
Graphite	7782-42-5	Listed	Listed	DSL	Listed
Electrolyte	--	Listed	Listed	DSL	Listed
Silicon Rubber	--	Listed	Listed	DSL	Listed
PE	9002-88-4	Listed	Listed	DSL	Listed
Al	7429-90-5	Listed	Listed	DSL	Listed
Ni	7440-02-0	Listed	Listed	DSL	Listed
ABS	9003-56-9	Listed	Listed	DSL	Not Listed
PC	25037-45-0	Listed	Listed	DSL	Not Listed
Stainless steel	65997-19-5	Listed	Listed	DSL	Listed
Ag	7440-22-4	Listed	Listed	DSL	Listed

EINECS：（European Inventory of Existing Chemical Substances）

ELINCS：（European List of Notified Chemical Substances）

DSL：（Canadian Domestic Chemical Substances）

IECSC：（Inventory of Existing Chemical Substances in China）

NDSL：（Canadian non-domestic Chemical Substances）

NLP：

TSCA：（Toxic Substances Control Act of USA）

Section 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 the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

--End of report--