

Material Safety Data Sheet

1. Product & Company Identification

Product name:	Lithium-Ion Cell, rechargeable
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Item no.	Size	Nominal Voltage	Capacity	Energy content
2749812	18650	3,6 V	3000 mAh	10.8 Wh

Manufacturer:	Conrad Electronic SE
Address:	Klaus-Conrad-Str. 1, D-92240 Hirschau
Telephone:	+49 (0) 9604 / 40 - 8988
Date of issue:	05.01.2022

2. Hazards Identification

Explosive risk

This article does not belong to the explosion dangerous goods

Flammable risk

This article does not belong to the flammable material

Oxidation risk

This article does not belong to the oxidation of dangerous goods

Toxic risk

This article does not belong to the toxic dangerous goods

Radioactive risk

This article does not belong to the radiation of dangerous goods

Mordant risk

This article does not belong to the corrosion of dangerous goods

Other risk

N/A

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3. Composition/information on ingredients

Classification of the substance or mixture: substance mixture

Chemical Composition	CAS No.	Weight (%)
Lithium nickel cobalt Al (Li(NiCoAl)O ₂)	113066-89-0	39.50
Carbon Black	1333-86-4	1.44
PVDF	24937-79-9	0.7
Graphite powder	7782-42-5	20.6
CMC	9004-32-4	0.39
SBR	9003-55-8	0.49
Separator	9002-88-4	2.24
LiPF ₆	21324-40-3	14.38
Cu	7440-50-8	9.34
Al	7429-90-5	3.39
Ni(Nickel)	7440-02-0	0.43
Iron (Fe)	7439-89-6	7.1

4. First Aid Measures

General information:

No special measures required.

After inhalation:

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

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 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.

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5. Fire Fighting Measures

Suitable extinguishing agents:

Use extinguishing agent suitable for local conditions and the surrounding environment . Such as dry powder , CO2.

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 or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

Attention extinguishing method and protective measures:

Wear self-contained respirator.

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.

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.

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8. Exposure Controls/Personal Protection

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:

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

Ventilation:

Not necessary under conditions of normal use.

Hand protection:

Protective Gloves

Eye protection:

Tightly sealed goggles

9. Physical and Chemical Properties

Appearance Specific

Form: Cylindrical

Odour: Odorless

10. Stability and Reactivity

Chemical stability:

Stable in normal circumstances.

Conditions to Avoid:

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

Incompatibilities:

Oxidizing agents, acid, base.

Hazardous Combustible Products:

Toxic fumes and may form peroxides.

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11. Toxicological Information

Signs & symptoms:

None, unless battery ruptures.

In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.

Inhalation:

Lung irritant.

Skin contact:

Skin irritant.

Eye contact:

Eye irritant.

Ingestion:

Poisoning if swallowed.

12. Ecological Information

Mammalian effects:

None known at present.

Eco-toxicity:

None known at present.

Bioaccumulation potential:

Slowly Bio-degradable.

Environmental fate:

None known environmental hazards at present.

13. Disposal Considerations

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.

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14. Transport Information

	IATA	IMDG
UN Number	UN3480 UN3481	UN3480 UN3481
UN Proper shipping name	Lithium Ion Batteries Lithium Ion Batteries Packed With Equipment Lithium Ion Batteries Contained In Equipment	Lithium Ion Batteries Lithium Ion Batteries Packed With Equipment Lithium Ion Batteries Contained In Equipment
Transport hazard class(es)	9	9
Packing group	II	II
Marine pollutant	No	No

IATA: International Air Transport Association

IMDG: International Maritime Dangerous Goods

Transport information: The Lithium Battery (SW18650-30SP 3.6V 3000mAh) has passed the test UN38.3.

The package of battery (SW18650-30SP 3.6V 3000mAh) should be complied with the requirements of Packing Instruction 965/966/967 of IATA DGR 63rd Edition for transportation.

The package of battery (SW18650-30SP 3.6V 3000mAh) should be complied with the requirements of 188 of IMDG (40-20) or the <<Recommendations On The Transport Of Dangerous Goods-Model Regulations>> (21).

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.

Note: Batteries weight in the package < 5kg (By air, Batteries packed with equipment).

Note: Batteries weight in the package < 5kg (By air, Batteries installed in equipment).

Transport Fashion: By air, by sea, by railway, by road.

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15. Regulatory Information

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:

Composition	CAS No.	IECSC	TSCA	DSL/NDSL	EINECS/ELINCS/ NLP
Lithium nickel cobalt Al (Li(NiCoAl)O ₂)	113066-89-0	Listed	Not listed	Not listed	Not listed
Carbon Black	1333-86-4	Listed	Listed	DSL	Listed
PVDF	24937-79-9	Listed	Listed	DSL	Not listed
Graphite powder	7782-42-5	Listed	Listed	DSL	Listed
CMC	9004-32-4	Listed	Listed	DSL	Listed
SBR	9003-55-8	Listed	Listed	DSL	Listed
Separator	9002-88-4	Listed	Listed	DSL	Listed
LiPF ₆	21324-40-3	Listed	Listed	NDSL	Listed
Cu	7440-50-8	Listed	Listed	DSL	Listed
Al	7429-90-5	Listed	Listed	DSL	Listed
Ni(Nickel)	7440-02-0	Listed	Listed	DSL	Listed
Iron (Fe)	7439-89-6	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: No-longer Polymer

TSCA: Toxic Substances Control Act of USA

16. 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.