



Material Safety Data Sheet

Report No.:A2012291-C01-R02

Date: January 18, 2021

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name: AX2-50 PixelBar containing Li-ion Battery

Model: AX2-50

Applicant: Astera Manufacturing Ltd

Applicant Address: 4th Floor, Building 3, CLT Technology Park, No. 7, Ganli 6th Road, Longgang District, Shenzhen, China

Emergency Telephone: +86 755 8960 8750

2. HAZARDS IDENTIFICATION

Most important hazards: The product is not classified as dangerous in accordance with Regulation (EC) 1272/2008, Regulation (EC) 453/2010 and Regulation EC 1907/2006 (REACH) Annex II.

Environmental properties: Not hazardous.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical composition	Cas No.	Weight(%)
Nickel compound	1313-99-1	0-25
Manganese compound	1313-13-9	0-15
Cobalt compound	1307-96-6	4-50
Styrene-Butadiene-Rubber	27288-99-9	<1
Polyvinylidene Fluoride(PVDF)	24937-79-9	<5
Aluminum Foil	7429-90-5	2-10
Copper Foil	7440-50-8	2-10
Craphite	7782-42-5	10-30
Electrolyte (Ethylene carbonate)	96-49-1	10-20
Lithium hexafluorophosphate	21324-40-3	<5
Stainless steel, Nickel and inert materials	N/A	Remainder

Shenzhen Alpha Product Testing Co., Ltd.

Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

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4. FIRST AID MEASURES

Inhalation: No special measures as there is no hazard for normal contact. Concentrated powder or dust from processing may cause unpleasant obstruction in the nasal passages. Remove to fresh air.

Skin contact: Not applicable for finished product.

Eye contact: No special measures as there is no hazard for normal contact.

Ingestion: Do not induce vomiting without professional instruction. Get medical attention immediately.

Additional advice: Never give anything by mouth to an unconscious person. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical powder, sandy soil. Avoid using water and carbon dioxide.

Specific hazards: No information available.

Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear personal protective equipment. Ensure adequate ventilation.

Environmental precautions: Do not flush into surface water.

Methods for cleaning up: Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

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7. HANDLING AND STORAGE

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Avoid long-time direct contact of sunlight.

Handling:

Do not breathe vapors or fumes that may be evolved during processing.

Do not disassemble or burn batteries.

Do not squeeze or pierce batteries.

Do not put batteries into water.

Workers must wear proper protective equipments and must operate strictly according to relative rules.

Packaging material: Keep in properly labelled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection: Use an approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hand protection: Wear appropriate gloves to prevent skin exposure.

Eye protection: Wear appropriate protective eyeglasses or chemical safety goggles.

Hygiene measures: Use only in area provided with appropriate exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls: No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Voltage: 3.6V.

Capacity: 3350mAh

Energy:12.06Wh

Appearance: White, cylinder, odorless, solid Li-ion Battery.

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10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions.

Hazardous decomposition products: No information available.

Materials to avoid: Oxidising agents, strong acids and alkalis if batteries rupture.

Conditions to avoid: Heat, damp air, flames and sparks.

11. TOXICOLOGICAL INFORMATION

Inhalation, skin contact and eye contact are possible when the battery is not 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

Bioaccumulation: No data available. If Manganese concentration reach to 0.1mg/L in the water, BoD5 will reduce.

Ecotoxicity effects: If Chromium concentration reach to 1mg/L in the water, BoD5 will reduce 18%.

Mobility: Mobility.

13. DISPOSAL CONSIDERATIONS

Waste from residues:

Do not allow product to reach sewage system.

Do not throw it into any open bodies of water.

Dispose of in accordance with local regulations.

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14. TRANSPORT INFORMATION

Transport information:

The AX2-50 PixelBar containing Li-ion Battery is not regulated as dangerous good. According to PACKING INSTRUCTION 967 section II of IATA DGR 62nd Edition for transportation.

If those lithium-ion batteries are packed with or contained in an equipment, UN No. is UN3481.the special provision 188 of IMDG, or the Technical Instructions for the Safe Transport of Dangerous Goods (TI).

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

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

15. REGULATORY INFORMATION

Labelling: The product is not classified as dangerous in accordance with Regulation (EC) 1272/2008, Regulation (EC) 453/2010 and Regulation EC 1907/2006 (REACH) Annex II.

Symbol(s): No data available.

R-phrase(s): No data available.

S-phrase(s): No data available.

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.

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