Safety Data Sheet

According to Regulation EC No.1907/2006 Annex 2

SECTION 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Product Name	JSP Ltd.'s Visilite™ helmet illumination system
Product Code	AHV360-000-800
Product Description	Lithium Ion Battery

1.2 Relevant identified uses of the substance or mixture and uses advised against

Only to be used as a battery to power the lights of JSP Ltd.'s Visilite™. No other uses for this battery are recommended.

1.3 Details of the supplier

Address:	JSP Ltd Worsham Mill Minster Lovell Witney Oxfordshire OX29 0TA
Telephone:	+44 1993 826051
Email Address:	technical.support@jsp.co.uk

1.4 Emergency Telephone Number

Emergency Phone #	+44 1993 826051

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

Article containing substances not intended to be released, this product is a sealed unit and not considered hazardous under recommended usage and storage

2.2 Label Elements

Labelling according to regulation EC No.1272/2008

Hazard Pictogram

Signal Word — Danger

Hazard Statements

H228	Flammable solid
H301	Toxic if swallowed
H314	Causes severe skin burns and eye damage
H317	May cause an allergic reaction
H351	Suspected of causing cancer
H371	May cause damage to organs
H372	May cause damage to organs through prolonged or repeated exposure
H412	Harmful to aquatic life with long lasting effects

Precautionary Statements

Please refer to section 16 for a full list of precautionary statements

2.3 Other Hazards

This product does not fulfil the criteria outlined in Annex XIII of regulation EC No. 1906:2006 for being persistent, bioaccumulative and toxic (PBT) and very persistent and very bioaccumulative (vPvB)

SECTION 3 Composition/information on ingredients

3.1 Substances

3.2 Mixtures

Substance	CAS Number	%	Classification: Regulation EC No. 1272/2008	Type
Lithium Cobalt Oxide	12190-79-3	15-40	Skin Sens. 1, H317	[1]
Graphite	7782-42-5	10-30	Not considered Hazardous under Regulation EC No. 1272/2008	[1]

Lithium Hexa fluoro phosphate	21324-40-3	10-30	Acute Tox. 3, H301 Skin Corr. 1B, H314 STOT RE 1, H372	[1]
Copper	7440-50-8	7-13	Not considered Hazardous under Regulation EC No. 1272/2008	[1]
Aluminium	7429-90-5	5-10	Flam. Sol. 1, H228	[1]
Nickel	7440-02-0	1-5	Skin Sens. 1, H317 Carc. 2, H351 STOT SE 1, H371 Aquatic Chronic 3, H412	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type:
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern
Occupational exposure limits, if available, are listed in Section 8.

SECTION 4 First Aid Measures

4.1 Description of First Aid Measures

Eye contact	In case of electrolyte contact with eyes do not rub eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical advice.
Inhalation	In case of inhalation electrolyte vapours make victim blow their nose. Seek medical attention if symptoms persist
Skin contact	Remove contaminated clothes and shoes immediately. Wash extraneous matter or contact region with soap and water
Ingestion	Wash mouth thoroughly with water and seek medical attention
Protection of first-aiders	Please see section 8.2 for appropriate personal protective equipment for use by first aiders

4.2 Most Important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	Electrolyte may cause eye irritation and inflammation
Inhalation	Electrolyte may cause respiratory irritation and inflammation
Skin contact	Electrolyte may cause irritation to skin and inflammation
Ingestion	Electrolyte may be toxic if ingested

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	No specific treatment notes to physician
Specific treatments	

SECTION 5 Firefighting measures

5.1 Extinguishing Media

Suitable Extinguishing Media	Carbon Dioxide, Nitrogen, chemical fire extinguishing media
Unsuitable Extinguishing Media	Water

5.2 Special hazard arising from the substance or mixture

Oxides of Carbon, Nitrogen, Copper, Manganese, Iron, Zinc, Nickel and Potassium maybe released during combustion. Corrosive gases may be liberated during combustion and with contact with water.

5.3 Advice for firefighters

Wear suitable personal protective equipment for fighting fires as necessary

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear suitable personal protective equipment as outlined in section 8 when dealing with spilled substances and mixtures from the battery. Remove any ignition sources and avoid contact with water
For emergency responders	Wear suitable personal protective equipment as outlined in section 8 when dealing with spilled substances and mixtures from the battery. Remove any ignition sources and avoid contact with water

6.2 Environmental precautions

Do not dispose of spilled material in the environment, only dispose of material in accordance with local legislation

6.3 Methods and materials for containment and cleaning up

Remove solid waste from hazard area, for any spilled electrolyte wipe with a dry cloth using personal protective equipment recommended in section 8.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7 Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures	Do not crush, pierce, short the positive and negative terminals with conductive material (i.e. metal). Do not directly weld the terminals. Do not disassemble, mutilate or mechanically abuse the battery.
Advice on general occupational hygiene	Ensure appropriate workplace hygiene is exercised while handling the battery do eat, drink or smoke while handling the battery, especially if it is suspected to be leaking

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool location, well ventilated location away from moisture, open flames and sources of heat.

7.3 Specific end use(s)

Recommendations

Industrial sector specific solutions	Only to be used as a battery to power the lights of JSP Ltd.'s Visilite™. No other uses for this battery are recommended.

SECTION 8 Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control Parameters

Occupational Exposure limits

This product does not have an occupational exposure limit

Recommended monitoring procedures

DNELs/DMELs

PNECs

8.2 Exposure Controls

Appropriate engineering Controls	Under foreseeable use of the product engineering controls are not required. In the presence of open or leaking batteries ensure adequate ventilation is provided
Individual protective measures	
Hygiene measures	

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Eye/face protection	Where risk assessment shows that eye protection is appropriate use suitable eye and face protection that meets the requirements of EN166
Skin Protection	
Hand protection	When handling a battery that is leaking wear suitable gloves that meets the requirements of EN 374
Body protection	When handling a battery that is leaking wear suitable clothing that minimise exposed skin to the hazard
Other skin protection	
Respiratory protection	If exposure to vapours is likely use a CE marked respirator that meets the requirements of EN140 and tested and approved filters that are classified as ABEK filters under EN14387
Environmental exposure controls	Avoid discharging electrolyte solution into the environment, dispose of damaged battery in accordance with local legislation

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Square Cell contained within equipment
Colour	Silver
Odour	Non
Odour threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Available
Evaporation rate	Not Available
Flammability	Not Available
Upper/lower flammability /explosive limits	Not Available
Vapour pressure	Not Available
Vapour density	Not Available
Relative density	Not Available
Solubility(ies)	Not Available
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	Not Available
Explosive properties	Not Available
Oxidising properties	Not Available

9.2 Other information

No additional information

SECTION 10 Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product

10.2 Chemical Stability

Under foreseeable use of the product this battery is considered chemically stable

10.3 Possibility of hazardous reactions

Under foreseeable use of the product hazardous reactions should not occur

10.4 Conditions to Avoid

Avoid excessive heat, humidity and mechanical stresses. Avoid contact with water and avoid short circuiting the terminals

10.5 Hazardous decomposition products

Corrosive gases may be liberated during combustion

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity

No Data Available

Skin corrosion/irritation

No Data Available

Serious eye damage/irritation

No Data Available

Respiratory or skin sensitisation

No Data Available

Germ cell mutagenicity

No Data Available

Carcinogenicity

No Data Available

Reproductive toxicity

No Data Available

Specific target organ toxicity – single exposure

No Data Available

Specific target organ toxicity – repeated exposure

No Data Available

Aspiration

No Data Available

Additional Information

No addition information

SECTION 12 Ecological Information

12.1 Toxicity

No Data Available

12.2 Persistence and degradability

Does not readily decay under foreseeable environmental conditions

12.3 Bioaccumulative potential

No Data Available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No Data Available

12.6 Other adverse effects

No data available

SECTION 13 Disposal Considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste Treatment Methods

Product — The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Packaging — The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14 Transport Information

14.1 UN number

ADR/RID	UN3481
ADN	UN3481
IMDG	UN3481
ICAO	UN3481

14.2 UN proper shipping name

ADR/RID	LITHIUM ION BATTERIES, CONTAINED IN EQUIPMENT
ADN	LITHIUM ION BATTERIES, CONTAINED IN EQUIPMENT
IMDG	LITHIUM ION BATTERIES, CONTAINED IN EQUIPMENT
ICAO	LITHIUM ION BATTERIES, CONTAINED IN EQUIPMENT

14.3 Transport hazard classes

ADR/RID	9
ADN	9
IMDG	9
ICAO	9

14.4 Packaging group

ADR/RID	N/A
ADN	N/A
IMDG	N/A
ICAO	N/A

14.5 Environmental hazards

ADR/RID	N/A
ADN	N/A
IMDG	N/A
ICAO	N/A

14.6 Special precaution for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not Applicable

SECTION 15 Regulatory information

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

Regulation EC No.1907/2006 on the registration evaluation authorisation and restriction of chemicals REACH:

Annex XIV	None of the substances in this mixture are listed
Annex XVII	None of the substances in this mixture are listed
Candidate List of Substance of Very High concern for eventual inclusion into Annex XIV	None of the substances in this mixture are listed

International regulations:

Chemical Weapon Convention List Schedules I, II & III Chemicals	Not Listed
Montreal Protocol (Annexes A, B, C, E)	Not Listed
Stockholm Convention on Persistent Organic Pollutants	Not Listed
Rotterdam Convention on Prior Inform Consent (PIC)	Not Listed
UNECE Aarhus Protocol on POPs and Heavy Metals	Not Listed

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16 Other information

Full Text of H-Statements referred to in Section 2 and 3

H228	Highly flammable liquid and vapour
H301	Toxic if swallowed
H314	Causes severe skin and eye damage
H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H371	May cause damage to organs
H372	Causes damage to organs
H412	Harmful to aquatic life with long lasting effects

Full Text of P-Statements referred to in Section 2

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P260	Do not breathe dust/vapours/gas
P261	Avoid breathing dust/vapours/gas
P264	Wash hands thoroughly after handling
P270	Do eat, drink or smoke when using this product
P272	Contaminated clothing should not be allowed out of the work place
P280	Wear protective gloves
P281	Use personal protective equipment as required
P301 + P330 + P331	IF SWALLOWED: Rinse mouth and do NOT induce vomiting
P302 + P352	IF ON SKIN: Wash with plenty of soap
P303 + P361 + P353	IF ON SKIN (or hair): Take off contaminated clothing rinse skin with water
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338	IF IN EYES: Cautiously rinse with water for several minutes, remove contacts lenses if present and easy to do so
P308 + P313	IF exposed or concerned: Get medical advice or attention
P314	Get medical advice or attention if you feel unwell
P333 + P313	If skin irritation or rash occurs: Get medical advice or attention
P363	Wash contaminated clothing before reuse
P372	Explosion risk in case of fire

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