



Certificate No. FM 22786  
ISO 9001:2015

## Safety Data Sheet

According to Regulation EC No.1907/2006 Annex 2

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

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#### 1.1 Product Identifier

Product Name Powercap® Active™ Lithium Ion Battery  
Product Code CAU340-001-151  
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 JSP Ltd's Powercap® Active™ and Powercap® Active™ IP powered air respirators. 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

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#### 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

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## 2.2 Label Elements

### Labelling according to regulation EC No.1272/2008

Hazard Pictogram



Signal Word

Danger

Hazard Statements

H228

Flammable Solid

H317

May cause an allergic skin reaction

H350

May cause cancer

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:	Type
			Regulation EC No. 1272/2008	
Lithium-transition metal oxide (Li[M] <sub>m</sub> [O] <sub>n</sub> )* cathode	12190-79-3 12057-17-9 18242-95-1	20-60	Skin Sens. 1 H317 Carc. 1B H350	[1]
Carbon anode	7782-42-5 7440-44-0	10-30	Not considered Hazardous under Regulation EC No. 1272/2008	
Aluminium (Outer case)	7429-90-5	1~30	Flam. Sol. 1; H228	[1]
Organic electrolyte	-	5-25	-	
Copper	7440-50-8	1-15	Not considered Hazardous under Regulation EC No. 1272/2008	
Aluminium	7429-90-5	1-10	Flam. Sol. 1; H228	[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.

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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.

\*M represents are transition metals of Co, Mn, Ni and Al

## 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

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## 5.2 Special hazard arising from the substance or mixture

Oxides of Lithium, Cobalt, Manganese, Nickel, Aluminium and Copper 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

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### 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

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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

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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 JSP Ltd's Powercap® Active™ and Powercap® Active™ IP power air respirators. No other uses for this battery are recommended.

## SECTION 8 Exposure controls/personal protection

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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  
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  
Other skin  
protection*

When handling a battery that is leaking wear suitable clothing that minimise exposed skin to the hazard

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

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Environmental exposure controls	Avoid discharging electrolyte solution into the environment, dispose of damaged battery in accordance with local legislation
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## SECTION 9 Physical and chemical properties

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### 9.1 Information on basic physical and chemical properties

Physical State	Solid Cell containing fluid electrolyte
Colour	Black
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	
Explosive properties	Not Available
Oxidising properties	Not Available

### 9.2 Other information

Battery Voltage	3.70V
Battery Capacity	1880mAh
Battery Weight	145g

## SECTION 10 Stability and reactivity

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### 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

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### 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

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### 11.1 Information on toxicological effects

#### Acute toxicity

Product/Ingredient Name	Exposure Route	Species	Exposure Time	Dose
Organic Electrolyte	Oral	Rat		>2000mg/kg

#### 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

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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**

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### **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**

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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

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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

<b>14.1</b>	<b>UN number</b>	
	ADR/RID	3480 (3481 when battery is contained in equipment or packed with equipment)
	ADN	3480 (3481 when battery is contained in equipment or packed with equipment)
	IMDG	3480 (3481 when battery is contained in equipment or packed with equipment)
	ICAO	3480 (3481 when battery is contained in equipment or packed with equipment)
<b>14.2</b>	<b>UN proper shipping name</b>	
	ADR/RID	Lithium Ion Batteries (Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment)
	ADN	Lithium Ion Batteries (Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment)
	IMDG	Lithium Ion Batteries (Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment)
	ICAO	Lithium Ion Batteries (Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment)
<b>14.3</b>	<b>Transport hazard classes</b>	
	ADR/RID	9
	ADN	9
	IMDG	9
	ICAO	9
<b>14.4</b>	<b>Packaging group</b>	
	ADR/RID	II
	ADN	II
	IMDG	II
	ICAO	II
<b>14.5</b>	<b>Environmental hazards</b>	
	ADR/RID	N/A
	ADN	N/A
	IMDG	N/A
	ICAO	N/A
<b>14.6</b>	<b>Special precaution for user</b>	

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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**

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**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**

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

H228	Flammable Solid
H317	May cause an allergic skin reaction
H350	May cause cancer

**Full Text of P-Statements referred to in Section 2**

P210	Keep away from heat/sparks/open flames/hot surfaces
P240	Ground/bond container and receiving equipment
P241	Use explosion-proof electrical ventilating/lighting/equipment
P280	Wear protective gloves/protective/clothing/eye protection/face protection
P370 + P378	In case of fire use ... for extinction
P261	Avoid Breathing gases/vapours

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P272	Contaminated work clothing should not be allowed out of the work place
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P333 + P313	If skin irritation or rash occurs: get medical advice/attention
P363	Wash contaminated clothing before reuse
P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P281	Use personal protective equipment as required
P308 + P313	IF exposed or concerned get medical advice or attention
P405	Store locked up
P501	Dispose of contents/container in a accordance with local legislation and guidelines

### Notice to reader

*This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is given in good faith, being based on the latest information available to JSP Ltd and is to the best of JSP Ltd's knowledge and belief, accurate and reliable at the time of preparation. However, no representation, warranty or guarantee is made as to the accuracy, liability or completeness and JSP Ltd assumes no responsibility therefore, and disclaims any liability for any loss, damage or injury howsoever arising (including in respect of any claim brought by any third party) incurred using this information. The product is supplied on the condition that the user accepts responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use*

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