

Safety data sheet

Document no. 99-160729-A
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: B3501, Item no. 403501A & S-403501A
Used with: 403520A, 403520B & 403520B-FCC

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

Recommended uses: Lithium Iron Disulfide Battery, Lithium content: 5.88 g. The battery cell is contained in a hermetically-sealed case, designed to withstand temperatures and pressure during normal use. During normal use and handling the hazardous materials are fully contained inside the battery cell.

1.3. Details of the supplier of the safety data sheet

Supplier: Cobham SATCOM
Industrivej 30
9490 Pandrup
Denmark
Tel: +45 39558800
Email: satcom.shipping@coham.com

1.4. Emergency telephone number

+45 22 23 62 15

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP-classification (Regulation
(EC) No 1272/2008):

The product shall not be classified as hazardous according to EU classification and labelling rules.

Most serious harmful effects:

The product is an article and therefore not covered by the classification and labelling rules that apply to chemical products.

In the accidental case of a ruptured and leaking battery, be aware that the leaking electrolyte is corrosive to eyes and skin.

2.2. Label elements

The product shall not be classified as hazardous according to EU classification and labelling rules.

2.3. Other hazards

Assessment to determine PBT and vPvB has not been made.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Registration number	CAS/EC No.	Substance	CLP-classification (Regulation (EC) No 1272/2008)	w/w%	Note
.	1309-36-0	Pyrite	.	24-35	.
.	215-167-7	.	.	.	.
.	7439-89-6	Iron	-	18-22	.
.	231-096-4	.	-	.	.
.	646-06-0	1,3-Dioxolane	Flam. Liq. 2;H225	5-9	.
.	211-463-5	.	.	.	.
.	7439-93-2	Lithium	Water-react. 1;H260 Skin Corr. 1B;H314	6-7	.
.	231-102-5	.	.	.	.
.	110-71-4	1,2-Dimethoxyethane	Flam. Liq. 2;H225 Repr. 1B;H360FD	2-4	.
.	203-794-9	.	Acute Tox. 4;H332	.	.
.
.	1333-86-4	Carbon-black	-	0-4	.
.	215-609-9	.	-	.	.
.	7782-42-5	Graphite	-	0-4	.
.	231-955-3	.	.	.	.
.	10377-51-2	Lithium-iodide	-	0.3-3	.
.	233-822-5	.	.	.	.
.	.	Plastic and Other	.	.	.

Please see section 16 for the full text of H-phrases.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:	Seek fresh air. Seek medical advice in case of persistent discomfort. Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Do not induce vomiting. If vomiting occurs, keep head low so that stomach contents do not enter lungs. Seek medical advice immediately.
Skin:	Remove contaminated clothing. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.
Eyes:	Flush immediately with water (preferably using eye wash equipment) for at least 5 minutes. Open eye wide. Remove any contact lenses. Seek medical advice.
Burns:	Flush with water until pain ceases. Remove clothing that is not stuck to the skin – seek medical advice/transport to hospital. If possible, continue flushing until medical attention is obtained.
Other information:	When obtaining medical advice, show the safety data sheet or label.

4.2. Most important symptoms and effects, both acute and delayed

Leaking electrolyte: Has a caustic burning effect and causes burning pain, reddening, blistering and burning sores if it comes in contact with skin. Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight. Ingestion may cause caustic burning in mouth, esophagus and stomach. Pains in mouth, throat and stomach. Difficulty swallowing, feeling unwell and vomiting of blood.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms. No special immediate treatment required. Ensure that medical personnel are aware of the material involved, and take precautions to protect themselves.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	If batteries are on charge, turn off power. Extinguish with powder, foam, carbon dioxide or water mist. Use water or water mist to cool non-ignited stock.
Unsuitable extinguishing media	Do not use water stream, as it may spread the fire.

5.2. Special hazards arising from the substance or mixture

Exposures to temperatures of above 100°C can cause venting of the liquid electrolyte.

5.3. Advice for firefighters

Extinguishing water which has been in contact with the product may be corrosive. Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases – seek fresh air.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel: In case of leaking battery: Wear gloves. Wear safety goggles if there is a risk of eye splash. Smoking and naked flames prohibited. Take precautionary measures against static discharges. Use spark-free tools and explosion proof equipment.

For emergency responders: In addition to the above: Chemical protective suit equivalent to EN 943-2 is recommended.

6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water.

6.3. Methods and material for containment and cleaning up

Contain and absorb spill with sand or other absorbent, non-combustible material and transfer to suitable waste containers.

6.4. Reference to other sections

See section 8 for type of protective equipment. See section 13 for instructions on disposal.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Smoking and naked flames prohibited. The battery can explode or leak and cause burns if installed backwards, disassembled, charged or exposed to water, fire or high temperature. The battery is not designed for recharging. Wash hands before breaks, before using restroom facilities, and at the end of work. Take precautionary measures against static discharges. Use spark-free tools and explosion proof equipment. See section 8 for type of protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc. Store in a dry, cool, well-ventilated area. Elevated temperatures may result in reduced battery life. Keep away from sources of ignition. NEVER short-circuit.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Legal basis: Commission Directive 2000/39/EC (Occupational Exposure Limits). Last amended by Commission Directive 2009/161/EU.
Contains no substances subject to reporting requirements.

8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below. See also section 7.1.

Personal protective equipment,
eye/face protection:

In case of leakage: Wear safety goggles if there is a risk of eye splash. Eye protection must conform to EN 166.

Personal protective equipment,
skin protection:

In case of leakage: Wear gloves. Type of material: Latex/ Neoprene rubber/ Nitrile rubber. Gloves must conform to EN 374.

Personal protective equipment,
respiratory protection:

Not required.

Environmental exposure controls: Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State:	Solid substance
Colour:	No data
Odour:	No data
Odour threshold:	No data
pH (solution for use):	No data
pH (concentrate):	No data
Melting point/freezing point:	No data
Initial boiling point and boiling range:	No data
Flash point:	No data
Evaporation rate:	No data
Flammability (solid, gas):	No data
Upper/lower flammability limits:	No data
Upper/lower explosive limits:	No data
Vapour pressure:	No data
Vapour density:	No data
Relative density:	1,7-2,0
Solubility:	No data
Partition coefficient n-octanol/water:	No data
Auto-ignition temperature:	No data
Decomposition temperature:	No data
Viscosity:	No data
Explosive properties:	No data
Oxidising properties:	No data

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive.

10.2. Chemical stability

The battery is hermetically sealed. The battery is stable under normal conditions and meet the ATEX conditions. Exposure to temperatures of above 100°C can cause venting of the liquid electrolyte. Internal shorting could also cause venting of the electrolyte.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Avoid heating and contact with ignition sources. Avoid contact with moisture and water.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Product decomposes in fire conditions or when heated to high temperatures, and inflammable and toxic gases may be released.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity -oral:	The product does not have to be classified. Ingestion of large quantities may cause discomfort.
Acute toxicity -dermal:	The product does not have to be classified.
Acute toxicity -inhalation:	The product does not have to be classified.
Skin corrosion/irritation:	Leaking electrolyte: Has a caustic burning effect and causes burning pain, reddening, blistering and burning sores if it comes in contact with skin.

Serious eye damage/eye irritation:	Leaking electrolyte: Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight.
Respiratory sensitisation or skin sensitisation:	The product does not have to be classified.
Germ cell mutagenicity:	The product does not have to be classified.
Carcinogenic properties:	The product does not have to be classified.
Reproductive toxicity:	The electrolyte contains a substance, which is suspected of having a reproductive effect.
Single STOT exposure:	Leaking electrolyte: Inhalation of vapours may cause irritation to the upper airways.
Repeated STOT exposure:	The product does not have to be classified.
Aspiration hazard:	No hazards.
Other toxicological effects:	Ingestion may cause caustic burning in mouth, oesophagus and stomach. Pains in mouth, throat and stomach. Difficulty swallowing, feeling unwell and vomiting of blood.

SECTION 12: Ecological information

12.1. Toxicity

The product does not have to be classified.

12.2. Persistence and degradability

Test data are not available.

12.3. Bioaccumulative potential

No bioaccumulation expected.

12.4. Mobility in soil

Not expected to be mobile in soil.

12.5. Results of PBT and vPvB assessment

No assessment has been made.

12.6. Other adverse effects

Intact battery: No hazards.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Avoid discharge to drain or surface water. Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site. EWC code: Depends on line of business and use, for instance 16 06 05: other batteries and accumulators

Absorbent/cloth contaminated with the product: EWC code: 15 02 02 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances.

SECTION 14: Transport information

ADR/RID

14.1. UN number	3090
14.2. UN proper shipping name	LITHIUM METAL BATTERIES
14.3. Transport hazard class(es)	9
14.4. Packing group	
Hazard identification number	
Tunnel restriction code:	E
14.5. Environmental hazards	The product should not be labelled as an environmental hazard (symbol: fish and tree).

ADN

14.1. UN number	3090
14.2. UN proper shipping name	LITHIUM METAL BATTERIES
14.3. Transport hazard class(es)	9
14.4. Packing group	
14.5. Environmental hazards	The product should not be labelled as an environmental hazard (symbol: fish and tree).
Transport in tank vessels:	Not applicable.

IMDG

14.1. UN number	3090
14.2. UN proper shipping name	LITHIUM METAL BATTERIES
14.3. Transport hazard class(es)	9
14.4. Packing group	
14.5. Environmental hazards	The product is not a Marine Pollutant (MP).
IMDG Code segregation group:	-

ICAO/IATA

14.1. UN number	3090
14.2. UN proper shipping name	LITHIUM METAL BATTERIES
14.3. Transport hazard class(es)	9
14.4. Packing group	

14.6. Special precautions for user

None.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Supplemental information: TRANSPORTATION OF BATTERIES PACKED WITH EQUIPMENT, MAY BE PACKED AS "UN 3091 LITHIUM METAL BATTERIES, PACKED WITH EQUIPMENT"

SECTION 15: Regulatory information

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

Special provisions: None.

15.2. Chemical safety assessment

Chemical safety assessment has not been performed.

SECTION 16: Other information

Changes have been made in the following sections:

2, 3, 8, 16

Abbreviation explanations:

PBT: Persistent, Bioaccumulative and Toxic
vPvB: Very Persistent and Very Bioaccumulative
STOT: Specific Target Organ Toxicity

Classification method:

Calculation based on the hazards of the known components.

H-phrases:

H225 Highly flammable liquid and vapour.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H314 Causes severe skin burns and eye damage.
H332 Harmful if inhaled.
H360FD May damage fertility. May damage the unborn child.

Training:

A thorough knowledge of this safety data sheet should be a prerequisite condition.

Other information:

This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with 1907/2006/EC (REACH) as subsequently changed.