

# Safety data sheet

Revision: 24-09-2012  
Replaces: 09-09-2009  
Version: 02.00/EU-UK

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

### 1.1. Product identifier

Trade name: B3504, Item nr. 403504A & S-403504A  
Used with: 403530A, 403540A, 403560A, 403536A & 403538A

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

Recommended uses: Lithium Ion Battery, 15,2 Wh. 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

Distributor: Thrane & Thrane A/S  
Porsvej 2  
9200 Ålborg SV  
Denmark  
Tel: +45 96346100  
Fax: +45 96346119  
Email: shippingafd@thrane.com  
Contact person: Niels Anton Nielsen

### 1.4. Emergency telephone number

+45 39 55 89 89

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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

DPD-classification:

CLP-classification:

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 may cause sensitization by skin contact.

### 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.

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## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

Registration number	CAS/EC No.	Substance	DSD-classification/ CLP-classification	w/w%	Note
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12190-79-3	Cobalt-lithium-dioxide	Carc. Cat 3;R40 R43	25-45
235-362-0	.	Carc. 2;H351 Skin Sens. 1;H317	.
7440-50-8-B	Copper	-	5-25
231-159-6	.	-	.
7440-44-0	Graphite	-	5-25
213-153-3	.	-	.
7429-90-5-a	Aluminum	-	10-30
231-072-3	.	-	.
9003-07-0	Polypropylene	-	1-5
.	.	-	.
9002-88-4	Polyethylene, homopolymer	-	1-5
.	.	-	.
21324-40-3	Lithium hexafluorophosphate(1-) (in	T;R24 Xn;R22 C;R34	0,5-4
244-334-7	EC/EMC/DEC electrolyte)	Acute Tox. 4;H302 Acute tox. 3;H311	.
.	.	Skin Corr. 1B;H314	.
7440-02-0	Nickel	Carc. Cat. 3;R40 T;R48/23 R43	0,1-1,5
231-111-4	.	Carc. 2;H351 STOT RE 1;H372	.
.	.	Skin Sens. 1	.
9002-84-0	Polytetrafluoroethylene	-	0,5-2
.	.	-	.
24937-79-9	Polyvinylidene Fluoride	-	0,5-2
.	.	-	.

Please see section 16 for the full text of R-phrases and 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.
Ingestion:	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 in case of persistent discomfort.
Skin:	Remove contaminated clothing. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.
Eyes:	Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist.
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

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

Treat symptoms. No special immediate treatment required.

## 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: Protective suit equivalent to EN 368, type 3, 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.

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## 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 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.

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## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Legal basis: Directive 2000/39/EC as subsequently amended.  
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.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

State:	State: Solid
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:	No data
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.

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**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 degree celsius can cause venting of the liquid electrolyte and/or heat generation and ignition. 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.

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**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: May cause slight irritation.

Serious eye damage/eye irritation: Leaking electrolyte: May cause eye irritation.

Respiratory sensitisation or skin sensitisation: Leaking electrolyte: May cause sensitization by skin contact. Symptoms include reddening, swelling, blistering and ulceration – often slowly developing.

Germ cell mutagenicity: The product does not have to be classified.

Carcinogenic properties: The product contains at least one substance that is suspected of being carcinogenic.

Reproductive toxicity: The product does not have to be classified.

Single STOT exposure: The product does not have to be classified.

Repeated STOT exposure: Leaking electrolyte: May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: No hazards.

Other toxicological effects: None known.

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**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**

Test data are not available.

**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**

None known.

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**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.

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**SECTION 14: Transport information**

**ADR/RID**

The battery meets the required special provisions, so that it is not to be transported as fully regulated dangerous goods. Any special regulation for excepted batteries must still be followed.

14.1. UN number

3480

14.2. UN proper shipping name

LITHIUM ION BATTERIES

14.3. Transport hazard class(es)

14.4. Packing group

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Hazard identification number

Tunnel restriction code:

14.5. Environmental hazards

**ADN**

The battery meets the required special provisions, so that it is not to be transported as fully regulated dangerous goods. Any special regulation for excepted batteries must still be followed.

14.1. UN number

3480

14.2. UN proper shipping name

LITHIUM ION BATTERIES

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

Environmental hazard in tank vessels:

**IMDG**

The battery meets the required special provisions, so that it is not to be transported as fully regulated dangerous goods. Any special regulation for excepted batteries must still be followed.

14.1. UN number

3480

14.2. UN proper shipping name

LITHIUM ION BATTERIES

14.3. Transport hazard class(es)

14.4. Packing group -  
14.5. Environmental hazards  
IMDG Code segregation group:

#### ICAO/IATA

The battery meets the required special provisions, so that it is not to be transported as fully regulated dangerous goods. Any special regulation for excepted batteries must still be followed.

14.1. UN number 3480  
14.2. UN proper shipping name LITHIUM ION BATTERIES  
14.3. Transport hazard class(es)  
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.

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### 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.

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### SECTION 16: Other information

Changes have been made in the following sections: 1-16

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.

R-phrases: R22 Harmful if swallowed.  
R24 Toxic in contact with skin.  
R34 Causes burns.  
R40 Limited evidence of a carcinogenic effect.  
R43 May cause sensitisation by skin contact.  
R48/23 Toxic: danger of serious damage to health by prolonged exposure through inhalation.

H-phrases: H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H372 Causes damage to organs through prolonged or repeated exposure.

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

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