Li-Ion battery pack BA1400T 56V 2.5Ah 140Wh / BA2800T 56V 5.0Ah 280Wh / BA4200T 56V 420Wh

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

1.1 Product identifier
Product name: Li-Ion battery pack BA1400T 56V 2.5Ah 140Wh / BA2800T 56V 5.0Ah 280Wh / BA4200T 56V 420Wh
Product code: Not available.
Product description: This product is non-hazardous for workers under normal conditions of use. This SDS is written based on a possible contact of the user with the inner electrolyte solution contained in the battery, in the course of a misuse or an accident.
Product type: Solid.
Other means of identification: BA1400T/BA2800T/BA4200T

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Lithium-ion batteries.

1.3 Details of the supplier of the safety data sheet
Supplier's details: EGO Europe GmbH
Wahlwiesenstrasse 1,
71711 Steinheim an der Murr, Germany
Tel: 0044 1494 957 514
Fax: 0049 7144 8875497

1.4 Emergency telephone number
National advisory body/Poison Centre
Emergency telephone number (with hours of operation): 0044 1235 239 670
24/7
e-mail address of person responsible for this SDS: Joerg.bauerle@egopowerplus.eu

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Acute Tox. 4, H302
Skin Corr. 1A, H314
Eye Dam. 1, H318
Skin Sens. 1, H317
Carc. 1B, H350
STOT RE 2, H373

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.
SECTION 2: Hazards identification

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms:

- Danger symbol
- Irritation symbol
- Warning symbol

Signal word: Danger

Hazard statements:
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H350 - May cause cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention:
P201 - Obtain special instructions before use.
P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.
P260 - Do not breathe dust.

Response:
P304 + P340 + P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
P303 + P361 + P353 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or physician.
P305 + P310 - IF IN EYES: Immediately call a POISON CENTER or physician.

Storage:
P405 - Store locked up.

Disposal:
P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients:
- Cobalt lithium dioxide
- Ethylene carbonate
- Lithium hexafluorophosphate

Supplemental label elements:
Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Special packaging requirements:
Containers to be fitted with child-resistant fastenings:
Not applicable.

Tactile warning of danger:
Not applicable.

2.3 Other hazards
SECTION 2: Hazards identification

Other hazards which do not result in classification: None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures: Mixture

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Identifiers</th>
<th>%</th>
<th>Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAS: 7440-02-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index: 028-002-00-7</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>EC: 235-362-0</td>
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</tr>
<tr>
<td></td>
<td>CAS: 12190-79-3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC: 231-955-3</td>
<td>≥25 - ≤50</td>
<td>Skin Sens. 1, H317</td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td>CAS: 7782-42-5</td>
<td></td>
<td>Carc. 1B, H350</td>
<td>[2]</td>
</tr>
<tr>
<td>Cobalt lithium dioxide</td>
<td>≥25 - ≤50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural graphite</td>
<td>EC: 231-955-3</td>
<td>≥25 - ≤50</td>
<td>Not classified.</td>
<td>[2]</td>
</tr>
<tr>
<td></td>
<td>CAS: 7782-42-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethylene carbonate</td>
<td>≥10 - ≤25</td>
<td></td>
<td>Acute Tox. 4, H302</td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td>CAS: 96-49-1</td>
<td></td>
<td>Eye Irrit. 2, H319</td>
<td></td>
</tr>
<tr>
<td>Propylene carbonate</td>
<td>≥10 - ≤25</td>
<td></td>
<td>STOT RE 2, H373</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index: 607-194-00-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>EC: 231-159-6</td>
<td>≥5 - ≤10</td>
<td>Not classified.</td>
<td>[2]</td>
</tr>
<tr>
<td></td>
<td>CAS: 7440-50-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index: 607-194-00-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithium hexafluorophosphate</td>
<td>≥5 - &lt;10</td>
<td></td>
<td>Acute Tox. 3, H301</td>
<td>[1]</td>
</tr>
<tr>
<td></td>
<td>CAS: 21324-40-3</td>
<td></td>
<td>Skin Corr. 1A, H314</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT RE 1, H372</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Flam. Sol. 1, H228</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Water-react. 2, H261</td>
<td></td>
</tr>
<tr>
<td>Aluminium powder (stabilized)</td>
<td>≥3 - ≤5</td>
<td></td>
<td>See Section 16 for the full text of the H statements declared above.</td>
<td>[2]</td>
</tr>
<tr>
<td></td>
<td>EC: 231-072-3</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>CAS: 7429-90-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index: 013-002-00-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
6. Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

**Eye contact**
Get medical attention immediately. Call a poison centre or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

**Inhalation**
Get medical attention immediately. Call a poison centre or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie,
SECTION 4: First aid measures

Skin contact : Get medical attention immediately. Call a poison centre or physician. Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison centre or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes severe burns. May cause an allergic skin reaction.
Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
- pain
- watering
- redness
Inhalation : No known significant effects or critical hazards.
Skin contact : Adverse symptoms may include the following:
- pain or irritation
- redness
- blistering may occur
Ingestion : Adverse symptoms may include the following:
- stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.
SECTION 5: Firefighting measures

5.1 Extinguishing media
- Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media: Use of water spray when fighting fire may be inefficient. Do not scatter spilled material with high pressure water streams.

5.2 Special hazards arising from the substance or mixture
- Hazards from the substance or mixture: May form hydrofluoric acid if electrolyte comes into contact with water.
- Hazardous combustion products: Decomposition products may include the following materials:
  - Carbon dioxide
  - Carbon monoxide
  - Phosphorus oxides
  - Halogenated compounds
  - Metal oxide/oxides

5.3 Advice for firefighters
- Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spill material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up
- Small spill: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Li-ion battery pack BA1400T 56V 2.5Ah 140Wh / BA2800T 56V 5.0Ah 280Wh / BA4200T 56V 420Wh

SECTION 6: Accidental release measures

Large spill: Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

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: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations: Not available.

Industrial sector specific solutions: Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits
SECTION 8: Exposure controls/personal protection

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Exposure limit values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. TWA: 0.5 mg/m³, (as Ni) 8 hours.</td>
</tr>
<tr>
<td>Cobalt lithium dioxide</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). Inhalation sensitiser. TWA: 0.1 mg/m³, (as Co) 8 hours.</td>
</tr>
<tr>
<td>Natural graphite</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction TWA: 4 mg/m³ 8 hours. Form: Respirable dust</td>
</tr>
<tr>
<td>Copper</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 2 mg/m³, (as Cu) 15 minutes. Form: Dusts and mists TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dusts and mists TWA: 0.2 mg/m³, (as Cu) 8 hours. Form: Fertilizer and/or industrial use.</td>
</tr>
<tr>
<td>Aluminium powder (stabilized)</td>
<td>EH40/2005 WELs (United Kingdom (UK), 12/2011). TWA: 10 mg/m³ 8 hours. Form: Inhalable fraction TWA: 4 mg/m³ 8 hours. Form: Respirable dust</td>
</tr>
</tbody>
</table>

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs: No DNELs/DMELs available.

PNECs: No PNECs available

8.2 Exposure controls

Appropriate engineering controls: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
SECTION 8: Exposure controls/personal protection

**Hand protection**: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection**: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**Environmental exposure controls**: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

**Appearance**

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid. [Battery pack.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

| Flash point     | Not available.         |
| Evaporation rate| Not available.         |
| Flammability (solid, gas) | Not available.         |
| Upper/lower flammability or 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.         |
SECTION 9: Physical and chemical properties

Oxidising properties : Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not puncture, crush or incinerate.

10.5 Incompatible materials : Strong oxidising agents. Corrosives.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced. In case of open cells, there is the possibility of hydrofluoric acid and carbon monoxide release.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene carbonate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>10 g/kg</td>
<td></td>
</tr>
<tr>
<td>Propylene carbonate</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>&gt;5000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Route</th>
<th>ATE value</th>
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</thead>
<tbody>
<tr>
<td>Oral</td>
<td>1735.6 mg/kg</td>
</tr>
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</table>

Irritation/Corrosion

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Score</th>
<th>Exposure</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene carbonate</td>
<td>Skin - Mild irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>660 mg</td>
<td></td>
</tr>
<tr>
<td>Propylene carbonate</td>
<td>Eyes - Moderate irritant</td>
<td>Rabbit</td>
<td>-</td>
<td>60 mg</td>
<td></td>
</tr>
</tbody>
</table>

Sensitisation

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.
Li-ion battery pack BA1400T 56V 2.5Ah 140Wh / BA2800T 56V 5.0Ah 280Wh / BA4200T 56V 420Wh

SECTION 11: Toxicological information

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Category</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene carbonate</td>
<td>Category 2</td>
<td>Not determined</td>
</tr>
<tr>
<td>Lithium hexafluorophosphate</td>
<td>Category 1</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Aspiration hazard

There is no data available.

Information on likely routes of exposure

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes severe burns. May cause an allergic skin reaction.
Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following: pain, watering, redness.
Inhalation : No known significant effects or critical hazards.
Skin contact : Adverse symptoms may include the following: pain or irritation, redness, blistering may occur.
Ingestion : Adverse symptoms may include the following: stomach pains.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.
SECTION 11: Toxicological information

Other information: Not available.

SECTION 12: Ecological information

12.1 Toxicity
There is no data available.

12.2 Persistence and degradability
There is no data available.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogPow</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt lithium dioxide</td>
<td>-</td>
<td>15600</td>
<td>high</td>
</tr>
<tr>
<td>Ethylene carbonate</td>
<td>0.11</td>
<td>-</td>
<td>low</td>
</tr>
<tr>
<td>Propylene carbonate</td>
<td>-0.41</td>
<td>-</td>
<td>low</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

<table>
<thead>
<tr>
<th>Soil/water partition coefficient (Koc)</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No known significant effects or critical hazards.

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

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should 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.

Hazardous waste

Packaging

Methods of disposal: 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 13: Disposal considerations

Special precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

<table>
<thead>
<tr>
<th></th>
<th>ADR/RID</th>
<th>ADN</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.1 UN number</td>
<td>UN3480</td>
<td>UN3480</td>
<td>UN3480</td>
<td>UN3480</td>
</tr>
<tr>
<td>14.2 UN proper shipping name</td>
<td>LITHIUM ION BATTERIES (including lithium ion polymer batteries)</td>
<td>LITHIUM ION BATTERIES (including lithium ion polymer batteries)</td>
<td>LITHIUM ION BATTERIES (including lithium ion polymer batteries)</td>
<td>LITHIUM ION BATTERIES (including lithium ion polymer batteries)</td>
</tr>
<tr>
<td>14.3 Transport hazard class(es)</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>14.4 Packing group</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14.5 Environmental hazards</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
<td>No.</td>
</tr>
</tbody>
</table>

14.6 Special precautions 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.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Restricted to professional users.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air: Listed
SECTION 15: Regulatory information

Industrial emissions (integrated pollution prevention and control) - Water

Ozone depleting substances (1005/2009/EU)
Not listed.

Prior Informed Consent (PIC) (649/2012/EU)
Not listed.

National regulations

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>List name</th>
<th>Name on list</th>
<th>Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt lithium dioxide</td>
<td>UK Occupational Exposure Limits EH40 - WEL</td>
<td>cobalt compounds</td>
<td>Carc.</td>
<td></td>
</tr>
</tbody>
</table>

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

SECTION 16: Other information

Abbreviations and acronyms
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4, H302</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Corr. 1A, H314</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Sens. 1, H317</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Carc. 1B, H350</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2, H373</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

Full text of abbreviated H statements

H228 Flammable solid.
H261 In contact with water releases flammable gases.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H350 May cause cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
Li-ion battery pack BA1400T 56V 2.5Ah 140Wh / BA2800T 56V 5.0Ah 280Wh / BA4200T 56V 420Wh

SECTION 16: Other information

Full text of classifications [CLP/GHS]

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 3, H301</td>
<td>ACUTE TOXICITY (oral) - Category 3</td>
</tr>
<tr>
<td>Acute Tox. 4, H302</td>
<td>ACUTE TOXICITY (oral) - Category 4</td>
</tr>
<tr>
<td>Carc. 1B, H350</td>
<td>CARCINOGENICITY - Category 1B</td>
</tr>
<tr>
<td>Eye Dam. 1, H318</td>
<td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2, H319</td>
<td>SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2</td>
</tr>
<tr>
<td>Flam. Sol. 1, H228</td>
<td>FLAMMABLE SOLIDS - Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A, H314</td>
<td>SKIN CORROSION/IRRITATION - Category 1A</td>
</tr>
<tr>
<td>Skin Sens. 1, H317</td>
<td>SKIN SENSITISATION - Category 1</td>
</tr>
<tr>
<td>STOT RE 1, H372</td>
<td>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1</td>
</tr>
<tr>
<td>STOT RE 2, H373</td>
<td>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2</td>
</tr>
<tr>
<td>Water-react. 2, H261</td>
<td>SUBSTANCES AND MIXTURES WHICH IN CONTACT WITH WATER EMIT FLAMMABLE GASES - Category 2</td>
</tr>
</tbody>
</table>

History

Date of issue (dd/mm/yyyy) : 30/01/2019
Date of previous issue : Not applicable
Version : 1
Prepared by : KMK Regulatory Services Inc.

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