SAFETY DATA SHEET

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

1.1. Product identifier
Name of the substance: GARDENA Lithium Ion Batteries (less than 100 Wh)
Identification number: - (CAS number)
Registration number: -
Synonyms: None.
Article No.: Articles covered by this SDS are shown on the attached list.
Issue date: 26-February-2014
Version number: 04
Revision date: 02-July-2015
Supersedes date: 03-February-2015

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Lithium ion battery.
Uses advised against: None known.

1.3. Details of the supplier of the safety data sheet
Supplier/Manufacturer: Gardena Manufacturing GmbH
Address: Hans-Lorenser-Straße 40, 89079 Ulm, Germany
Telephone: +49(0) 7 31 490 0
Fax: +49(0) 7 31 490 219
www.husqvarnagroup.com

1.4. Emergency telephone number: +1-760-476-3961 (Access code 333721)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
This product is an article according to REACH.
Classification according to Regulation (EC) No 1272/2008 as amended
Not applicable.
Hazard summary: Exposure to contents of an open or damaged battery: Contact with this material will cause burns to the skin, eyes and mucous membranes. May cause sensitisation by skin contact.

2.2. Label elements
Label according to Regulation (EC) No. 1272/2008 as amended
Hazard pictograms: None.
Signal word: None.
Hazard statements: Not assigned.
Precautionary statements
- Prevention: P102 Keep out of reach of children.
- Response: Not assigned.
- Storage: Store as indicated in Section 7.
- Disposal: Dispose of waste and residues in accordance with local authority requirements.

2.3. Other hazards
None known.

SECTION 3: Composition/information on ingredients

3.1. Substances
**General information**

**Chemical name**

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<th>REACH Registration No.</th>
<th>INDEX No.</th>
<th>Notes</th>
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**Constituents**

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<th>REACH Registration No.</th>
<th>INDEX No.</th>
<th>Notes</th>
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<td>7429-90-5</td>
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<td>10-20</td>
<td>7440-44-0 (natural)</td>
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<tr>
<td>Copper</td>
<td>5-15</td>
<td>7440-50-8</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Organic electrolyte</td>
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</table>

**Composition comments**

All concentrations are in percent by weight.

**SECTION 4: First aid measures**

**General information**

Show this safety data sheet to the doctor in attendance.

**4.1. Description of first aid measures**

**Inhalation**

Exposure to contents of an open or damaged battery: Move to fresh air. Get medical attention if any discomfort continues.

**Skin contact**

Exposure to contents of an open or damaged battery: Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if any discomfort continues.

**Eye contact**

Exposure to contents of an open or damaged battery: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if any discomfort continues.

**Ingestion**

Exposure to contents of an open or damaged battery: Rinse mouth thoroughly. Get medical attention if any discomfort occurs.

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

Skin and eye burns.

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

Treat symptomatically.

**SECTION 5: Firefighting measures**

**General fire hazards**

The product is not flammable. Will burn if involved in a fire.

**5.1. Extinguishing media**

**Suitable extinguishing media**

Dry chemical powder.

SPECIFIC RECOMMENDATIONS. Class D fire extinguisher.

**Unsuitable extinguishing media**

Do not use a solid water stream as it may scatter and spread fire.

**5.2. Special hazards arising from the substance or mixture**

Containers can burst violently when heated, due to excess pressure build-up. Fire may produce irritating, corrosive and/or toxic gases.

**5.3. Advice for firefighters**

**Special protective equipment for firefighters**

Wear self-contained breathing apparatus and protective clothing.

**Special fire fighting procedures**

Use standard firefighting procedures and consider the hazards of other involved materials.
SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:
Leak from a damaged or opened battery: Avoid contact with skin and eyes. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

For emergency responders:
Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions
Do not contaminate water sources or sewer.

6.3. Methods and material for containment and cleaning up
Leak from a damaged or opened battery: Wipe up with absorbent material (e.g. cloth, fleece).
Place in a designated labeled waste container, dispose as hazardous waste.

6.4. Reference to other sections
For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not allow conductive material to touch the battery terminals. A dangerous short-circuit may occur and cause battery failure and fire. Do not open, disassemble, crush or burn battery. Do not expose battery to extreme heat or fire. Elevated temperatures can result in reduced battery service life.
Observe good industrial hygiene practices. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities
Lithium ion battery.

7.3. Specific end use(s)
Lithium ion battery.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No exposure limits noted for ingredient(s).

Biological limit values
No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures
Follow standard monitoring procedures.

Derived no-effect level (DNEL)
Not available.

Predicted no effect concentrations (PNECs)
Not available.

Exposure guidelines
Airborne exposures to hazardous substances are not expected when product is used for its intended purpose.

8.2. Exposure controls

Appropriate engineering controls
Ventilation is not normally required. Leak from a damaged or opened battery: Provide adequate ventilation if fumes or vapours are generated.

Individual protection measures, such as personal protective equipment

General information
Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection
Not necessary under normal conditions. Wear chemical goggles if handling an open or leaking battery.

Skin protection
- Hand protection
Not necessary under normal conditions. Leak from a damaged or opened battery: Wear chemical-resistant, impervious gloves.
- Other
Not necessary under normal conditions.

Respiratory protection
Not necessary under normal conditions.

Thermal hazards
Not applicable.

Hygiene measures
Do not store food, drink and tobacco near the product. Practice good housekeeping.

8.3. Reference to other sections
For waste disposal, see section 13 of the SDS.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance
Battery.

Physical state
Solid.

Form
Solid.

Colour
Various.

Odour
Odourless.

Odour threshold
Not applicable.
SECTION 10: Stability and reactivity

10.1. Reactivity
Not available.

10.2. Chemical stability
The product is stable under normal conditions of use, storage and transport.

10.3. Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid
Do not allow conductive material to touch the battery terminals. A dangerous short-circuit may occur and cause battery failure and fire. Heat, sparks, flames, elevated temperatures.

10.5. Incompatible materials
Do not immerse in seawater or other high conductivity liquids.

10.6. Hazardous decomposition products
Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.

SECTION 11: Toxicological information

General information
Low hazard for usual industrial or commercial handling by trained personnel.

Information on likely routes of exposure

Inhalation
Not relevant, due to the form of the product. Exposure to contents of an open or damaged battery: May cause irritation to the respiratory system.

Skin contact
Not relevant, due to the form of the product. Exposure to contents of an open or damaged battery: Causes skin burns.

Eye contact
Not relevant, due to the form of the product. Exposure to contents of an open or damaged battery: Causes serious eye damage.

Ingestion
Not relevant, due to the form of the product. Exposure to contents of an open or damaged battery: Ingestion may cause irritation and malaise.

Symptoms
Exposure to contents of an open or damaged battery: Causes skin and eye burns.

11.1. Information on toxicological effects

Acute toxicity
Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Skin corrosion/irritation
Exposure to contents of an open or damaged battery: Causes skin burns.

Serious eye damage/eye irritation
Exposure to contents of an open or damaged battery: Causes serious eye damage.

Respiratory sensitisation
No data available.

Skin sensitisation
Exposure to contents of an open or damaged battery: May cause an allergic skin reaction.

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 hazard
No data available.

Mixture versus substance information
Not available.

Other information
No data available.

SECTION 12: Ecological information
12.1. Toxicity
No ecological impacts expected under normal use conditions.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

Partition coefficient n-octanol/water (log Kow)
Not applicable.

Bioconcentration factor (BCF)
Not available.

12.4. Mobility in soil
Not available.

12.5. Results of PBT and vPvB assessment
Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects
No data available.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Residual waste
Dispose in accordance with applicable federal, state, and local regulations.

Contaminated packaging
Not applicable.

EU waste code
16 06 05

Disposal methods/information
Do not dispose in fire. Dispose waste and residues in accordance with applicable federal, state, and local regulations.

Special precautions
Dispose in accordance with all applicable regulations.

SECTION 14: Transport information
ADR
14.1. UN number
UN3480

14.2. UN proper shipping name
LITHIUM ION BATTERIES

14.3. Transport hazard class(es)
Class 9
Subsidiary risk -
Label(s) 9
Hazard No. (ADR) -
Tunnel restriction code E

14.4. Packing group II

14.5. Environmental hazards
No.

14.6. Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.
May not be subject to ADR; See SP 188.

RID
14.1. UN number
UN3480

14.2. UN proper shipping name
LITHIUM ION BATTERIES

14.3. Transport hazard class(es)
Class 9
Subsidiary risk -
Label(s) 9

14.4. Packing group II

14.5. Environmental hazards
No.

14.6. Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.
May not be subject to RID; See SP 188.

ADN
14.1. UN number
UN3480
### 14. UN proper shipping name

**LITHIUM ION BATTERIES**

### 14.2. UN proper shipping name

### 14.3. Transport hazard class(es)

- **Class**: 9
- **Subsidiary risk**: -
- **Label(s)**: 9

### 14.4. Packing group

- **Il**: II

### 14.5. Environmental hazards

- **No**

### 14.6. Special precautions for user

- Read safety instructions, SDS and emergency procedures before handling.
- May not be subject to ADN; See SP 188.

**IATA**

### 14.1. UN number

- **UN3480**

### 14.2. UN proper shipping name

**LITHIUM ION BATTERIES**

### 14.3. Transport hazard class(es)

- **Class**: 9
- **Subsidiary risk**: -
- **Label(s)**: 9

### 14.4. Packing group

- **Il**: II

### 14.5. Environmental hazards

- **No**

### 14.6. Special precautions for user

- Read safety instructions, SDS and emergency procedures before handling.
- May not be subject to ADN; See SP 188.

**IMDG**

### 14.1. UN number

- **UN3480**

### 14.2. UN proper shipping name

**LITHIUM ION BATTERIES**

### 14.3. Transport hazard class(es)

- **Class**: 9
- **Subsidiary risk**: -
- **Label(s)**: 9

### 14.4. Packing group

- **Il**: II

### 14.5. Environmental hazards

- **Marine pollutant**: No.
- **EmS**: F-A, S-I

### 14.6. Special precautions for user

- Read safety instructions, SDS and emergency procedures before handling.
- May not be subject to IMDG; See SP 188.
- Not applicable.

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

- May also be transported as UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT.

### General information

**SECTION 15: Regulatory information**

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

**EU regulations**

- Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended
  - Not listed.
  - Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended
  - Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended
  - Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended
  - Not listed.
- Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended
  - Not listed.
Not listed.
Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA
Not listed.

Authorisations
Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended
Not listed.

Restrictions on use
Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended
Not listed.
Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended
Not listed.
Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended
Not listed.

Other EU regulations
Directive 2012/18/EU on major accident hazards involving dangerous substances
Aluminium (CAS 7429-90-5)
Not listed.
Directive 94/33/EC on the protection of young people at work
Not listed.

Other regulations
This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations
Not available.

15.2. Chemical safety assessment

SECTION 16: Other information

List of abbreviations
PBT: Persistent, bioaccumulative and toxic.
vPvB: Very Persistent and very Bioaccumulative.
TWA: Time weighted average.
STEL: Short term exposure limit.

References
Not available.

Information on evaluation method leading to the classification of mixture
This product is an article according to REACH.

Full text of any H-statements not written out in full under Sections 2 to 15
None.

This SDS contains revisions in the following section(s):
1

Training information
Follow training instructions when handling this material.

Disclaimer
The information in the sheet was written based on the best knowledge and experience currently available.
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