

## 1. Product and company identification

<b>Product name</b>	<b>GARDENA Lithium Ion Batteries (less than 100 Wh)</b>
<b>Article No.</b>	Articles covered by this SDS are shown on the attached list.
<b>Supplier</b>	Husqvarna New Zealand Ltd
<b>Address</b>	51 Aintree Avenue, Mangere, Auckland 202
<b>Country</b>	New Zealand
<b>Telephone</b>	+64 9 920 2410
<b>e-mail</b>	anthony.barry@husqvarnagroup.com
<b>Contact</b>	Anthony Barry
<b>Emergency</b>	Contact Poisons Information Centre; phone 0800 764 766

### Recommended use and Limitations on use

<b>Recommended use</b>	Lithium ion battery.
<b>Limitations on use</b>	None known.

## 2. Hazards identification

<b>GHS classification</b>	
<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>Environmental hazards</b>	Not classified.

### Label elements

<b>Symbols</b>	None.
<b>Signal word</b>	None.
<b>Hazard statement</b>	Not assigned.

### Precautionary statements

<b>Prevention</b>	Keep out of reach of children.
<b>Response</b>	Not assigned.
<b>Storage</b>	Store as indicated in Section 7.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.

## 3. Composition/information on ingredients

<b>Substance or mixture</b>	Substance
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<b>Chemical property</b>	<b>CAS Number</b>	<b>Concentration (%)</b>
GARDENA Lithium Ion Batteries (less than 100 Wh)	-	-

<b>Constituents</b>	<b>CAS Number</b>	<b>Concentration (%)</b>
Lithium Cobaltic (LiCoO <sub>2</sub> )	-	20-40
Iron	7439-89-6	15-25
Aluminium	7429-90-5	2-6
Graphite	7440-44-0 (natural) 7782-42-5 (synthetic)	10-20
Copper	7440-50-8	5-15
Organic electrolyte	-	10-20

<b>Composition comments</b>	All concentrations are in percent by weight.
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## 4. First aid measures

<b>Inhalation</b>	Exposure to contents of an open or damaged battery: Move to fresh air. Get medical attention if any discomfort continues.
<b>Skin contact</b>	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.

<b>Eye contact</b>	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.
<b>Ingestion</b>	Exposure to contents of an open or damaged battery: Rinse mouth thoroughly. Get medical attention if any discomfort occurs.
<b>Potential delayed effects</b>	Skin and eye burns.
<b>Personal protection for first-aid responders</b>	Show this safety data sheet to the doctor in attendance.
<b>Notes to physician</b>	Treat symptomatically.

## 5. Fire-fighting measures

<b>Extinguishing media</b>	Dry chemical powder. SPECIFIC RECOMMENDATIONS. Class D fire extinguisher.
<b>Extinguishing media to avoid</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>HAZCHEM Code Number</b>	4W
<b>Specific hazards during fire fighting</b>	Containers can burst violently when heated, due to excess pressure build-up. Fire may produce irritating, corrosive and/or toxic gases.
<b>Special fire fighting procedures</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Protection of fire-fighters</b>	Wear self-contained breathing apparatus and protective clothing.
<b>Hazards from combustion products</b>	Carbon oxides. Metal oxides.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	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.
<b>Environmental precautions</b>	Do not contaminate water sources or sewer.
<b>Spill cleanup methods</b>	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.

## 7. Handling and storage

<b>Handling</b>	
<b>Precautions</b>	Observe good industrial hygiene practices. Wash hands thoroughly after handling.
<b>Safe handling advice</b>	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. Precautions shall be taken to prevent electrical short between cell or battery terminals. Precautions shall be taken to prevent damage which may result in physical damage to the pouch.
<b>Prevention of fire and explosion</b>	Do not allow conductive material to touch the battery terminals. A dangerous short-circuit may occur and cause battery failure and fire.
<b>Local and general ventilation</b>	Provide adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Storage</b>	
<b>Suitable storage conditions</b>	Keep out of reach of children. Store in a cool, dry place. Store away from incompatible materials (See Section 10). Storage temperature: between -20°C and 35°C. Relative Humidity range between 45% and 85%.
<b>Incompatible materials</b>	Strong oxidising agents. Strong acids. Chlorine.

## 8. Exposure controls/personal protection

<b>Workplace exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Exposure guidelines</b>	Airborne exposures to hazardous substances are not expected when product is used for its intended purpose.
<b>Engineering controls</b>	Ventilation is not normally required. Leak from a damaged or opened battery: Provide adequate ventilation if fumes or vapours are generated.
<b>Personal protective equipment</b>	
<b>Respiratory protection</b>	Not necessary under normal conditions.
<b>Hand protection</b>	Not necessary under normal conditions. Leak from a damaged or opened battery: Wear chemical-resistant, impervious gloves.
<b>Skin protection</b>	Not necessary under normal conditions.

<b>Eye/face protection</b>	Not necessary under normal conditions. Wear chemical goggles if handling an open or leaking battery.
<b>Radioactive or thermal hazards</b>	Not applicable.
<b>Hygiene measures</b>	Do not store food, drink and tobacco near the product. Practice good housekeeping.

## 9. Physical and chemical properties

<b>Appearance</b>	Battery.
<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Colour</b>	Various.
<b>Odour</b>	Odourless.
<b>Odour threshold</b>	Not applicable.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	Not applicable.
<b>Boiling point, initial boiling point, and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit – upper (%)</b>	Not available.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Relative density</b>	Not available.
<b>Density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>Viscosity</b>	Not applicable.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is non-reactive under normal conditions of use, storage and transport.
<b>Stability</b>	The product is stable under normal conditions of use, storage and transport.
<b>Conditions to avoid</b>	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.
<b>Incompatible materials</b>	Do not immerse in seawater or other high conductivity liquids.
<b>Hazardous decomposition products</b>	Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Not relevant, due to the form of the product. Exposure to contents of an open or damaged battery: Ingestion may cause irritation and malaise.
<b>Inhalation</b>	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.
<b>Skin contact</b>	Not relevant, due to the form of the product. Exposure to contents of an open or damaged battery: Causes skin burns.
<b>Eye contact</b>	Not relevant, due to the form of the product. Exposure to contents of an open or damaged battery: Causes serious eye damage.
<b>Acute toxicity</b>	Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

<b>Routes of exposure</b>	Skin contact. Eye contact.
<b>Symptoms</b>	Exposure to contents of an open or damaged battery: Causes skin and eye burns.
<b>Skin corrosion/irritation</b>	Exposure to contents of an open or damaged battery: Causes skin burns.
<b>Serious eye damage/eye irritation</b>	Exposure to contents of an open or damaged battery: Causes serious eye damage.
<b>Respiratory sensitizer</b>	No data available.
<b>Skin sensitizer</b>	Exposure to contents of an open or damaged battery: May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	No data available.
<b>Carcinogenicity</b>	No data available.
<b>Toxic to reproduction</b>	No data available.
<b>Specific target organ toxicity - single exposure</b>	No data available.
<b>Specific target organ toxicity - repeated exposure</b>	No data available.
<b>Aspiration hazard</b>	No data available.
<b>Chronic effects</b>	No data available.
<b>Relevant negative data</b>	No data available.
<b>Other information</b>	No data available.

## 12. Ecological information

<b>Ecotoxicity</b>	No ecological impacts expected under normal use conditions.
<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation</b>	No data available.
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not applicable.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>Mobility</b>	No data available.
<b>Other hazardous effects</b>	No data available.

## 13. Disposal considerations

<b>Disposal methods/information</b>	Do not dispose in fire. Dispose waste and residues in accordance with applicable federal, state, and local regulations.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations.

## 14. Transport information

### IATA

<b>UN number</b>	UN3480
<b>UN proper shipping name</b>	LITHIUM ION BATTERIES
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Packing group</b>	II
<b>Environmental hazards</b>	No
<b>ERG Code</b>	-
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IMDG

<b>UN number</b>	UN3480
<b>UN proper shipping name</b>	LITHIUM ION BATTERIES
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Packing group</b>	II
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-A, S-I
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

May not be subject to IMDG; See SP 188.

<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>General information</b>	May also be transported as UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT.

## 15. Regulatory information

<b>Applicable regulations</b>	Batteries are considered manufactured articles and are therefore not covered by the HSNO Act.
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## 16. Other information

<b>References</b>	Not available.
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<b>Issued by</b>	Not available.
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<b>Prepared by</b>	Not available.
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<b>Disclaimer</b>	The information in the sheet was written based on the best knowledge and experience currently available.
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<b>Issue date</b>	06-August-2015
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<b>Revision date</b>	-
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**Gardena Branded Li-Ion batteries less than 100 Wh**

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1866	9851
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