

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Name of the substance	Husqvarna Lithium Ion Batteries (more 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	17-April-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

Manufacturer/Supplier	Husqvarna AB
Address	Drottninggatan 2
Telephone	+46 (0)36-14 65 00
Contact person	Accessory Department
e-mail	sds.info@husqvarna.se
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.
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2.2. Label elements**Label according to Regulation (EC) No. 1272/2008 as amended**

Hazard pictograms	None.
Signal word	None.
Hazard statements	The product does not meet the criteria for classification.

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.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients**3.1. Substances**

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Husqvarna Lithium Ion Batteries (more than 100 Wh)	-	-	-	-	
Classification:	-				

Constituents

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Lithium Cobaltic (LiCoO ₂)	20-40	-	-	-	
Iron	15-25	7439-89-6 231-096-4	-	-	
Aluminium	2-6	7429-90-5 231-072-3	-	-	
Graphite	10-20	7440-44-0 (natural) 7782-42-5 (synthetic) 231-153-3	-	-	
Copper	5-15	7440-50-8 231-159-6	-	-	
Organic electrolyte	10-20	-	-	-	

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 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%.

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.

Environmental exposure controls Avoid release to the environment.

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.

pH	Not applicable.
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not available.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	Insoluble.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidizing properties	Not available.
9.2. Other information	No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
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.

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.

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.

ADN

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.

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	II
14.5. Environmental hazards	No
ERG Code	-
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

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	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.

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

Not applicable.

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

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.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

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.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

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

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

Not applicable.

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.

Husqvarna Branded Li-Ion Batteries - more than 100 Wh

5788487-03
5810694-01
5810695-01
9667290-32
9667290-42
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9667760-01
9670207-01
9670208-01
9670209-01
9670219-01
9670224-01
9672419-01
9672524-01
9672525-01
9672766-01
9673267-31
9673268-31
9673363-31
9673364-31
9670981-02
9670982-02
9670987-02
9670986-02
9670917-01