

Li-Ion Batteries >100 Wh

Product Safety Information Sheet

A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis

Issue date: 11/11/2024

Revision date: 11/11/2024

Supersedes: 17/04/2024

Version: 5.17

SECTION 1: Identification of the hazardous chemical and of the supplier

1.1. Product identifier

Name Li-Ion Batteries >100 Wh

1.2. Other means of identification

Product code BU ET&A
 Other means of identification Hilti B 18 / 5.2 Li-Ion (01), Hilti B 22 / 5.2 Li-Ion (01), Hilti B 22 / 8.0 Li-Ion (01), Hilti B 36 / 3.0 Li-Ion (01), Hilti B 36 / 3.3 Li-Ion (01), Hilti B 36 / 3.9 Li-Ion (01), Hilti B 36 / 5.2 Li-Ion (01), Hilti B 36 / 6.0 Li-Ion (01), Hilti B 36 / 9.0 Li-Ion (01), Hilti B 22-110 Li-Ion (01), Hilti B22-170 Li-Ion (01), Hilti B22-195 Li-Ion (01), Hilti B22-255 Li-Ion (01), Hilti B22-290 Li-Ion (01)

1.3. Recommended use of the chemical and restrictions on use

Recommended use Rechargeable Lithium Ion battery for power tools
 Restrictions on use For professional use only

1.4. Supplier details

Supplier

Hilti (Malaysia) Sdn. Bhd.
 F-5-A, Sime Darby Brunfield Tower, No. 2, Jalan PJU 1A/7A
 Oasis Square, Oasis Damansara
 47301 Petaling Jaya, Selangor
 Malaysia
 T +60 3 5628 7222
 1800 880 985 toll free - F +60 3 7848 7399

Department issuing data specification sheet

Hilti AG
 Feldkircherstraße 100
 9494 Schaan
 Liechtenstein
 T +423 234 2111
product.compliance-power.tools@hilti.com

1.5. Emergency phone number

Emergency number GBK GmbH Global Regulatory Compliance
 +49 (0)6132-84463

Country	Organisation/Company	Address	Emergency number	Comment
Malaysia	Malaysia National Poison Centre (NPC) Universiti Sains Malaysia	11800 Penang	+60 (0)4 6536 999 (Mon-Fri 8am-10pm; Sat, Sun & Public Holiday 8am-5pm)	

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to Industry Code of Practice on chemicals classification and hazard communication (2019)
 Not classified

2.2. Label elements

Labelling according to Industry Code of Practice on chemicals classification and hazard communication (2019)
 No labelling applicable

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2.3. Other hazards that do not result in classification

Other hazards which do not result in classification

For the battery chemical materials are stored in a hermetically sealed metal case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use there is no physical danger of ignition or explosion and chemical danger of hazardous materials leakage.

It may cause heat generation or electrolyte leakage if battery terminals contact with other metals. Electrolyte is flammable. In case of electrolyte leakage move the battery from fire immediately.

However if exposed to a fire, added mechanical shocks, decomposed, added electric stress by miss-use, the gas release vent will be operated. The battery case will be broken at the extreme, hazardous materials may be released.

Moreover, if heated strongly by a surrounding fire, acrid gas may be emitted.

SECTION 3: Composition and information of the ingredients of the hazardous chemical

3.1. Substances

Not applicable

3.2. Mixtures

Comments

Lithium Ion rechargeable battery pack:

Name/Type	Energy content (Wh)
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Hilti B 18 / 5.2 Li-Ion (01)	112,00
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Hilti B 22 / 5.2 Li-Ion (01)	112,00
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Hilti B 22 / 8.0 Li-Ion (01)	171,08
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Hilti B 36 / 3.0 Li-Ion (01)	108,00
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Hilti B 36 / 3.3 Li-Ion (01)	118,80
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Hilti B 36 / 3.9 Li-Ion (01)	140,40
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Hilti B 36 / 5.2 Li-Ion (01)	187,20
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Hilti B 36 / 6.0 Li-Ion (01)	216,00
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Hilti B 36 / 9.0 Li-Ion (01)	316,80
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Hilti B 22-110 Li-Ion (01)	110,16
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Hilti B 22-170 Li-Ion (01)	170,65
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Hilti B 22-195 Li-Ion (01)	194,4
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Hilti B 22-255 Li-Ion (01)	255,96
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Hilti B 22-290 Li-Ion (01)	291,6
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This product contains a positive electrode (Lithium cobalt oxide (CAS-No. 12190-79-3)), a negative electrode (graphite (CAS-No. 7782-42-5)) and electrolyte (ethylene carbonate (CAS-No. 96-49-1), diethyl carbonate (CAS-No. 105-58-8) and lithium hexafluorophosphate (CAS-No. 21324-40-3)).

The physical form of the product, however, precludes exposure to workers under normal conditions of use.

This mixture does not contain any substances to be mentioned according to the applicable regulations

SECTION 4: First-aid measures

4.1. Description of necessary first aid measures

First-aid measures general

If the electrolyte is leaking out of the battery pack, the following measures have to be taken.

First-aid measures after inhalation

Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact

Remove affected clothing and wash all exposed skin area with mild soap and water,

followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact

Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion

Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media Cool batteries and accumulators with water jet. In case of fire in the surroundings: Use extinguishing agent suitable for surrounding fire.
Unsuitable extinguishing media No additional information available.

5.2. Physicochemical hazards arising from the chemical

Hazardous decomposition products in case of fire Formation of toxic gases is possible during heating or in case of fire.

5.3. Special protective equipment and precautions for fire fighters

Firefighting instructions Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
EAC code 4W

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment, and emergency procedures

General measures No flames, no sparks. Eliminate all sources of ignition. Isolate from fire, if possible, without unnecessary risk.

6.1.1. For non-emergency personnel

Protective equipment Wear protective gloves. protective clothing. Safety goggles. Gas mask.
Emergency procedures Evacuate unnecessary personnel. No flames, no sparks. Eliminate all sources of ignition. Isolate from fire, if possible, without unnecessary risk.

6.1.2. For emergency responders

Protective equipment Equip cleanup crew with proper protection.
Emergency procedures Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up Take up liquid spill into absorbent material.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed Normal use of this product shall imply use in accordance with the instructions on the packaging and in line with the expectations of a professional user.

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Precautions for safe handling

Do not soak in water or seawater.
 Do not expose to strong oxidizers.
 Do not give a strong mechanical shock or fling.
 Never disassemble, modify or deform.
 Do not connect the positive terminal to the negative terminal with electrically conductive material.
 Use only the chargers / electric tools specified by Hilti to charge or discharge the battery.

Do not throw into fire or expose to high temperatures (>85 °C).
 Do not connect the positive terminal to the negative terminal with electrically conductive material.

Hygiene measures

Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

Avoid direct sunlight, high temperature, high humidity.
 Store in a cool place (temperature: -20 °C ~ 40 °C, humidity: 45 - 85%).

Storage area

Store in a well-ventilated place.

Incompatible products

Strong bases. Strong acids.

Incompatible materials

Sources of ignition. Direct sunlight.

Information on mixed storage

Store away from water.

Do not store together with electrically conductive materials.

The accu-pack should be stored at 30 to 50% of the charging capacity.

Avoid storing in places where it is exposed to static electricity.

Storage temperature

-20 – 40 °C

SECTION 8: Exposure controls and personal protection

8.1. Control parameters

No additional information available

Exposure limit values for the other components

Additional information

No technical measures are necessary during normal use. In case of leakage of substances contained within the cell, the information below may be useful.

8.1.1 Biological monitoring

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls

If the electrolyte is leaking out of the battery pack, the following measures have to be taken.

8.3. Individual protection measures, such as PPE

Hand protection:

Wear protective gloves.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,12		EN ISO 374

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Wear appropriate mask

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Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

Physical state	Solid
Appearance	plastic case.
Colour	red,Black
Odour	odourless
Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	Non flammable.
Explosive limits	No data available
Vapour pressure	No data available
Relative vapour density at 20°C	No data available
Relative density	No data available
Solubility	No data available
Partition coefficient n-octanol/water (Log Pow)	No data available
Partition coefficient n-octanol/water (Log Kow)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive properties	Risk of explosion by shock, friction, fire or other sources of ignition.

SECTION 10: Stability and reactivity

Reactivity	No data available
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	Heating may cause a fire or explosion.
Conditions to avoid	Direct sunlight,Extremely high or low temperatures,Water, humidity
Incompatible materials	Conductive materials, water, seawater, strong oxidizers and strong acids.
Hazardous decomposition products	fume,Carbon monoxide,Carbon dioxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion or irritation	Not classified
Serious eye damage or eye irritation	Not classified
Respiratory sensitization	Not classified
Skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified

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Specific target organ toxicity (STOT) – single exposure	Not classified
Specific target organ toxicity (STOT) – repeated exposure	Not classified
Aspiration hazard	Not classified
Potential adverse human health effects and symptoms	This product contains an organic electrolyte. If the electrolyte is leaking out of the battery pack, the following effects are known when getting into contact: Irritation: severely irritant to eyes. Irritation: may cause irritation to the respiratory system.
Other information	When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

SECTION 12: Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute)	Not classified
Hazardous to the aquatic environment, long-term (chronic)	Not classified
Other information	Do not allow battery packs to penetrate the soil. The battery cell may corrode and electrolyte may leak.

12.2. Persistence and degradability

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Persistence and degradability	Not established.

12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.

12.4. Mobility in soil

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Mobility in soil	No additional information available

12.5. Other adverse effects

Ozone	Not classified
Other adverse effects	No additional information available

SECTION 13: Disposal information

13.1. Disposal methods

Product/Packaging disposal recommendations	Dispose in a safe manner in accordance with local/national regulations. Refer to manufacturer/supplier for information on recovery/recycling.
Ecological information	Avoid release to the environment.

SECTION 14: Transportation information

In accordance with ADR / IMDG / IATA / RID /

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
UN 3480	UN 3480	UN 3480	UN 3480

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ADR	IMDG	IATA	RID
14.2. UN proper shipping name			
LITHIUM ION BATTERIES	LITHIUM ION BATTERIES	Lithium ion batteries	LITHIUM ION BATTERIES
Transport document description			
UN 3480 LITHIUM ION BATTERIES, 9, (E)	UN 3480 LITHIUM ION BATTERIES, 9	UN 3480 Lithium ion batteries, 9	UN 3480 LITHIUM ION BATTERIES, 9
14.3. Transport hazard class(es)			
9	9	9	9
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	M4
Special provisions (ADR)	230, 377, 376, 636, 310, 348, 387
Limited quantities (ADR)	0
Packing instructions (ADR)	P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906
Transport category (ADR)	2
Tunnel restriction code (ADR)	E
EAC code	4W

Transport by sea

Special provisions (IMDG)	230, 376, 377, 310, 348, 384, 387
Limited quantities (IMDG)	0
Packing instructions (IMDG)	P903, P908, P909, P910, P911, LP903, LP904, LP905, LP906
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-I
Stowage category (IMDG)	A
Stowage and handling (IMDG)	SW19
MFAG-No	147

Air transport

PCA packing instructions (IATA)	Forbidden
PCA max net quantity (IATA)	Forbidden
CAO packing instructions (IATA)	See 965
Special provisions (IATA)	A88, A99, A154, A164, A183, A213, A331, A802

Rail transport

Special provisions (RID)	230, 310, 348, 376, 377, 387, 636
Limited quantities (RID)	0
Packing instructions (RID)	P903, 908, 909, P910, P911, LP903, LP904, LP905, LP906

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14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental regulations specific for the hazardous chemical in question

Regulation	Component/ Mixture
EHS Notification and Registration Scheme	Not applicable
EHS Notification and Registration Scheme	Not applicable
Environmental Quality (Chlorofluorocarbons Prohibition) Order 1993	
Environmental Quality (Industrial Effluent) Regulations 2009	
Environmental Quality (Scheduled Wastes) Regulations 2007	
Control of Industrial Major Accident Hazards Regulations 1996	
Prohibition of Use of Substance Order 1999	
Use and Standards of Exposure of Chemical Hazardous to Health Regulations 2000	
Chemical Weapons Convention Act	
Corrosive and Explosive Substances and Offensive Weapons Act	
Dangerous Drugs Act	
Pesticides Act	
Petroleum (Safety Measures) Act	
Poisons Act 1952	
Poisons (Psychotropic Substances) Regulations 1989	

15.2. International agreements

No additional information available

SECTION 16: Other information

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Version	5.17
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Indication of changes			
Section	Changed item	Change	Comments
1.2	Product name - Trade name	Added	
3.2	Comments	Added	



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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.