

# 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: 04/08/2022      Revision date: 04/08/2022      Supersedes: 12/09/2021      Version: 5.15

### SECTION 1: Identification

#### 1.1. Identification

Product form	Article
Product name	Li-Ion Batteries >100 Wh
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 B22-255 Li-Ion (01)

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture	Rechargeable Lithium Ion battery for power tools
Recommended use	For professional use only, Rechargeable Lithium Ion battery for power tools

#### 1.3. Supplier

<b>Supplier</b> Hilti, Inc. Legacy Tower, Suite 1000 7250 Dallas Parkway Plano, TX 75024 - USA T +1 9724035800 1-800-879-8000 toll free - F +1 918 254 0522	<b>Department issuing data specification sheet</b> Hilti Entwicklungsgesellschaft mbH Hiltistraße 6 Kaufering, 86916 - Deutschland T +49 8191 906876 <a href="mailto:anchor.hse@hilti.com">anchor.hse@hilti.com</a>
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#### 1.4. Emergency telephone number

Emergency number	Chem-Trec Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada) Tel.: 703 527 3887 (Other countries) +1 918 8723000 1-800-879-8000 toll free
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### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labelling

No labelling applicable

#### 2.3. Other hazards which 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.

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### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Comments	Name/Type	Lithium Ion rechargeable battery pack: Energy content (Wh)
	Hilti B 18 / 5.2 Li-Ion (01)	112
	Hilti B 22 / 5.2 Li-Ion (01)	112
	Hilti B 22 / 8.0 Li-Ion (01)	172,8
	Hilti B 36 / 3.0 Li-Ion (01)	108
	Hilti B 36 / 3.3 Li-Ion (01)	118,8
	Hilti B 36 / 3.9 Li-Ion (01)	140,4
	Hilti B 36 / 5.2 Li-Ion (01)	187,2
	Hilti B 36 / 6.0 Li-Ion (01)	216
	Hilti B 36 / 9.0 Li-Ion (01)	324
	Hilti B 22-110 Li-Ion (01)	110,16
	Hilti B 22-170 Li-Ion (01)	170,64
	Hilti B 22-255 Li-Ion (01)	255,96

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 criteria of section 3.2 of HazCom 2012

## SECTION 4: First-aid measures

### 4.1. Description of 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.

### 4.2. Most important symptoms and effects (acute and delayed)

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

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) 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. Specific 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.
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#### 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.

### 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.
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##### 6.1.1. For non-emergency personnel

Protective equipment	Wear protective gloves, protective clothing. Safety goggles. Gas mask.
Emergency procedures	Evacuate unnecessary personnel.

##### 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 material for containment and cleaning up

Methods for cleaning up	Take up liquid spill into absorbent material.
Other information	Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

### 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.
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.

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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%).

Incompatible products Strong bases. Strong acids.

Incompatible materials Sources of ignition. Direct sunlight.

Storage temperature -20 – 40 °C

Information on mixed storage Store away from water.  
Do not store together with electrically conductive materials.

Storage area 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.  
Store in a well-ventilated place.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

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No additional information available

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.

### 8.2. 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/Personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

#### Hand protection:

Wear protective gloves.

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

#### Eye protection:

Chemical goggles or safety glasses

#### Respiratory protection:

Wear appropriate mask

#### Personal protective equipment symbol(s):



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### Other information:

Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic 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
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	Non flammable.
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
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available
Explosive limits	No data available
Explosive properties	Risk of explosion by shock, friction, fire or other sources of ignition.
Oxidising properties	No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Heating may cause a fire or explosion.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Water, humidity.

### 10.5. Incompatible materials

Conductive materials, water, seawater, strong oxidizers and strong acids.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

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### 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/irritation	Not classified
Serious eye damage/irritation	Not classified
Respiratory or skin sensitisation	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
Viscosity, kinematic	
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.
Symptoms/effects	Not expected to present a significant hazard under anticipated conditions of normal use.
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. Toxicity

No additional information available

#### 12.2. Persistence and degradability

Li-Ion Batteries >100 Wh	
Persistence and degradability	Not established.

#### 12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other information	Do not allow battery packs to penetrate the soil. The battery cell may corrode and electrolyte may leak.
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### SECTION 13: Disposal considerations

#### 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.
Ecology - waste materials	Avoid release to the environment.





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### SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID /

ADR	IMDG	IATA	RID
<b>14.1. UN number or ID number</b>			
UN 3480	UN 3480	UN 3480	UN 3480
<b>14.2. UN proper shipping name</b>			
LITHIUM ION BATTERIES	LITHIUM ION BATTERIES	Lithium ion batteries	LITHIUM ION BATTERIES
<b>Transport document description</b>			
UN 3480 LITHIUM ION BATTERIES, 9A, (E)	UN 3480 LITHIUM ION BATTERIES, 9A	UN 3480 Lithium ion batteries, 9A	UN 3480 LITHIUM ION BATTERIES, 9A
<b>14.3. Transport hazard class(es)</b>			
9A	9A	9A	9A
			
<b>14.4. Packing group</b>			
Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>			
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
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

#### Transport by sea

Special provisions (IMDG)	230, 376, 377, 310, 348, 384
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

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### Rail transport

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

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

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### 15.2. International regulations

#### CANADA

No additional information available


#### EU-Regulations

No additional information available

#### National regulations

No additional information available

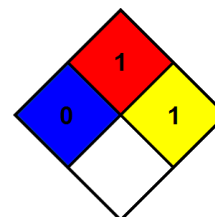
### 15.3. US State regulations

<b>Li-Ion Batteries &gt;100 Wh</b>	
U.S. - California - Proposition 65 - Other information	 <b>WARNING:</b> Lithium-ion batteries and products that contain lithium-ion batteries can expose you to chemicals including cobalt lithium nickel oxide, and nickel, which are known to the State of California to cause cancer and birth defects or reproductive harm. For more information do to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> .

## SECTION 16: Other information

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Revision date	04/08/2022
Other information	All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory. All components of this product are listed, or excluded from listing, on the Canadian Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL).
NFPA health hazard	0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



Indication of changes:

Section	Changed item	Change	Comments
15	State or local regulations	Modified	



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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.*