Safety data sheet
according to 1907/2006/EC, Article 31 / ISO 11014

Printing date 09.10.2013 Version number 7 Revision: 09.10.2013

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

· **Product identifier**

· **Trade name:** **Hilti B 7 / 1.5 Li-Ion Hilti B 12 / 2.6 Li-Ion Hilti B 14 / 1.6 Li-Ion Hilti B 14 / 3.3 Li-Ion Hilti B 18 / 1.6 Li-Ion Hilti B 18 / 2.6 Li-Ion Hilti B 18 / 3.3 Li-Ion Hilti B 22 / 1.6 Li-Ion Hilti B 22 / 2.6 Li-Ion Hilti B 22 / 3.3 Li-Ion Hilti B 36 / 2.4 Li-Ion Hilti B 36 / 2.6 Li-Ion Hilti B 144 / 2.6 Li-Ion**

· **Relevant identified uses of the substance or mixture and uses advised against**
· **Article category** AC3 Electrical batteries and accumulators
· **Application of the substance / the preparation** Rechargeable Lithium Ion battery for power tools

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Hilti (Gt. Britain) Ltd.
1 Trafford Wharf Road
Trafford Park
GB-M17 1BY Manchester
Phone: 0800 886 100 (Freephone)
Fax: 0800 886 200 (Freefax)
Email: gbsales@hilti.com

· **Informing department:**
anchor.hse@hilti.com
see section 16
· **Emergency telephone number:**
Schweizerisches Toxikologisches Informationszentrum - 24 h Service
Tel.: 0041 / 44 251 51 51 (international)
.
Hilti (Gt. Britain) Ltd
Phone: 0800 886 100 (Freephone)
Fax: 0800 886 200 (Freefax)

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2 Hazards identification

· **Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**
In accordance with article 3 (3) of REACH, this / these item(s) are articles.
An article is not subject to the mandatory marking regulations applicable to dangerous substances.
The product is not classified as hazardous to health or environment according to the CLP regulation.

· **Additional information:**
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 electrolite leakage if battery terminals contact with other metals. Elektrolyte 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 breaked at the extreme, hazardous materials may be released.

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

· **Label elements**
· **Labelling according to Regulation (EC) No 1272/2008** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:**
Lithium Ion rechercheable battery pack:

Name/Type	Lithiumequivalent (g)	Energy content (Wh)
B 7 / 1.5 Li-Ion	0,9	10,8
B 12 / 2.6 Li-Ion	2,34	28,1
B 14 / 1.6 Li-Ion	1,92	23
B 14 / 3.3 Li-Ion	3,84	46
B 18 / 1.6 Li-Ion	2,88	35
B 18 / 2.6 Li-Ion	4,68	56,16
B 18 / 3.3 Li-Ion	5,94	71,3
B 22 / 1.6 Li-Ion	2,88	35
B 22 / 2.6 Li-Ion	4,68	56,16
B 22 / 3.3 Li-Ion	5,94	71,3
B 36 / 2.6 Li-Ion	7,8	94
B 36 / 2.4 Li-Ion	7,2	86,4
B 144 / 2.6 Li-Ion	3,12	37,44

· **Dangerous components:**
This product contains a positive electrode (Lithium cobalt oxide), a negative electrode (graphite) and electrolyte (ethylene carbonate, diethyl carbonate and lithium hexafluorophosphate). The physical form of the product, however, precludes exposure to workers under normal conditions of use.

CAS: 1307-96-6 EINECS: 215-154-6	cobalt oxide Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Sens. 1, H317	<30%
CAS: 1313-13-9 EINECS: 215-202-6	manganese dioxide Acute Tox. 4, H302; Acute Tox. 4, H332	<30%
CAS: 1313-99-1 EINECS: 215-215-7	nickel monoxide Carc. 1A, H350i; STOT RE 1, H372; Skin Sens. 1, H317; Aquatic Chronic 4, H413	<30%
CAS: 7440-44-0 EINECS: 231-153-3	carbon Flam. Liq. 3, H226; Self-heat. 1, H251	<30%
	Electrolyte; main ingredients: Lithium hexaflourophospate, organic carbonates Skin Corr. 1A, H314	<20%
CAS: 24937-79-9	Polyvinylidene fluoride (PVdF)	<10%
CAS: 7429-90-5	Aluminium foil	2-10%
CAS: 7440-50-8	Copper foil	2-10%

4 First aid measures

· **Description of first aid measures**
· **General information**
This product contains an organic electrolyte. If the electrolyte is leaking out of the battery pack, the following measures have to be taken.
· **After inhalation**
Take affected persons into the open air and position comfortably
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness bring patient into stable side position for transport.
· **After skin contact** Instantly wash with water and soap and rinse thoroughly. If skin irritation persist, call a physician.
· **After eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
· **After swallowing** Seek immediate medical advice.
· **Information for doctor**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

· **Extinguishing media**
· **Suitable extinguishing agents**
CO2, extinguishing powder or water jet. Fight larger fires with water jet.
Foam
· **For safety reasons unsuitable extinguishing agents** Water with full jet.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **Advice for firefighters**
· **Protective equipment:**
In the event of fire, wear self contained breathing apparatus
Wear full protective suit.
Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Keep away from ignition sources
Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.
Keep people at a distance and stay on the windward side.
· **Environmental precautions:** Do not allow to enter the ground/soil.
· **Methods and material for containment and cleaning up:**
Absorb liquid components with liquid-binding material.
Collect mechanically.
· **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

7 Handling and storage

· **Handling**
· **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.
No special precautions necessary if used correctly.
· **Information about protection against explosions and fires:**
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.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and containers:**
Avoid direct sunlight, high temperature, high humidity.
Store in a cool place (temperature: -20 °C ~ 35 °C, humidity: 45 - 85%)
· **Information about storage in one common storage facility:**
Do not store together with oxidizing and acidic materials.
Store away from water.
Do not store together with electrically conductive materials.

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· **Further information about storage conditions:**
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.
Protect from heat and direct sunlight.
Protect from humidity and keep away from water.

· **Storage class** 11
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** The lists that were valid during the compilation were used as basis.

· **Exposure controls**
· **Personal protective equipment**
· **Breathing equipment:** Not required.
· **Protection of hands:** Not required.
· **Material of gloves** Not required.
· **Penetration time of glove material** Not required.
· **Eye protection:** Not required.
· **Body protection:**

Protective work clothing.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	plastic case
Colour:	Black / Red
· **Odour:**	Odourless
· **Odour threshold:**	Not determined
· **pH-value:**	Not applicable
· **Change in condition**	
Melting point/Melting range:	Not applicable
Boiling point/Boiling range:	Not applicable
· **Flash point:**	Not applicable
· **Inflammability (solid, gaseous)**	Not applicable
· **Ignition temperature:**	Not applicable
· **Decomposition temperature:**	Not applicable
· **Self-inflammability:**	Product is not selfigniting.
· **Danger of explosion:**	Risk of explosion by shock, friction, fire or other sources of ignition.
· **Critical values for explosion:**	
Lower:	Not determined
Upper:	Not determined

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· **Oxidizing properties**	Not determined
· **Vapour pressure:**	Not determined
· **Density**	Not applicable
· **Relative density**	Not determined
· **Vapour density**	Not determined
· **Evaporation rate**	Not determined
· **Solubility in / Miscibility with Water:**	Not applicable
· **Viscosity:**	
dynamic:	Not determined
kinematic:	Not determined
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** Conductive materials, water, seawater, strong oxidizers and strong acids.
· **Hazardous decomposition products:** Acrid or harmful gas is emitted during fire

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:**
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:
Irritant to skin and mucous membranes.
· **on the eye:** Irritant effect.
· **Sensitization:** No sensitizing effect known.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Do not allow battery packs to penetrate the soil.
The battery cell may corrode and electrolyte may leak.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

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13 Disposal considerations

· **Waste treatment methods**
· **Recommendation** Dispose of this battery pack according to national regulations or return the used battery pack to Hilti.

· **European waste catalogue**	
16 06 05	other batteries and accumulators
20 01 34	batteries and accumulators other than those mentioned in 20 01 33

· **Uncleaned packagings:**
· **Recommendation:**
Disposal must be made according to official regulations.
Dispose of packaging according to regulations on the disposal of packagings.

14 Transport information

· **UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **Packing group** · **ADR, IMDG, IATA**	Void
· **Environmental hazards:** · **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications. Lithium-ion batteries are tested in accordance with: UN manual of Tests and Criteria, Part III, subsection 38.3
· **ADR** · **Remarks:**	Lithium ion batteries offered for carriage are not subject to other provisions of ADR/RID/GGVS/E. They meet the requirements of special provision SP 188.
· **IMDG** · **Remarks:**	Lithium ion batteries offered for carriage are not subject to other provisions of IMDG/GGVSee. They meet the requirements of special provision SP 188.
· **IATA** · **Remarks:**	Lithium ion batteries offered for transport are not subject to other additional requirements of these regulations. They meet the requirements of Packing Instruction 965/II (≤2 batteries) and 965/IB (>2 batteries).
· **UN "Model Regulation":**	-

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **National regulations**

· **Other regulations, limitations and prohibitive regulations**
· **Substances of very high concern (SVHC) according to REACH, Article 57** None
· **Chemical safety assessment:** not required.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H226 Flammable liquid and vapour.
H251 Self-heating: may catch fire.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H350i May cause cancer by inhalation.
H372 Causes damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H413 May cause long lasting harmful effects to aquatic life.

· **Department issuing data specification sheet:**
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· **Contact:** Mechthild Krauter
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
· *** Data compared to the previous version altered.**