

1 Identification

- **Product identifier**
- **Trade name:** **NiMH Batteries**
SFB 105 / SFB 125 / SFB 126 / SFB 155 / SFB 185 / B 24/3,0
PSA 80 / PRA 801 / PRA 82 / PRA 810 / PRA 87 / PPA 82
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Article category** AC3 Electrical batteries and accumulators
- **Application of the substance / the mixture** Rechargeable NiMH battery pack for electric tools
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Hilti, Inc.
 5400 South 122nd East Ave.
 US-Tulsa, OK 74146
 Phone: (800) 879-8000
 Fax: (800) 879-7000
 Español: (800) 879-5000
- **Information department:**
 anchor.hse@hilti.com
 see section 16
- **Emergency telephone number:**
 Chem-Trec
 Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada)
 Tel.: 703 527 3887 (Other countries)

2 Hazard(s) identification

- **Classification of the substance or mixture**
 The product is not classified according to the Globally Harmonized System (GHS).

- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system**
- **NFPA ratings (scale 0-4)**



Health = 0
 Fire = 1
 Reactivity = 0

- **Other hazards**

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.

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures

- **Description:**

Rechargeable NiMH battery pack:

Name/type	no. of cells	energy capacity [Wh]
SFB 105	8	28,8
SFB 125	10	36
SFB 126	10	36
SFB 155	13	46,8

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SFB 185	15	54
B 24/3,0	20	72
PSA 80	4	19,2
PRA 801	3	30,6
PRA 82	2	19,2
PRA 810	3	42
PRA 87	4	44
PPA 82	4	32

This product contains a positive electrode (Nickel(III)-oxidehydroxide), a negative electrode (metallhydride powder) and electrolyte (potassium hydroxide / sodium hydroxide).

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

· Dangerous components:

12054-48-7	nickel dihydroxide	0-20%
	NiOOH	1-22%
	MmNiCoMnAl	2-34%
	(MmNiCoMnAl)Hx	3-35%
1310-58-3	potassium hydroxide	0-4%
1310-73-2	sodium hydroxide	0-4%

· **Additional information** For the wording of the listed risk phrases refer to section 16.

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 fresh air and keep quiet.

· **After skin contact** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures**· Extinguishing media****· Suitable extinguishing agents**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Dry sand

· 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:**

Wear self-contained respiratory protective device.

Ensure adequate ventilation

6 Accidental release measures**· Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources

· **Environmental precautions:** Do not allow to penetrate the ground/soil.

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- **Methods and material for containment and cleaning up:**
Pick up mechanically.
Dilute with plenty water.
- **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 disposal information.

7 Handling and storage

- **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.
- **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 receptacles:**
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:**
Store away from water.
Do not store together with electrically conductive materials.
- **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 water.
- **Storage class**
As per VCI (1991) storage classification concept.
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- **Specific end use(s)** To be used only for the intended purpose. Please refer to the operating instructions.

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:**
No technical measures are necessary during normal use. In case of leakage of substances contained within the cell, the information below may be useful.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Recommended filter device for short term use:** Filter AX

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· Protection of hands:


Protective gloves.

Only use chemical-protective gloves with CE-labeling of category III.

EN 374

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Material of gloves

Nitrile rubber, NBR

 Recommended thickness of the material: ≥ 0.12 mm

· Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:


Tightly sealed goggles.

· Body protection:


Protective work clothing.

9 Physical and chemical properties
· Information on basic physical and chemical properties
· General Information
· Appearance:

Form:	plastic case
Color:	Black / Red
Odor:	Odorless
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

· Flammability (solid, gaseous) Not determined.

· Ignition temperature:
Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapor pressure: Not applicable.

Density:	Not applicable
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.

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- | | |
|---|--|
| · Solubility in / Miscibility with Water: | Insoluble |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| dynamic: | Not applicable. |
| kinematic: | Not applicable. |
| · Solvent content: | |
| Organic solvents: | 0.0 % |
| · 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**
In the event of misuse of a battery cell or the like, oxygen or hydrogen accumulates in the cell and the cell's internal pressure rises. These gases may be emitted through the gas release vent. The gases may ignite if in the proximity of a naked flame or source of ignition.
- **Conditions to avoid**
Do not connect the positive terminal to the negative terminal with electrically conductive material.
Do not overcharge.
Protect from heat and direct sunlight.
Protect from humidity and water.
- **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:
Caustic effect on skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· NTP (National Toxicology Program)
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None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **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.

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- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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:** Dispose of packaging according to regulations on the disposal of packagings.

14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN3496
· ADN	not applicable
· UN proper shipping name	
· DOT	UN3496
· ADR, IMDG, IATA	Batteries, nickel-metal hydride
· Transport hazard class(es)	
· DOT	
· Class	Void
· ADR, IMDG, IATA	
· Class	9 Miscellaneous dangerous substances and articles
· Packing group	
· DOT, ADR	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Miscellaneous dangerous substances and articles
· EMS Number:	F-A,S-I
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· IMDG	Special Provision 963
· IATA	Special Provision A199
· UN "Model Regulation":	UN3496, Batteries, nickel-metal hydride

15 Regulatory information

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

 · **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

 · **Section 313 (Specific toxic chemical listings):**

None of the ingredients are listed.

 · **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

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· Proposition 65:**· Chemicals known to cause cancer:**

None of the ingredients are listed.

· Cancerogenity categories**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· Chemical safety assessment: not required.**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS:

Hilti Entwicklungsgesellschaft mbH

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· Contact: Mechthild Krauter**· Date of preparation / last revision** 01/23/2015 / -**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

· * Data compared to the previous version altered.