



Material Safety Data Sheet

1. Product & Company Identification

Product:	Rechargeable NiMH Battery, Size AA/Mignon
Manufacturer:	Conrad Electronic SE
Nominal voltage:	1,2 V
Nominal capacity:	2700 mAh
Address:	Klaus-Conrad-Str. 1, D-92240 Hirschau
Telephone:	+49 (0) 9604 / 40 - 8988
Date of issue:	14.01.2016

2. Hazards Identification

Hazard description:

A sealed NiMH Battery is not hazardous in normal use on principle.

Information concerning particular hazards for human and environment:

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:










The classification is according to the latest editions of 1272/2008/EC, EU Commission Directive 1999/45/EC, 67/548/EEC, and extended by company and literature data.

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3. Composition/Information on Ingredients

Chemical characterization

Description: The substance listed below with nonhazardous additions. For the wording of listed risk phrases refer to section 16.

Dangerous components:			
CAS: 12054-48-7 EINECS: 235-008-5 EU number: 028-008-00-X	Nickel dihydroxide Carc. Cat. 3;  Xn,  Xi,  N; R 20/22-40-43-50/53		33,0%
CAS: 1310-58-3 EINECS: 215-181-3 EU number: 019-002-00-8	Potassium hydroxide  C,  Xn; R 22-35		15,0%
CAS: 21041-93-0 EINECS: 244-166-4	Cobaltous hydroxide  Xn,  Xi; R 20/21/22-36/37/38		7,0%
CAS: 7439-96-5 EINECS: 231-105-1	Manganese  Xn; R 48		0,135%
CAS: 7723-14-0 EINECS: 231-768-7 EU number: 015-002-00-7	Phosphorus  F; R 11-16-52/53		0,018%
Non-dangerous components:			
CAS: 7439-89-6 EINECS: 231-096-4	iron		44,7615%
CAS: 7440-44-0 EINECS: 231-153-3	carbon	R 10	0,054%
CAS: 7704-34-9 EINECS: 231-722-6	sulphur, precipitated, sublimed or colloidal		0,0225%
CAS: 7440-21-3 EINECS: 231-130-8	silicon		0,009%

Remark:

Manganese (CAS No.: 7439-96-5): Synonym: Mn

Phosphorus (CAS No.: 7723-14-0): Synonym: P

Iron (CAS No.: 7439-89-6): Synonym: Fe

Carbon (CAS No.: 7440-44-0): Synonym: C

Silicon (CAS No.: 7440-21-3): Synonym: Si

Sulphur, precipitated, sublimed or colloidal (CAS No.: 7704-34-9): Synonym: S



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3. First Aid Measures

General information:

In case of electrolyte solution spill (battery leakage) precautions must be taken to avoid any contact of human tissues. If it accidentally happens following must be done:

After inhalation:

Supply fresh air and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.

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:

Call for a doctor immediately. Drink plenty of water and provide fresh air. Call for a doctor immediately.

5. Fire Fighting Measures

Suitable extinguishing agents:

CO₂, sand, extinguishing powder. Do not use water.

For safety reasons unsuitable extinguishing agents:

Water

Protective equipment:

Mouth respiratory protective device.

6. Accidental release Measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Do not allow product to reach sewage system or any water source. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

Additional information:

See Section 7 for information on safe handling.



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7. Handling and Storage

Handling

Information for safe handling:

The sealed NiMH battery when sleeved are safe in case of spilling. Non-sleeved battery may generate short-circuits, causing release of alkaline electrolyte mist or liquid. Electrolyte reacts with zinc, aluminium, tin and other active materials releasing flammable hydrogen gas.

Information about fire -and explosion protection:

No special measures required.

Storage

Requirements to be met by storerooms and receptacles:

Store in a cool location.

Information about storage in one common storage facility:

Store away from foodstuffs.

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8. Exposure Controls/Personal Protection

Additional information about design of technical facilities:

No further data; see item 7.

Ingredients with limit values that require monitoring at the workplace:	
12054-48-7 nickel dihydroxide	
REL (USA)	0,015 mg/m ³ as Ni
1310-58-3 potassium hydroxide	
REL (USA)	C 2 mg/m ³
TLV (USA)	Short-term value: C 2 mg/m ³

DNELs:

Not available

PNECs:

Not available

Additional information:

The lists valid during the making were used as basis.

Personal protective equipment

General protective and hygienic measures:

Under normal condition of use and handling no special protection is required for sealed Ni-Mh batteries.

Respiratory protection:

Not required.

Protection of hands:



Protective gloves

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

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

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

Eye protection:

Not required.



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9. Physical and Chemical Properties

General Information

Form:	Solid
Colour:	Silver-grey
Odour:	Odourless
Change in condition	Melting point/Melting range: Not available Boiling point/Boiling range: Not available
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not available
Ignition temperature:	Not available
Decomposition temperature:	Not available
Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	Lower: Not available Upper: Not available
Oxidizing properties:	Not available
Vapour pressure:	Not available
Density:	Not available
Relative density:	Not available
Vapour density;	Not available
Evaporation rate;	Not available
Solubility in / Miscibility with water:	Not available
pH-value:	Not available
Segregation coefficient (n-octanol/water):	Not available
Viscosity: Dynamic:	Not available.

10. Stability and Reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Materials to be avoided:

Dangerous reactions:

No dangerous reactions known.

Dangerous decomposition products:

No dangerous decomposition products known.



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11. Toxicological Information

Acute toxicity

LD/LC50 values relevant for classification:		
1310-58-3 potassium hydroxide		
Oral	LD50	273 mg/kg (rat)
7439-89-6 iron		
Oral	LD50	30 mg/kg (rat)
7440-21-3 silicon		
Oral	LD50	23160 mg/kg (rat)
7439-96-5 manganese		
Oral	LD50	9000 mg/kg (rat)

Primary irritant effect:

on the skin: No irritant effect.

on the eye: No irritating effect.

Additional toxicological information:

The product shows the following dangers if electrolyte leakage occurs according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

Toxicokinetics, metabolism and distribution:

Not available

Acute effects (acute toxicity, irritation and corrosivity):

Not available

Repeated dose toxicity:

Not available



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12. Ecological Information

Information about elimination (persistence and degradability):

Not available

Behaviour in environmental systems

Mobility and bioaccumulation potential:

Not available

Ecotoxicological effects

Aquatic toxicity:

Not available

Additional ecological information:

General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

PBT assessments:

Not available and be responsible for the use of batteries.

13. Disposal Considerations

Product

Recommendation: Never incinerate NiMH batteries.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.



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14. Transport Information

Land transport ADR/RID (cross-border)

ADR/RID class: -
Danger code (Kemler): -
UN-Number: -
Packaging group: -
Hazard label: -
Description of goods: -
Limited quantities (LQ): -
Transport category: -
Tunnel restriction code: -

Maritime transport IMDG

IMDG Class: -
UN Number: -
Label: -
Packaging group: -
EMS Number: -
Marine pollutant: Yes
Segregation groups: -
Proper shipping name: -

Air transport ICAO-TI and IATA-DGR

ICAO/IATA Class: -
UN/ID Number: -
Label: -
Packaging group: -
Proper shipping name: -

Environmental hazards:

Product contains environmentally hazardous substances: nickel dihydroxide



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15. Regulatory Information

Sara

Section 335 (extremely hazardous substances):	
7723-14-0	phosphorus

Section 313 (specific toxic chemical listings):	
12054-48-7	nickel dihydroxide
7439-96-5	manganese
7723-14-0	phosphorus

TSCA (Toxic Substances Control Act):
All ingredients are listed.

Proposition 65

Chemical known to cause cancer:	
12054-48-7	nickel dihydroxide

Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.

Chemicals known to cause developmental toxicity:
None of the ingredients is listed.

Carcinogeny categories

EPA (Environmental Protection Agency)		
7439-96-5	manganese	D
7723-14-0	phosphorus	D

IARC (International Agency for Research on Cancer)		
12054-48-7	nickel dihydroxide	1

NTP (National toxicology Program)		
12054-48-7	nickel dihydroxide	K



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TLV (Threshold Limit Value established by ACGIH)		
12054-48-7	nickel dihydroxide	A1
NIOSH-Ca(National Institution for Occupational Safety & Health)		
12054-48-7	nickel dihydroxide	
OSHA-Ca(Occupational Safety & Health Administration)		
None of the ingredients is listed.		

Labelling according to EU guidelines:

The substance is not subject to classification according to Directive 67/548, 1999/45/EC and 1272/2008/EC.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials

Observe the general safety regulations when handling chemicals.

16. Other Information

Relevant R-phrases

The product shows the following dangers classification :

- 11 Highly flammable.
- 16 Explosive when mixed with oxidising substances.
- 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- 20/22 Harmful by inhalation and if swallowed.
- 22 Harmful if swallowed.
- 35 Causes severe burns.
- 36/37/38 Irritating to eyes, respiratory system and skin.
- 40 Limited evidence of a carcinogenic effect.
- 43 May cause sensitization by skin contact.
- 48 Danger of serious damage to health by prolonged exposure.
- 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The contents and format of this MSDS/SDS are in according with REGULATION(EC) No. 1907/2006, EU Commission Directive 1999/45/EC, 67/548/EEC.

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