

**Safety Data Sheet**  
according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

- Trade name: **Nickel Metal Hydride Battery**
- Other means of identification: NI-MH Battery (AA)

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

- Application of the substance / the mixture: Battery
- Uses advised against: No further relevant information available.

**1.3 Details of the supplier of the Safety Data Sheet**

- Manufacturer/Supplier:  
Sterno Products  
1880 Compton Ave. #101  
Corona, CA 92881  
Phone: (951) 682-9600

**1.4 Emergency telephone number:**

ChemTel Inc.  
(800)255-3924 (North America)  
+1 (813)248-0585 (International)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

The product is not classified as hazardous according to the CLP regulation.

**Additional information:**

Note: Leaking cells pose health hazards: see Sections 4 and 11. Intentional abuse of cells or batteries increases the risk of harm or damage to the product, to the user, and to surrounding materials and personnel. Do not attempt to open sealed cells or batteries. Do not intentionally short-circuit cells or batteries. Do not expose these products to temperatures exceeding the maximum manufacturers rating. Do not dispose of cells/batteries in landfills. Please follow all manufacturer guidelines in the use, storage, and disposal of these products. Consult manufacturer in cases of questions involving specific product usage.

Exposure to product contents is highly unlikely during normal usage.

**2.2 Label elements**

- Labelling according to Regulation (EC) No 1272/2008 Not Regulated
- Hazard pictograms Not Regulated
- Signal word Not Regulated
- Hazard-determining components of labelling: Not applicable.
- Hazard statements Not Regulated.
- Additional information:  
Safety data sheet available on request.

**2.3 Other hazards** There are no other hazards not otherwise classified that have been identified.

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

(Cont'd. on page 2)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

(Cont'd. from page 1)

### SECTION 3: Composition/information on ingredients

#### 3.2 Mixtures

##### Components:

CAS: 12054-48-7 EINECS: 235-008-5 Index number: 028-008-00-X Reg.nr.: 01-2119472435-36-XXXX	nickel dihydroxide ⚠ Resp. Sens. 1, H334; Muta. 2, H341; Carc. 1A, H350i; Repr. 1B, H360D; STOT RE 1, H372 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Skin Sens. 1, H317	20-40%
CAS: 7440-02-0 EINECS: 231-111-4 Index number: 028-002-00-7 Reg.nr.: 01-2119438727-29-XXXX	Nickel ⚠ Skin Sens. 1, H317	<20%
CAS: 9002-86-2 EINECS: 206-625-7	Polyvinyl chloride substance with a Community workplace exposure limit	<20%
CAS: 1307-96-6 EINECS: 215-154-6 Index number: 027-002-00-4 Reg.nr.: 01-2119532645-38-XXXX	cobalt oxide ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330 ⚠ Resp. Sens. 1B, H334 ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ⚠ Skin Sens. 1, H317	<10%
CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8 Reg.nr.: 01-2119487136-33-XXXX	Potassium hydroxide ⚠ Met. Corr. 1, H290; Skin Corr. 1A, H314 ⚠ Acute Tox. 4, H302	<5%

##### Additional information:

For the listed ingredient(s), the identity and/or exact percentages are being withheld as a trade secret.  
 For the wording of the listed Hazard Statements refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General information:

Information is only applicable to product contents, and not to product as normally supplied. This information is applicable to damaged, leaking, or spilled product as contact with contents is possible under these conditions.

##### After inhalation:

Supply fresh air; consult doctor in case of complaints.  
 Provide oxygen treatment if affected person has difficulty breathing.  
 In case of irregular breathing or respiratory arrest provide artificial respiration.

##### After skin contact:

Immediately remove any clothing soiled by the product.  
 Immediately wash with water and soap and rinse thoroughly.  
 If skin irritation continues, consult a doctor.  
 Seek immediate medical help for blistering or open wounds.

##### After eye contact:

Remove contact lenses if worn, if possible.  
 Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Cont'd. on page 3)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

(Cont'd. from page 2)

- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; call for medical help immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
Coughing  
Allergic reactions  
Gastric or intestinal disorders.  
Vomiting.  
Diarrhea.  
Caustic effect on skin and mucous membranes.
- **Hazards:**  
Causes serious eye damage.  
Harmful if swallowed or if inhaled.  
May cause cancer.  
Suspected of causing genetic defects.  
Causes damage to organs through prolonged or repeated exposure.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
Treat symptomatically.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
Water in flooding quantities.  
Fire-extinguishing powder  
Sand
- **For safety reasons unsuitable extinguishing agents:** None.
- **5.2 Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.  
In contact with water releases flammable gases.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information:** Cool endangered receptacles with water in flooding quantities.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
If containers are leaking, use respiratory protective device against the effects of fumes/dust/aerosol.  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions** Avoid release to the environment.
- **6.3 Methods and material for containment and cleaning up**  
Absorb liquid components with liquid-binding material.  
Pick up mechanically.  
Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**

(Cont'd. on page 4)

**Safety Data Sheet**  
according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

(Cont'd. from page 3)

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Keep away from open flames or temperatures exceeding manufacturer ratings. DO NOT ATTEMPT TO OPEN SEALED CELLS OR BATTERIES – BATTERY CONTENTS MAY PRESENT SERIOUS SAFETY AND HEALTH HAZARDS. SHORT-CIRCUITING THE TERMINALS OF A DEVICE MAY RESULT IN DAMAGE TO DEVICE AND ANY NEARBY OBJECTS OR PERSONNEL.

**Information about fire - and explosion protection:**

Protect from heat.  
Protect against electrostatic charges.  
Keep respiratory protective device available.

**7.2 Conditions for safe storage, including any incompatibilities**

**Requirements to be met by storerooms and receptacles:**

Store in a dry, well-ventilated place.  
Do not use or store near open flame.  
Avoid extreme temperatures; battery may rupture and release contents.  
Do not store and transport with incompatible materials.  
Store individual batteries or cells only in approved packaging in order to avoid inadvertent short circuits, as this may result in damage to device, nearby objects, personnel, or all of the above.

**Information about storage in one common storage facility:**

Store away from foodstuffs.  
Store away from water.

**7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

**12054-48-7 nickel dihydroxide**

WEL (Great Britain)	Long-term value: 0,5 mg/m <sup>3</sup> as Ni; Sk; Carc
OEL (Ireland)	Long-term value: 0,5 mg/m <sup>3</sup> as Ni

**7440-02-0 Nickel**

WEL (Great Britain)	Long-term value: 0,5 mg/m <sup>3</sup> as Ni; Sk; Carc
OEL (Ireland)	Long-term value: 0,5 mg/m <sup>3</sup> Sens

**9002-86-2 Polyvinyl chloride**

WEL (Great Britain)	Long-term value: 10* 4** mg/m <sup>3</sup> *inhalable dust **respirable dust
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(Cont'd. on page 5)

**Safety Data Sheet**  
according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

(Cont'd. from page 4)

OEL (Ireland)	Long-term value: 10* 1** mg/m <sup>3</sup> *total inhalable **respirable dust
<b>1307-96-6 cobalt oxide</b>	
WEL (Great Britain)	Long-term value: 0,1 mg/m <sup>3</sup> as Co; Carc, Sen
OEL (Ireland)	Long-term value: 0,02 mg/m <sup>3</sup> as Co; Sens.
<b>1310-58-3 Potassium hydroxide</b>	
WEL (Great Britain)	Short-term value: 2 mg/m <sup>3</sup>
OEL (Ireland)	Short-term value: 2 mg/m <sup>3</sup>

· **8.2 Exposure controls**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.
- Avoid breathing vapours.

· **Respiratory protection:**

- Not required under normal conditions of use.
- For spills, respiratory protection may be advisable.

· **Protection of hands:**

- Not required under normal conditions of use.
- Wear protective gloves to handle contents of damaged or leaking units.
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

- Butyl rubber, BR
- Nitrile rubber, NBR
- Natural rubber, NR
- Neoprene gloves
- Fluorocarbon rubber (Viton)

· **Eye protection:**

- Not required for normal handling. Wear protective eyewear while handling damaged or leaking product.

· **Body protection:**

- Protective work clothing
- Protection may be required for spills.

· **Limitation and supervision of exposure into the environment:** Avoid release to the environment.

· **Risk management measures:** No further relevant information available.

**SECTION 9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**

· **Appearance**

- Form:** Solid
- Colour:** According to product specification
- Odour:** Odourless
- Odour threshold:** Not determined.

(Cont'd. on page 6)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

(Cont'd. from page 5)

· <b>pH-value:</b>	Not applicable.
· <b>Melting point/freezing point:</b>	Not determined.
· <b>Initial boiling point and boiling range:</b>	Not determined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gas):</b>	Not determined.
· <b>Auto/Self-ignition temperature:</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Explosive properties:</b>	Not determined.
· <b>Explosion limits</b>	
Lower:	Not determined.
Upper:	Not determined.
· <b>Oxidising properties</b>	Non-oxidising.
· <b>Vapour pressure:</b>	Not applicable.
· <b>Density:</b>	
Relative density:	Not determined.
Vapour density:	Not applicable.
Evaporation rate:	Not applicable.
· <b>Solubility in / Miscibility with water:</b>	Insoluble.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity</b>	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.  
To avoid thermal decomposition do not overheat.
- **10.3 Possibility of hazardous reactions**  
Hazardous reactions generally occur with contents of leaking batteries only.  
Toxic fumes may be released if heated above the decomposition point.  
Reacts with strong acids and oxidising agents.  
Reacts with strong alkali.  
Contact with water releases flammable gases.
- **10.4 Conditions to avoid**  
Excessive heat.  
Avoid acids.

(Cont'd. on page 7)

**Safety Data Sheet**  
according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

(Cont'd. from page 6)

Store away from oxidising agents.

Moisture.

· **10.5 Incompatible materials**

Oxidisers, strong bases, strong acids

Water

· **10.6 Hazardous decomposition products**

Carbon monoxide and carbon dioxide

Toxic metal oxide smoke

Hydrogen

**SECTION 11: Toxicological information**

· **11.1 Information on toxicological effects**

· **Acute toxicity:**

None from normal handling. Symptoms only seen in exposure to leaking articles.

Harmful if swallowed or if inhaled.

· **LD/LC50 values relevant for classification:**

**1310-58-3 Potassium hydroxide**

Oral	LD50	273 mg/kg (rat)
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· **Primary irritant effect**

· **Skin corrosion/irritation:**

None from normal handling. Symptoms only seen in exposure to leaking articles.

Caustic effect on skin and mucous membranes.

· **Serious eye damage/irritation:**

None from normal handling. Symptoms only seen in exposure to leaking articles.

Strong irritant with the danger of severe eye injury.

· **Respiratory or skin sensitisation:**

None from normal handling. Symptoms only seen in exposure to leaking articles.

May cause sensitisation by inhalation and skin contact.

· **IARC (International Agency for Research on Cancer):**

7440-02-0	Nickel	2B
1307-96-6	cobalt oxide	2B
12054-48-7	nickel dihydroxide	1

· **Probable routes of exposure:**

Information references exposures to battery contents, and not exposures to whole units. Exposures to whole units are unlikely to produce health hazards.

· **Germ cell mutagenicity:**

None from normal handling. Symptoms only seen in exposure to leaking articles.

Suspected of causing genetic defects.

· **Carcinogenicity:**

None from normal handling. Symptoms only seen in exposure to leaking articles.

May cause cancer.

· **Reproductive toxicity:**

None from normal handling. Symptoms only seen in exposure to leaking articles.

May damage fertility or the unborn child.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:**

(Cont'd. on page 8)

## Safety Data Sheet

according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

(Cont'd. from page 7)

- None from normal handling. Symptoms only seen in exposure to leaking articles.
- Causes damage to organs through prolonged or repeated exposure.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** The product contains materials that are harmful to the environment.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Avoid transfer into the environment.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Contact waste processors for recycling information.  
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- **14.1 UN-Number**
- **DOT, ADR/RID/ADN, IATA** Not Regulated
- **IMDG** UN3496
- **14.2 UN proper shipping name**
- **DOT** Not regulated when prepared for transport so as to prevent a dangerous evolution of heat, short circuit and damage to terminals.
- **ADR/RID/ADN** Not subject to ADN, ADR or RID.
- **IMDG** BATTERIES, NICKEL-METAL HYDRIDE  
Nickel-metal hydride button cells or nickel-metal hydride cells or batteries packed with or contained in equipment are not subject to the provisions of the IMDG Code. All other nickel-metal hydride cells or

(Cont'd. on page 9)



**Safety Data Sheet**  
according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

(Cont'd. from page 8)

· IATA

batteries shall be securely packed and protected from short circuit. They are not subject to other provisions of the IMDG Code provided that they are loaded in a cargo transport unit in a total quantity of less than 100 kg gross mass. When loaded in a cargo transport unit in a total quantity of 100 kg gross mass or more, they are not subject to other provisions of the IMDG Code except those of 5.4.1, 5.4.3 and columns 16a and 16b of the Dangerous Goods List in chapter 3.2.

Not regulated when prepared for transport so as to prevent short circuit and unintentional activation.

· **14.3 Transport hazard class(es)**

· DOT, ADR/RID/ADN, IMDG, IATA

· Class Not Regulated

· **14.4 Packing group**

· DOT, ADR/RID/ADN, IMDG, IATA Not Regulated

· **14.5 Environmental hazards:**

· Marine pollutant: No

· **14.6 Special precautions for user** Not applicable.

· EMS Number: F-A,S-I

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

**SECTION 15: Regulatory information**

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

· **IARC (International Agency for Research on Cancer)**

12054-48-7	nickel dihydroxide	1
7440-02-0	Nickel	2B
1307-96-6	cobalt oxide	2B

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients are listed.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

(Cont'd. on page 10)

**Safety Data Sheet**  
according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

(Cont'd. from page 9)

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.

**Relevant phrases**

- H290 May be corrosive to metals.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H330 Fatal if inhaled.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H341 Suspected of causing genetic defects.
- H350i May cause cancer by inhalation.
- H360D May damage the unborn child.
- 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.

**Abbreviations and acronyms:**

- ADR: 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
- GHS: Globally Harmonised 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bio-accumulable, Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Met. Corr. 1: Corrosive to metals – Category 1
- Acute Tox. 3: Acute toxicity – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Acute Tox. 2: Acute toxicity – Category 2
- Skin Corr. 1A: Skin corrosion/irritation – Category 1A
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Resp. Sens. 1: Respiratory sensitisation – Category 1
- Resp. Sens. 1B: Respiratory sensitisation – Category 1B
- Skin Sens. 1: Skin sensitisation – Category 1
- Muta. 2: Germ cell mutagenicity – Category 2
- Carc. 1A: Carcinogenicity – Category 1Ai
- Repr. 1B: Reproductive toxicity – Category 1B
- STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

**Sources**

- Website, European Chemicals Agency ([echa.europa.eu](http://echa.europa.eu))
- Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do))
- Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))
- Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
- Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.
- Safety Data Sheets, Individual Manufacturers

(Cont'd. on page 11)



**Safety Data Sheet**  
according to 1907/2006/EC

Printing date: 07 January 2019

Revision: 07 January 2019

**Trade name: Nickel Metal Hydride Battery**

(Cont'd. from page 10)

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