



SDS Service Summary

No.: CANEC25000672801

Date: 13 Jan 2025

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SGS Job No. : NGBEC250001944(SHP25-000681)
Product Name : NI-CD
Manufacturer / Supplier : XINXIANG CITY HENGQIANG NEW ENERGY CO., LTD
Composition/Ingredient of product : See *section 3 Composition/information on ingredients* on the SDS
(as per applicant submission)
Job Receiving Date : 08 Jan 2025
SDS Preparation Period : 08 Jan 2025-13 Jan 2025

Service Requested : Preparation of Safety Data Sheet (SDS) for the product with submitted information, with calculation of the classification and labeling requirement according to the submitted composition and US Hazard Communication Standard 29 CFR 1910.1200.

Summary : As per request, the contents and formats of the SDS are prepared in accordance with US Hazard Communication Standard 29 CFR 1910.1200, and is provided per attached.

Disclaimer

This Safety Data Sheet (SDS) is provided to applicant to fulfill US Hazard Communication Standard 29 CFR 1910.1200 and communicate the hazard information of chemicals through the supply chain to ensure safe use. It is not a test report or a certificate ensuring the safety of a product. SGS has consolidated product information based on documents provided by Applicant (i.e. product name, the supplier details, product composition, available physical data, etc.) without independent verification from SGS. The information is provided without any warranty, express or implied, regarding its correctness.

Zm Guan
Project Engineer

Safety Data Sheet

29 CFR 1910.1200

Printing date 01/13/2025

Version number 1

Reviewed on 01/09/2025

1 Identification

- **Product identifier**
- **Trade name:** NI-CD
- **Recommended use of the chemical and restrictions on use:**
- **Application of the substance / the preparation:** Energy storage power supply
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** XINXIANG CITY HENGQIANG NEW ENERGY CO., LTD
- **Full address:** DAKUAI INDUSTRIAL ZONE, DAKUAI TOWN, FENGQUAN DISTRICT, XINXIANG CITY
- **Phone number:** 13849350211
- **Email:** 872962778@qq.com
- **Other U.S. contact point:** Not available
- **Further information obtainable from:** XINXIANG CITY HENGQIANG NEW ENERGY CO., LTD
- **Emergency telephone number:**
Poison Center
Tel: +1 800 222 1222
- **Reference Number:** CANEC25000672801, NGBEC250001944(SHP25-000681)
- **Remark:**
This product is likely to be classified as article and is out of scope of a SDS as set out in 29 CFR Part 1910.1200. This SDS is generated for applicant's reference only.

2 Hazard(s) identification

- **Classification of the substance or mixture**
Classification according to OSHA Hazard Communication Standard (29 CFR 1910.1200).



GHS08 Health hazard

Sensitization - Respiratory 1

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ Cell Mutagenicity 1B

H340 May cause genetic defects.

Carcinogenicity 1A

H350 May cause cancer.

Toxic to Reproduction 1B

H360 May damage fertility or the unborn child.

Specific Target Organ Toxicity - Repeated Exposure 1 H372 Causes damage to the kidneys, the respiratory system and the bone tissue through prolonged or repeated exposure. Route of exposure: Inhalation.



GHS05 Corrosion

Skin Corrosion 1A

H314 Causes severe skin burns and eye damage.

Eye Damage 1

H318 Causes serious eye damage.



GHS07

Acute Toxicity - Oral 4

H302 Harmful if swallowed.

Acute Toxicity - Inhalation 4

H332 Harmful if inhaled.

Sensitization - Skin 1

H317 May cause an allergic skin reaction.

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· **Information concerning particular hazards for human and environment:**

The product has to be labeled due to the calculation procedure of OSHA Hazard Communication Standard (29 CFR 1910.1200).

· **Classification system:**

The classification is according to the latest edition of OSHA Hazard Communication Standard (29 CFR 1910.1200), and extended by company and literature data.

· **Label elements**

· **Labelling according to OSHA Hazard Communication Standard (29 CFR 1910.1200)**

· **Hazard pictograms**



GHS05 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Nickel dihydroxide
cadmium hydroxide
potassium hydroxide

· **Hazard statements**

H302+H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H340 May cause genetic defects.

H350 May cause cancer.

H360 May damage fertility or the unborn child.

H372 Causes damage to the kidneys, the respiratory system and the bone tissue through prolonged or repeated exposure. Route of exposure: Inhalation.

· **Precautionary statements**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dusts or mists.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P284 [In case of inadequate ventilation] wear respiratory protection.

P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.

P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a poison center/doctor.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P321 Specific treatment (see on this label).

P314 Get medical advice/attention if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.

P363 Wash contaminated clothing before reuse.

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P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazards not otherwise classified (HNOC)** No further relevant information available.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:**

Mixture of the substances listed below with nonhazardous additions.

For the wording of the listed hazard statements refer to Section 16.

· **Composition:**

CAS: 1345-25-1	Iron oxide	37.9%
CAS: 12054-48-7	Nickel dihydroxide  Sensitization - Respiratory 1, H334; Germ Cell Mutagenicity 2, H341; Carcinogenicity 1A, H350; Toxic to Reproduction 1B, H360; Specific Target Organ Toxicity - Repeated Exposure 1, H372;  Acute Toxicity - Oral 4, H302; Acute Toxicity - Inhalation 4, H332; Skin Irritation 2, H315; Sensitization - Skin 1, H317	22.08%
CAS: 21041-95-2	cadmium hydroxide  Germ Cell Mutagenicity 1B, H340; Carcinogenicity 1B, H350; Specific Target Organ Toxicity - Repeated Exposure 1, H372;  Acute Toxicity - Oral 4, H302; Acute Toxicity - Dermal 4, H312; Acute Toxicity - Inhalation 4, H332	19.22%
CAS: 7732-18-5	Water	8.3%
CAS: 1310-58-3	potassium hydroxide  Skin Corrosion 1A, H314;  Acute Toxicity - Oral 4, H302	7.2%
CAS: 7782-42-5	Graphite	4.8%
CAS: 1310-73-2	Sodium hydroxide  Skin Corrosion 1A, H314	0.5%

4 First-aid measures

· **Description of first aid measures**

· **General description:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **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:**

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

· **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.

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5 Fire-fighting measures

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture:**
During heating or in case of fire poisonous gases are produced.
- **Special protective equipment and precautions for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures:**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

7 Handling and storage

- **Precautions for safe handling:**
Thorough dedusting.
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
For the general occupational hygienic measures refer to Section 8.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from water.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls/personal protection

- **Components with limit values that require monitoring at the workplace:**

CAS: 1345-25-1 Iron oxide (37.9%)

REL (USA) Long-term value: 1 mg/m³
as FeTLV (USA) Long-term value: 1 mg/m³
as Fe

CAS: 12054-48-7 Nickel dihydroxide (22.08%)

PEL (USA) Long-term value: 1 mg/m³
as NiREL (USA) Long-term value: 0.015 mg/m³
as Ni; See Pocket Guide App. A

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CAS: 1310-58-3 potassium hydroxide (7.2%)REL (USA) Ceiling limit value: 2 mg/m³TLV (USA) Ceiling limit value: 2 mg/m³**CAS: 7782-42-5 Graphite (4.8%)**

PEL (USA) Long-term value: 15 mppcf* mg/m³
 *impinger samples counted by light field techn.

REL (USA) Long-term value: 2.5* mg/m³
 *respirable dust

TLV (USA) Long-term value: 2* mg/m³
 all forms except graphite fibers; *resp. fraction

CAS: 1310-73-2 Sodium hydroxide (0.5%)PEL (USA) Long-term value: 2 mg/m³REL (USA) Ceiling limit value: 2 mg/m³TLV (USA) Ceiling limit value: 2 mg/m³

- **Regulatory information**

REL (USA): Guide to Occupational Exposure Values (NIOSH RELs)

TLV (USA): Guide to Occupational Exposure Values (TLV)

PEL (USA): Guide to Occupational Exposure Values (OSHA PELs)

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Based on the composition shown in Section 3, the following measures are suggested for occupational safety measure.**

- **Appropriate engineering controls:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

See Section 7 for information about design of technical facilities.

- **Individual protection measures, such as personal protective equipment**

- **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.

- **Hand protection:**



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.

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· Eye/face protection:*Tightly sealed goggles*

9 Physical and chemical properties

· General Information**· Appearance:**

Form:	<i>Solid</i>
Color:	<i>Yellow</i>
Odor:	<i>Odorless</i>
Odor threshold:	<i>Not available</i>

· pH-value: *Not available***· Change in condition**

Melting point/Freezing point:	<i>Not available</i>
Initial boiling point and boiling range:	<i>Not available</i>

· Flash point: *Not available***· Flammability (solid, gas):** *Not available***· Auto-Ignition temperature:** *Not available***· Decomposition temperature:** *Not available***· Lower and upper explosion limit**

Lower:	<i>Not available</i>
Upper:	<i>Not available</i>

· Vapor pressure: *Not available***· Density:** *Not available***· Relative density:** *Not available***· Vapor density:** *Not available***· Evaporation rate:** *Not available***· Solubility in / Miscibility with****Water:** *Not available***· Partition coefficient (n-octanol/water):** *Not available***· Viscosity:**

Dynamic:	<i>Not available</i>
Kinematic:	<i>Not available</i>

· Other information *No further relevant information available.*

10 Stability and reactivity

· Reactivity: *No further relevant information available.***· Chemical stability:** *No further relevant information available.***· Possibility of hazardous reactions:** *No dangerous reactions known.***· Conditions to avoid:** *No further relevant information available.***· Incompatible materials:** *No further relevant information available.*

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· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Acute toxicity:** Harmful if swallowed or if inhaled.
- **LD/LC50 values that are relevant for classification:** Not available
- **Skin corrosion/irritation:** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Toxic
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.
Carcinogenic.
The product can cause inheritable damage.
- **Carcinogenic categories**

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

12054-48-7	Nickel dihydroxide	I
21041-95-2	cadmium hydroxide	I

· **NTP (National Toxicology Program)**

12054-48-7	Nickel dihydroxide	K
21041-95-2	cadmium hydroxide	K

· **OSHA-Ca (Occupational Safety & Health Administration)**

21041-95-2	cadmium hydroxide	
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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.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

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· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	UN3496
· DOT, IMDG	
· IATA	Not applicable
· UN proper shipping name	Batteries, nickel-metal hydride
· DOT	Batteries, nickel-metal hydride, MARINE POLLUTANT
· IMDG	
· IATA	Not applicable
· Transport hazard class(es)	
· DOT, IMDG	
 	
· Class	9 Miscellaneous dangerous substances and articles
· Label	9
· IATA	
· Class	Not applicable
· Label	-
· Packing group	
· DOT, IMDG, IATA	Not applicable
· Environmental hazards:	Yes
· Marine pollutant:	Yes (DOT) Symbol (fish and tree)
· Special precautions for user	Not applicable
· EMS Number:	F-A,S-I
· Stowage Category	A
· Stowage Code	SW1 Protected from sources of heat.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable
· Transport/Additional information:	
· DOT	
· Remarks:	Special marking with the symbol (fish and tree).
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity

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15 Regulatory information

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

· Sara

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

12054-48-7 Nickel dihydroxide

21041-95-2 cadmium hydroxide

· TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

· Proposition 65

· Chemicals known to cause cancer:

12054-48-7 Nickel dihydroxide

21041-95-2 cadmium hydroxide

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

12054-48-7 Nickel dihydroxide

· Chemicals known to cause developmental toxicity:

12054-48-7 Nickel dihydroxide

· New Jersey Right-to-Know List:

12054-48-7 Nickel dihydroxide

21041-95-2 cadmium hydroxide

1310-58-3 potassium hydroxide

7782-42-5 Graphite

1310-73-2 Sodium hydroxide

· New Jersey Special Hazardous Substance List:

12054-48-7 Nickel dihydroxide

CA

21041-95-2 cadmium hydroxide

CA

1310-58-3 potassium hydroxide

CO, RI

1310-73-2 Sodium hydroxide

CO, RI

· Pennsylvania Right-to-Know List:

12054-48-7 Nickel dihydroxide

1310-58-3 potassium hydroxide

7782-42-5 Graphite

1310-73-2 Sodium hydroxide

· Pennsylvania Special Hazardous Substance List:

12054-48-7 Nickel dihydroxide

E

1310-58-3 potassium hydroxide

E

1310-73-2 Sodium hydroxide

E

· Cancerogenity categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

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· TLV (Threshold Limit Value)

12054-48-7 Nickel dihydroxide

AI

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

12054-48-7 Nickel dihydroxide

21041-95-2 cadmium hydroxide

· National regulations:**· Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

16 Other information

· Relevant hazard statements

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H340 May cause genetic defects.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H360 May damage fertility or the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

The contents and format of this SDS are in accordance with 29 CFR 1910.1200.

DISCLAIMER OF LIABILITY

The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

· Date of preparation / last revision 01/13/2025**· Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Skin Corrosion 1A: Skin corrosion/irritation – Category 1A

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Sensitization - Respiratory 1: Respiratory sensitisation – Category 1

Sensitization - Skin 1: Skin sensitisation – Category 1

Germ Cell Mutagenicity 1B: Germ cell mutagenicity – Category 1B

Germ Cell Mutagenicity 2: Germ cell mutagenicity – Category 2

Carcinogenicity 1A: Carcinogenicity – Category 1A

Carcinogenicity 1B: Carcinogenicity – Category 1B

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*Toxic to Reproduction 1B: Reproductive toxicity – Category 1B**Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1*

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