Report No.: MND251750QD_EU(En)1/2

Nomination No.: TJP25-007365

Safety Data Sheet（SDS）

Product Name：Ni-MH Battery

Warranty of Design：EU REACH Regulation (REACH 1907/2006 with amendment 2020/878)

Application Company Name：Henan Troily New Energy Technology CO.,LTD.

Application Company Address：Industrial Cluster of Yudong, Xinxiang 453000 Henan, China

Contact Information：18437325083

24 Hour Emergency Call：**0373-7722669**

Inspection Date：2025/12/30

SGS-CSTC Standards Technical Services(Qingdao) Co.,Ltd

Authorised Signatory

2026-01-04

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Safety Data Sheet

Ni-MH Battery

Version：V2.0.0.2
Report No.：MND251750QD_EU(En)1/2
Nomination No.：TJP25-007365
Creation Date：2025/12/30
Revision Date：-

***Prepared in accordance with EU REACH Regulation (REACH 1907/2006 with amendment 2020/878)**

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

1.1 Product identifier

Product Name	Ni-MH Battery
Product Model	See Appendix 1
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable
REACH Registration Number	-
UFI	No information available

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

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

1.3 Details of the supplier of the Safety Data Sheet

Applicant Name	Henan Troily New Energy Technology CO.,LTD.
Applicant Address	Industrial Cluster of Yudong, Xinxiang 453000 Henan, China
Applicant Post Code	——
Applicant Telephone	18437325083
Applicant Fax	0373-7722185
Applicant E-mail	troilybattery@163.com
Supplier Name	Henan Troily New Energy Technology CO.,LTD.
Supplier Address	Industrial Cluster of Yudong, Xinxiang 453000 Henan, China
Supplier Post Code	——
Supplier Telephone	18437325083
Supplier Fax	0373-7722185
Supplier E-mail	troilybattery@163.com

1.4 Emergency telephone number

Emergency telephone number	0373-7722669
Opening hours	24h

2 Hazards identification

2.1 CLP classification according to Regulation（EC）No. 1272/2008 with amendment 2023/707

The product meets the definition of "article". In the Globally Harmonized Chemical Classification and Labeling System

(GHS), the "articles" defined by the US Occupational Safety and Health Administration "Hazard Communication Standard" (29 CFR 1910.1200) or similar definitions do not fall within the scope of this system. [Rev.11 (2025) Part 1.3.2.1.1].According to Regulation (EC) No 1272/2008 and its amendments. Not classified as a dangerous substance.

2.2 Label elements

Hazard pictograms	Not applicable
Signal word	Not applicable

Hazard statements

Hazard statements	Not applicable

Precautionary statements

◆ Prevention

Prevention	Not applicable

◆ Response

Response	Not applicable

◆ Storage

Storage	Not applicable

◆ Disposal

Disposal	Not applicable

2.3 Other hazards

◆ Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Iron	Not applicable
Nickel	Not applicable
Nickel Hydroxide	Not applicable
Lanthanum Nickel	Insufficient information, temporarily unable to evaluate
Polypropylene	Insufficient information, temporarily unable to evaluate
Polyvinyl Chloride	Insufficient information, temporarily unable to evaluate
Sodium Hydroxide	Not applicable
Dihydrogen Oxide	Insufficient information, temporarily unable to evaluate
Potassium Hydroxide	Insufficient information, temporarily unable to evaluate
Cobalt Oxide	Not applicable
Lithium Hydroxide	Insufficient information, temporarily unable to evaluate

◆ Results of endocrine disrupting properties assessment

Component	Results of endocrine disrupting properties assessment [according to (EU) No 2017/2100 or (EU) No 2018/605]
Iron	Insufficient information, temporarily unable to evaluate
Nickel	Insufficient information, temporarily unable to evaluate
Nickel Hydroxide	Insufficient information, temporarily unable to evaluate

Lanthanum Nickel	Insufficient information, temporarily unable to evaluate
Polypropylene	Insufficient information, temporarily unable to evaluate
Polyvinyl Chloride	Insufficient information, temporarily unable to evaluate
Sodium Hydroxide	Insufficient information, temporarily unable to evaluate
Dihydrogen Oxide	Insufficient information, temporarily unable to evaluate
Potassium Hydroxide	Insufficient information, temporarily unable to evaluate
Cobalt Oxide	Insufficient information, temporarily unable to evaluate
Lithium Hydroxide	Insufficient information, temporarily unable to evaluate

◆ Other

	Not applicable.

3 Composition/information on ingredients

3.1 Substance

	Not applicable

3.2 Mixture

Component	Weight % content(or range)	Classification according to Regulation (EC) No. 1272/2008 with amendment 2023/707 [CLP]	Specific Conc. Limits, M-factors
Iron CAS：7439-89-6 EC：231-096-4 Index No.：-	22.8~50.7	Not Classified	-
Nickel CAS：7440-02-0 EC：231-111-4 Index No.：028-002-00-7	10.32~26.32	Sensitization - skin, Category 1, H317; Carcinogenicity, Category 2, H351; Specific target organ toxicity - repeated exposure, Category 1, H372	-
Nickel Hydroxide CAS：12054-48-7 EC：235-008-5 Index No.：028-008-00-X	12.32~25.3	Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Sensitization - skin, Category 1, H317; Acute Toxicity - Inhalation, Category 4, H332; Sensitization - respiratory, Category 1, H334; Germ cell mutagenicity, Category 2, H341; Carcinogenicity, Category 1A, H350; Reproductive toxicity, Category 1B, H360; Specific target organ toxicity - repeated exposure, Category 1, H372; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Lanthanum Nickel CAS：12196-72-4 EC：235-372-5 Index No.：-	Commercial secrets	Not Classified	-
Polypropylene CAS：9003-07-0 EC：618-352-4 Index No.：-	2.3~6.61	Not Classified	-
Polyvinyl Chloride CAS：9002-86-2 EC：618-338-8	1.3~3.5	Not Classified	-

Index No.：-			
Sodium Hydroxide CAS：1310-73-2 EC：215-185-5 Index No.：011-002-00-6	0~3.75	Skin corrosion/irritation, Category 1A, H314	H314A:C ≥ 5%|H314B:2% ≤ C < 5%|H315:0.5% ≤ C < 2%|H319:0.5% ≤ C < 2%
Dihydrogen Oxide CAS：7732-18-5 EC：231-791-2 Index No.：-	5.6~12.6	Not Classified	-
Potassium Hydroxide CAS：1310-58-3 EC：215-181-3 Index No.：019-002-00-8	1.2~3.7	Acute Toxicity - Oral, Category 4, H302; Skin corrosion/irritation, Category 1A, H314	H314A:C ≥ 5%|H314B:2% ≤ C < 5%|H315:0.5% ≤ C < 2%|H319:0.5% ≤ C < 2%
Cobalt Oxide CAS：1307-96-6 EC：215-154-6 Index No.：027-002-00-4	Commercial secrets	Acute Toxicity - Oral, Category 4, H302; Sensitization - skin, Category 1, H317; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	M=10
Lithium Hydroxide CAS：1310-66-3 EC：603-454-3 Index No.：-	0~0.19	Acute Toxicity - Oral, Category 4, H302; Skin corrosion/irritation, Category 1B, H314	-

4 First-aid measures

4.1 Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off with plenty of soap and water for at least 15 minutes and consult a physician if feel uncomfortable.
Ingestion	Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

4.2 Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

4.3 Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Please use battery fire extinguisher.

Unsuitable extinguishing media	There is no restriction on the type of extinguisher which may be used.

5.2 Specific hazards arising from the substance or mixture

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in fire.

5.3 Advice for firefighters

1	As in any fire, wear self-contained breathing apparatus （MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3	Use personal protective equipment,do not breathe dust/fume.

6.2 Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

1	Cut off the source of the leak as much as possible.
2	Keep leaks in a ventilated place.
3	Isolation of contaminated areas and restrictions on access.
4	It is recommended that emergency personnel wear dust masks.
5	Collect the spill with a clean shovel and place it in a clean, dry, loosely closed container and move the container away from the leak.
6	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

6.4 Reference to other sections

1	Personal Protective Equipment advice is contained in Section 8 of the SDS.
2	Disposal considerations advice is contained in Section 13 of the SDS.

7 Handling and storage

7.1 Precautions for safe handling

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.

◆ Measures to prevent fire

1	Keep away from heat/sparks/open flames/ hot surfaces.

◆ Measures to prevent aerosol and dust generation

1	Avoid formation of dust and aerosols.
2	Provide appropriate exhaust ventilation at places where dust is formed.

◆ Advice on general occupational hygiene

1	Wash hands and face after using the substances.
2	Replace the contaminated clothing immediately.

7.2 Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

7.3 Specific end use(s)

1	In addition to use mentioned in the Section 1.2, unforeseen other specific end uses.

8 Exposure controls/personal protection

8.1 Control parameters

◆ Occupational Exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m³	ppm	mg/m³
Nickel	Japan - JSOH(2024–2025)	-	1	-	-
	Permissible exposure standards for workers in the workplace	-	1	-	2
	France	-	1	-	-
	Germany (AGS)	-	0.006	-	0.048
	United Kingdom	-	-	-	3
	Austria	-	0.5	-	2
Nickel Hydroxide	Japan - JSOH(2024–2025)	-	0.1(total dust, as Ni)	-	-
	Permissible exposure standards for workers in the workplace	-	1(as Ni)	-	2(as Ni)
	France	-	1	-	-
	Finland	-	0.05	-	-
	Spain	-	0.1(as Ni)	-	-
	USA - ACGIH	-	0.2(as Ni, inhalable fraction)	-	-
Polyvinyl Chloride	Germany (DFG)	-	0.3	-	2.4

	United Kingdom	-	10(inhalable fraction);4(respirable fraction)	-	-
	Austria	-	5	-	10
	Belgium	-	1	-	-
	Finland	-	1	-	-
	Hungary	-	0.5	-	-
Sodium Hydroxide	Japan - JSOH(2024–2025)	-	-	-	-
	Permissible exposure standards for workers in the workplace	-	2	-	4
	France	-	2	-	-
	United Kingdom	-	-	-	2
	Austria	-	2(inhalable aerosol)	-	4(inhalable aerosol)
	Belgium	-	2	-	-
Potassium Hydroxide	Japan - JSOH(2024–2025)	-	-	-	-
	France	-	-	-	2
	United Kingdom	-	-	-	2
	Austria	-	2(inhalable aerosol)	-	-
	Belgium	-	-	-	2
	Denmark	-	2	-	2
Cobalt Oxide	Japan - JSOH(2024–2025)	-	0.05 (as Co)	-	-
	Finland	-	0.02	-	-
	Latvia	-	0.5	-	-
	Romania	-	0.05	-	0.1

◆ Biological limit values

Component	Standard	Biological monitoring index	Biological limits value	Sampling time	Remark
Nickel	USA -ACGIH	Nickel(Urine)	5μg/L	End of shift at end of work week	
Nickel Hydroxide	USA -ACGIH	Nickel(Urine)	5μg/L	End of shift at end of work week	

◆ Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 300 and GBZ/T 160 series standard Determination of toxic substances in workplace air.

◆ Derived No effect level (DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Iron	Inhalation	No data available	No data available	3 mg/m3	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Nickel	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Nickel Hydroxide	Inhalation	No data available	No data available	0.05 mg/m3	0.05 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Lanthanum Nickel	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Polypropylene	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Polyvinyl Chloride	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Sodium Hydroxide	Inhalation	No data available	No data available	1 mg/m3	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Dihydrogen Oxide	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Potassium Hydroxide	Inhalation	No data available	No data available	1 mg/m3	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Cobalt Oxide	Inhalation	No data available	No data available	0.0509 mg/m3	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Lithium Hydroxide	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

◆ Predicted No Effect Concentration (PNEC)

Component	A	B	C	D	E	F	G	H
Iron	No data available	No data available	No data available	No data available	No data available	No hazard identified	No data available	No data available
Nickel Hydroxide	7.1 µg/L	8.6 µg/L	330 µg/L	109 mg/kg sediment dw	109 mg/kg sediment dw	No hazard identified	29.9 mg/kg soil dw	120 µg/kg food
Sodium Hydroxide	No data available	No data available	No data available	No data available	No data available	No hazard identified	No data available	No potential for bioaccumulation

Note 1:

A: Freshwater; B: Seawater; C: Sewage treatment plant; D: Sediment (freshwater); E: Sediment (seawater); F: Air; G: Soil; H: Secondary poisoning(Hazard for Predators).

Note 2:

The PNEC values of the remaining components not shown in the product are not available yet.

8.2 Exposure controls

8.2.1 Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

8.2.2 Personal protection equipment

General requirement	No special requirements, please see the description below.
Eye protection	In general situation, eye protection is not needed. In the production process, when contacting with vapour or dust, tightly fitting safety goggles.
Hand protection	In general situation, hand protection is not needed.
Respiratory protection	In general situation, respiratory protection is not needed. If exposure limits are exceeded or if irritation or other symptoms are experienced, wear dust proof mask or gas defence mask.
Skin and body protection	In general situation, skin and body protection are not needed.

8.2.3 Environmental exposure controls

Environmental exposure controls	No information available

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Solid
Colour	No information available
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	No information available
Initial boiling point and boiling	No information available

range(°C)	
Flash point(Closed cup,°C)	Not applicable
Evaporation rate	Not applicable
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit：No information available；Lower limit：No information available
Vapor pressure(kPa)	Not applicable
Vapor density(Air = 1)	Not applicable
Relative density(Water=1)	No information available
Solubility(mg/L)	No information available
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Kinematic viscosity(mm^2/s)	Not applicable
Explosive properties	No information available
Oxidizing properties	No information available
Particle characteristics	No information available

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Information with regard to physical hazard classes	No information available

9.2.2 Other safety characteristics

Other safety characteristics	No information available

10 Stability and reactivity

Stability and reactivity

10.1 Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
10.2 Chemical stability	Stable under proper operation and storage conditions.
10.3 Possibility of hazardous reactions	The substance contains a certain amount of water, and may release hydrogen gas in contact with active metals.
10.4 Conditions to avoid	Incompatible materials, heat, flame and spark.
10.5 Incompatible materials	Halogen, interhalogen, strong oxidant, water and acids. Acids, phenols, alcohols and nitro substituted hydrocarbon. Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.
10.6 Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 with amendment 2023/707

	Ni-MH Battery
Skin corrosion/irritation	Based on available data, the classification criteria are not met

Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

Acute toxicity

Component	LD_{50}(oral)	LD_{50}(dermal)	LC_{50}(inhalation,4h)
Potassium Hydroxide	273mg/kg(Rat)	No information available	No information available
Iron	30000mg/kg(Rat)	No information available	No information available
Nickel Hydroxide	1515mg/kg(Rat)	> 2000mg/kg(Rat)	1.2mg/L(Rat)
Cobalt Oxide	202mg/kg(Rat)	No information available	No information available

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Iron	Not Listed	Not Listed
Nickel	Category 2B	Category R
Nickel Hydroxide	Category 1	Category K
Lanthanum Nickel	Category 1	Category K
Polypropylene	Category 3	Not Listed
Polyvinyl Chloride	Category 3	Not Listed
Sodium Hydroxide	Not Listed	Not Listed
Dihydrogen Oxide	Not Listed	Not Listed
Potassium Hydroxide	Not Listed	Not Listed
Cobalt Oxide	Category 2B	Not Listed
Lithium Hydroxide	Not Listed	Not Listed

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Component	Endocrine disrupting properties
Iron	No information available
Nickel	No information available
Nickel Hydroxide	No information available
Lanthanum Nickel	No information available
Polypropylene	No information available
Polyvinyl Chloride	No information available

Sodium Hydroxide	No information available
Dihydrogen Oxide	No information available
Potassium Hydroxide	No information available
Cobalt Oxide	No information available
Lithium Hydroxide	No information available

11.2.2 Other Information

Other Information	See Section 11.1

12 Ecological information

12.1 Toxicity

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
Nickel	LC_{50}：40mg/L (96h)(Fish)	EC_{50}：1mg/L (48h)(Crustaceans)	No information available
Sodium Hydroxide	LC_{50}: 196mg/L (96h)(Fish)	EC_{50}：40.4mg/L (48h)(Crustaceans)	No information available
Iron	LC_{50}：1.29mg/L (96h)(Fish)	No information available	No information available
Nickel Hydroxide	LC_{50}：77.13mg/L (96h)(Fish)	No information available	No information available
Cobalt Oxide	LC_{50}：1.5mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity

Chronic aquatic toxicity	No information available

12.2 Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Nickel	Low	Low
Polypropylene	Low	Low

12.3 Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Nickel	Low	Log Kow=-1.38
Polypropylene	Low	Log Kow=1.6783

12.4 Mobility in soil

Component	log Koc	Remark
Nickel	1.155	
Polypropylene	1.375	

12.5 Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Iron	Not applicable
Nickel	Not applicable
Nickel Hydroxide	Not applicable
Lanthanum Nickel	Insufficient information, temporarily unable to evaluate
Polypropylene	Insufficient information, temporarily unable to evaluate
Polyvinyl Chloride	Insufficient information, temporarily unable to evaluate
Sodium Hydroxide	Not applicable
Dihydrogen Oxide	Insufficient information, temporarily unable to evaluate
Potassium Hydroxide	Insufficient information, temporarily unable to evaluate
Cobalt Oxide	Not applicable
Lithium Hydroxide	Insufficient information, temporarily unable to evaluate

12.6 Endocrine disrupting properties

Component	Endocrine disrupting properties
Iron	No information available
Nickel	No information available
Nickel Hydroxide	No information available
Lanthanum Nickel	No information available
Polypropylene	No information available
Polyvinyl Chloride	No information available
Sodium Hydroxide	No information available
Dihydrogen Oxide	No information available
Potassium Hydroxide	No information available
Cobalt Oxide	No information available
Lithium Hydroxide	No information available

12.7 Other adverse effects

	No information available

13 Disposal considerations

13.1 Waste treatment methods

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label	

IMDG-CODE

14.1 UN number	3496
14.2 UN proper shipping name	BATTERIES, NICKEL-METAL HYDRIDE
14.3 Transport hazard class	9
14.4 Packing group	The packagings must conform to package instructions of UN number
14.5 Environmental hazards (Yes or no)	No
Remark	Non-Restricted according to the special provision 963.

IATA-DGR

14.1 UN number	3496
14.2 UN proper shipping name	BATTERIES, NICKEL-METAL HYDRIDE
14.3 Transport hazard class	9
14.4 Packing group	The packagings must conform to package instructions of UN number
14.5 Environmental hazards (Yes or no)	No
Remark	Non-Restricted according to the special provision A199.

UN-ADR

UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Special precautions for user

	Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

Maritime transport in bulk according to IMO instruments

◆Transport in bulk according to Annex II of MARPOL and the IBC code

	Not Available

◆Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

	Not Available

◆Transport in bulk in accordance with the IGC Code

	Not Available

15 Regulatory information

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

International chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M
Iron	√	√	√	√	√	√	√	√	√	√	√	√	√

Nickel	√	√	√	√	√	√	√	√	√	√	√	√	√
Nickel Hydroxide	√	√	√	√	√	√	√	√	√	×	×	√	√
Lanthanum Nickel	×	√	√	×	×	×	√	×	×	×	×	×	×
Polypropylene	√	×	√	√	√	√	√	√	√	√	√	√	√
Polyvinyl Chloride	√	×	√	√	√	√	√	√	√	√	√	√	√
Sodium Hydroxide	√	√	√	√	√	√	√	√	√	√	√	√	√
Dihydrogen Oxide	√	√	√	√	√	√	√	√	√	√	√	√	√
Potassium Hydroxide	√	√	√	√	√	√	√	√	√	√	√	√	√
Cobalt Oxide	√	√	√	√	√	√	√	√	√	√	√	√	√
Lithium Hydroxide	√	×	×	×	√	√	×	√	×	√	×	√	√

【A】 China Inventory of Existing Chemical Substances(IECSC)
【B】 European Inventory of Existing Commercial Chemical Substances(EC inventory)
【C】 United States Toxic Substances Control Act Inventory(TSCA)
【D】 Canadian Domestic Substances List(DSL)
【E】 New Zealand Inventory of Chemicals(NZIoC)
【F】 Philippines Inventory of Chemicals and Chemical Substances(PICCS)
【G】 Korea Existing Chemicals Inventory(KECL)
【H】 Australian. Inventory of Industrial Chemical (AIICS)
【I】 Japan Inventory of Existing & New Chemical Substances(ENCS)
【J】 Thailand Existing Chemicals Inventory(TECI)
【K】 Mexico National Inventory of Chemical Substances (INSQ)
【L】 Russia Inventory of Existing Substances(DRAFT)
【M】 Inventory of Existing Chemical Substances in Taiwan, China (TCSI)

List of Chemical Substances under International Conventions

Component	A	B	C
Iron	×	×	×
Nickel	×	×	×
Nickel Hydroxide	×	×	×
Lanthanum Nickel	×	×	×
Polypropylene	×	×	×
Polyvinyl Chloride	×	×	×
Sodium Hydroxide	×	×	×
Dihydrogen Oxide	×	×	×
Potassium Hydroxide	×	×	×
Cobalt Oxide	×	×	×
Lithium Hydroxide	×	×	×

【A】 The Montreal Protocol on Substances that Deplete the Ozone Layer
【B】 Stockholm Convention on Persistent Organic Pollutants (POPs)
【C】 Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

European chemical inventory

Component	A	B	C	D	E	F	G	H	I
Iron	×	×	×	√	√	×	×	×	×
Nickel	×	×	√	√	√	×	√	×	×
Nickel Hydroxide	×	×	√	√	√	×	√	×	×
Lanthanum Nickel	×	×	√	√	×	×	×	×	×
Polypropylene	×	×	×	√	×	×	×	×	×
Polyvinyl Chloride	×	×	×	√	×	×	×	×	×
Sodium Hydroxide	×	×	×	√	√	×	×	×	×
Dihydrogen Oxide	×	×	×	√	×	×	×	×	×
Potassium Hydroxide	×	×	×	√	√	×	×	×	×
Cobalt Oxide	×	×	×	√	√	×	×	×	×
Lithium Hydroxide	×	×	×	√	×	×	×	×	×

[A] Candidate list of Substances of Very High Concern for authorization under EU REACH regulation
[B] Substances requiring authorisation under EU REACH regulation
[C] Substances restricted under EU REACH
[D] Pre-registered substances under EU REACH
[E] Registered substances under EU REACH
[F] Substance Evaluation – CoRAP under EU REACH
[G] List of priority substances under EU water policy （Directive 2455/2001/EC）
[H] Substances subject to POPs Regulation
[I] Substances proposed as POPs

Note:
"√" Indicates that the substance included in the regulations.
"×" No data or not included in the regulations.

German water hazard class(WGK)

Component	WGK	Remark
Iron	nwg	
Nickel	WGK 1	
Nickel Hydroxide	WGK 3	
Sodium Hydroxide	WGK 1	The regular and professional use of this substance for drinking water treatment, surface water remediation or waste water treatment is not restricted by this classification.
Potassium Hydroxide	WGK 1	
Cobalt Oxide	WGK 3	
Lithium Hydroxide	WGK 1	

【WGK 1】 slightly hazardous to water
【WGK 2】 obviously hazardous to water
【WGK 3】 highly hazardous to water
【nwg】 non-hazardous to water
【awg】 hazardous to water in general

German technical instructions on air quality control(TA LUFT)

Component	TA LUFT	Remark

Iron	Chapter 5.2.1 Overall Dust, including fine dust. The emissions of dust in the exhaust gas are not allowed to exceed the following values:Mass flow:0,20 kg/hr or Mass conc.:20 mg/m³ The mass per unit volume of 0,15 g/m3 in exhaust gas is not allowed to be exceeded also on observance or lower deviation of a mass flow of 0,20 kg/h.For emission sources that exceed the mass flow rate of 0.40 kg/h, the mass concentration in waste gas the mass concentration must not exceed 10 mg/m³.	
Nickel	Chapter 5.2.2 Inorganic dusts. Class II. Also with the presence of several substances of the same class, the following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:2,5 g/hr or Mass conc.:0,5 mg/m³. Specified as Ni.	
Nickel Hydroxide	Chapter 5.2.7.1.1 Carcinogenic SubstancesThe substance must be assigned to the class (I, II or III) whose substances have the nearest potency. We can not accomplish this evaluation due to insufficiency of data.Carcinogenic substances not mentioned by name and for which no information on potency is available should be assigned to Class I as a precautionary measure.	
Polyvinyl Chloride	Chapter 5.2.5 Organic Substances, dust,including fine dust.To be treated as overall dust. The emissions of dust in the exhaust gas are not allowed to exceed the following values:Mass flow:0,20 kg/hr or Mass conc.:20 mg/m³ The mass per unit volume of 0,15 g/m³ in exhaust gas is not allowed to be exceeded also on observance or lower deviation of a mass flow of 0,20 kg/h.For emission sources that exceed the mass flow rate of 0.40 kg/h, the mass concentration in waste gas the mass concentration must not exceed 10 mg/m³.	
Sodium Hydroxide	Chapter 5.2.1 Overall Dust, including fine dust. The emissions of dust in the exhaust gas are not allowed to exceed the following values:Mass flow:0,20 kg/hr or Mass conc.:20 mg/m³ The mass per unit volume of 0,15 g/m3 in exhaust gas is not allowed to be exceeded also on observance or lower deviation of a mass flow of 0,20 kg/h.For emission sources that exceed the mass flow rate of 0.40	

	kg/h, the mass concentration in waste gas the mass concentration must not exceed 10 mg/m³.	
Potassium Hydroxide	Chapter 5.2.1 Overall Dust, including fine dust. The emissions of dust in the exhaust gas are not allowed to exceed the following values:Mass flow:0,20 kg/hr or Mass conc.:20 mg/m³ The mass per unit volume of 0,15 g/m3 in exhaust gas is not allowed to be exceeded also on observance or lower deviation of a mass flow of 0,20 kg/h.For emission sources that exceed the mass flow rate of 0.40 kg/h, the mass concentration in waste gas the mass concentration must not exceed 10 mg/m³.	
Cobalt Oxide	Chapter 5.2.2 Inorganic dusts. Class II. Also with the presence of several substances of the same class, the following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:2,5 g/hr or Mass conc.:0,5 mg/m³. Specified as Co.	

German technical rules for hazardous substances(TRGS)

Component	TRGS	Remark
Iron	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
Nickel	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
Nickel Hydroxide	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 406|TRGS 410|TRGS 500|TRGS 509|TRGS 510|TRGS 560	
Polyvinyl Chloride	TRGS 402|TRGS 500|TRGS 509|TRGS 510|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
Sodium Hydroxide	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Dihydrogen Oxide	TRGS 500|TRGS 509|TRGS 510	
Potassium Hydroxide	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Cobalt Oxide	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 406|TRGS 410|TRGS 500|TRGS 509|TRGS 510	

15.2 Chemical safety assessment

	No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16 Other information

Information on revision

Creation Date	2025/12/30
Revision Date	-
Reason for revision	-

Reference

[1] IPCS: The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home.
[2] IARC, website: http://www.iarc.fr/.
[3] OECD: The Global Portal to Information on Chemical Substances, website: https://www.echemportal.org/echemportal/.
[4] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple.
[5] NLM: ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp.
[6] EPA: Integrated Risk Information System, website: http://cfpub.epa.gov/iris/.
[7] U.S. Department of Transportation: ERG, website: http://www.phmsa.dot.gov/hazmat/library/erg.
[8] Germany GESTIS-database on hazard substance, website: http://gestis-en.itrust.de/.

Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC_{50}	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD_{50}	Lethal Dose 50%	NTP	National Toxicology Program
EC_{50}	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC_X	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P_{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor		

Disclaimer

This Safety Data Sheet (SDS) was prepared according to REACH Regulation The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

Appendix 1

Ni-MH cylindrical Battery

AA50, AA80, AA100, AA150, AA200, AA250, AA300, AA330, AA350, AA400, AA450, AA500, AA550, AA600, AA650, AA700, AA750, AA800, AA850, AA900, AA950, AA1000, AA1100, AA1200, AA1300, AA1400, AA1500, AA1600, AA1700, AA1800, AA1900, AA2000, AA2100, AA2200, AA2300, AA2400, AA2500, AA2600, AA2700, AA2800, AA2900, AA3000, AA3100 etc

AAA80, AAA100, AAA150, AAA200, AAA250, AAA300, AAA330, AAA350, AAA400, AAA450, AAA500, AAA550, AAA600, AAA650, AAA700, AAA750, AAA800 , AAA900 , AAA1000, AAA1100, AAA1200, AAA1300, AAA1400, AAA1500.etc

1/4AAA50, 1/4AAA60, 1/4AAA80 ect

1/3AAA50, 1/3AAA60, 1/3AAA70, 1/3AAA80, 1/3AAA85, 1/3AAA90, 1/3AAA100, 1/3AAA110, 1/3AAA120, 1/3AAA150, 1/3AAA160 ,1/3AAA180,etc

2/3AAA80, 2/3AAA100, 2/3AAA130, 2/3AAA120, 2/3AAA150, 2/3AAA180, 2/3AAA200, 2/3AAA250, 2/3AAA300, 2/3AAA350, 2/3AAA400,2/3AAA500,2/3AAA600,etc

2/3AA80, 2/3AA100, 2/3AA120, 2/3AA150, 2/3AA180, 2/3AA200, 2/3AA250, 2/3AA300, 2/3AA350, 2/3AA400, 2/3AA450, 2/3AA500, 2/3AA550, 2/3AA600, 2/3AA700, 2/3AA800, 2/3AA900, 2/3AA1000, etc

1/3AA50, 1/3AA60, 1/3AA80, 1/3AA100, 1/3AA120, 1/3AA150, 1/3AA180, 1/3AA200, 1/3AA250, 1/3AA300, 1/3AA350 etc

2/3A800, 2/3A1000, 2/3A1100, 2/3A1200, 2/3A1300, 2/3A1500, 2/3A1600, 2/3A1800, 2/3A2000

4/5A1000, 4/5A1200, 4/5A1500, 4/5A1600, 4/5A1800, 4/5A2000,4/5A2100, 4/5A2200, 4/5A2500

3/5AA100, 3/5AA200, 3/5AA300, 3/5AA400, 3/5AA500, 3/5AA600, 3/5AA700, 3/5AA800, 3/5AA1000,2/3AA1100

（1.2V,2.4V ,3.6V, 4.8V, 6.0V ,7.2V, 8.4V, 9.6V, 10.8V, 12V, 13.2V, 14.4V, 15.6V）etc

Ni-MH Button Battery：

10mAh, 20mAh, 30mAh, 40mAh, 50mAh, 60mAh, 70mAh, 80mAh, 100mAh, 110mAh, 120mAh, 160mAh, 230mAh, 250mAh, 300mAh, 330mAh, 350mAh, 400mAh, 500mAh, 600mAh, 650mAh, 700mAh, 800mAh, 900mAh, 1000mAh, etc

（1.2V,2.4V ,3.6V, 4.8V, 6.0V ,7.2V, 8.4V, 9.6V, 10.8V, 12V, 13.2V, 14.4V, 15.6V）etc