



Safety Data Sheet

according to Regulation (EC) No 1907/2006

RP-Technik GmbH

NIMHHT4820Q

Revision date: 17.12.2024

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

1.1. Product identifier

NIMHHT4820Q

Further trade names

Type: 4.8 V; 2.0 Ah; 9.6 Wh; 300 mm connection cable

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

Use of the substance/mixture

batteries and accumulators

1.3. Details of the supplier of the safety data sheet

Company name:	RP-Technik GmbH	
Street:	Hermann-Staudinger-Str. 10-16	
Place:	D-63110 Rodgau	
Telephone:	+49 (6106) 660 28 - 0	+49 (6106) 660 28 - 40
E-mail:	info@rp-group.com	
Contact person:	Francisco Goerke	
E-mail:	product@rp-group.com	

1.4. Emergency telephone number:

+49 (6106) 660 28 - 0 (24 h.)

Further Information

This battery pack is an article according to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 453/2010, and is not subject to the REACH regulation. The information contained in this safety data sheet contains valuable and critical information for the safe and proper use of the product. This SDS should be kept and made available to employees and other users of the product.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Not classified as a dangerous substance or mixture according to GHS/CLP.

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Additional advice on labelling

Labelling according to Regulation (EC) No. 1272/2008 [CLP]: not applicable / not relevant

The product is: article (batteries and accumulators)

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

Risk of explosion by shock, friction, fire or other sources of ignition. (Formation of: Gases/vapours, toxic) Do not open container by force. To avoid risks to man and the environment, comply with the instructions for use.



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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

The product is: article (batteries and accumulators)

Relevant ingredients

CAS No	Chemical name	Quantity
12054-48-7	Nickel dihydroxide	15 - 22 %
—	—	—
7439-89-6	Iron	16 - 20 %
—	—	—
7440-02-0	Nickel	30 - 40 %
—	—	—
7439-96-5	Manganese	0.3 - 1.5 %
—	—	—
7439-91-0	Lanthanum	1.7 - 4.5 %
—	—	—
7440-48-4	Cobalt	1.5 - 2.5 %
—	—	—
1310-58-3	Potassium hydroxide	1 - 2 %
—	—	—
9002-88-4	Polyethylene	0 - 0.6 %
—	—	—
7440-45-1	Cerium	0.29 - 0.9 %
—	—	—
7440-00-8	Neodymium	0 - 1 %
—	—	—
7429-90-5	Aluminium	0 - 1 %
—	—	—
1310-73-2	Sodium hydroxide	1 - 2 %
—	—	—
1310-65-2	Lithium hydroxide	0.1 - 0.5 %
—	—	—
9002-84-0	Polytetrafluoroethylene (PTFE)	0 - 0.1 %
—	—	—
9004-32-4	Carboxymethyl cellulose sodium salt	0 - 0.1 %
—	—	—
9003-07-0	Polypropylene	1 - 3 %
—	—	—
9003-55-8	Styrene-butadiene rubber (SBR)	0.1 - 0.5 %
—	—	—
21041-93-0	Cobalt hydroxide	0.5 - 2 %
—	—	—
20427-58-1	Zinc hydroxide	0 - 0.1 %
—	—	—
7732-18-5	Water	0.15 - 0.23 %
—	—	—
7440-65-5	Yttrium	0 - 1.5 %



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CAS No	Chemical name	Quantity
—	—	—
7440-10-0	Praseodymium	0 - 0.5 %
—	—	—
7440-67-7	Zirconium	0 - 1 %
—	—	—
7440-19-9	Samarium	0 - 1 %
—	—	—
7440-64-4	Ytterbium	0 - 0.5 %
—	—	—
7439-95-4	Magnesium	0 - 1 %
—	—	—
7440-32-6	Titanium	0 - 1 %
—	—	—
7440-44-0	Carbon	0 - 1 %
—	—	—
32131-17-2	Polyamide 66 (PA66)	0 - 1 %
—	—	—
11138-66-2	Xanthan gum	0 - 0.1 %
—	—	—
9003-01-4	Poly(acrylic acid)	0 - 0.1 %
—	—	—
9003-04-7	Sodium polyacrylate	0 - 0.1 %
—	—	—
9004-62-0	Hydroxyethyl cellulose	0 - 0.1 %
—	—	—
9004-65-3	Hydroxypropyl methyl cellulose	0 - 0.1 %
—	—	—
8052-42-4	Bitumen	0 - 0.1 %
—	—	—
13463-67-7	Titanium dioxide	0 - 0.1 %
—	—	—

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
-	-	No specific concentration limits, M-factors or ATE values stated in the supplier SDS.	-
—	The battery is a sealed article. Exposure is not expected under normal conditions of use.	—	—



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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No special measures are required for intact sealed batteries. The following measures apply after damage or leakage.

After inhalation

Move the affected person to fresh air. If breathing is difficult, provide artificial respiration and seek medical attention.

After contact with skin

Remove contaminated clothing and shoes. Wash thoroughly with soap and water. Seek medical attention if irritation occurs.

After contact with eyes

Rinse cautiously with plenty of water for several minutes while holding the eyelids open. Seek medical attention if irritation persists.

After ingestion

Do not induce vomiting. Rinse mouth and obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No relevant information is available for the intact article.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing media appropriate for the surrounding fire, such as dry powder or carbon dioxide (CO₂).

Co-ordinate fire-fighting measures to the fire surroundings.

5.2. Special hazards arising from the substance or mixture

Batteries may burst and release hazardous decomposition products when exposed to fire. Damaged or electrically abused batteries may burn rapidly and ignite adjacent batteries.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing.

Additional information

Cool endangered batteries with water spray where safe. Prevent contaminated extinguishing water from entering drains or surface water.



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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

For damaged or leaking batteries, keep unprotected persons away, remove ignition sources and provide adequate ventilation. Avoid contact with released cell contents.

For non-emergency personnel

Wear suitable personal protective equipment.

For emergency responders

Wear personal protection equipment (refer to section 8).

6.2. Environmental precautions

Do not allow released material to enter drains, soil or surface water.

6.3. Methods and material for containment and cleaning up

For containment

Isolate damaged batteries and contain released material.

For cleaning up

Collect mechanically using a method that does not generate dust. Place damaged batteries and collected material in a suitable container for disposal.

Other information

Use non-sparking tools where appropriate.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Do not dismantle, crush, puncture or open batteries. Do not short-circuit and do not install with incorrect polarity. Protect against mechanical and electrical abuse.

Advice on protection against fire and explosion



Keep away from heat, sparks, open flames and hot surfaces. Do not expose to fire or excessive temperatures.

Advice on general occupational hygiene

Wash hands after handling damaged or leaking batteries. Do not eat, drink or smoke in contaminated work areas.

Further information on handling

Follow the equipment and charging instructions.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a cool, dry and well-ventilated place. Protect from direct sunlight, heat and moisture.

Hints on joint storage

Do not store together with: Strong oxidising agents, acids and bases.

Further information on storage conditions

Keep away from heat. (Temperature > manufacturer-specified operating and storage limits) Protect from direct sunlight.

Protect from moisture.

7.3. Specific end use(s)

batteries and accumulators



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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
12054-48-7	Nickel dihydroxide	-	0.2	—	TWA	ACGIH
7440-02-0	Nickel	-	1.5	—	TWA	ACGIH
7440-02-0	Nickel	-	0.015	—	TWA	NIOSH
7439-96-5	Manganese	-	0.1	—	TWA	ACGIH
7440-48-4	Cobalt	-	0.02	—	TWA	ACGIH
1310-58-3	Potassium hydroxide	-	2	—	Ceiling	ACGIH/NIOSH
1310-73-2	Sodium hydroxide	-	2	—	Ceiling	ACGIH/NIOSH
13463-67-7	Titanium dioxide	-	10	—	TWA	ACGIH

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
-	No biological limit values stated	-	-	-	-

8.2. Exposure controls

Appropriate engineering controls

No special controls are required for intact sealed batteries. Provide adequate ventilation when handling damaged or leaking batteries.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety goggles when handling damaged or leaking batteries.

Hand protection



Wear suitable chemical-resistant protective gloves when handling damaged or leaking batteries.

Skin protection

Wear suitable protective clothing when exposure to cell contents is possible.

Respiratory protection

Use suitable respiratory protection if ventilation is inadequate or dust, mist or vapour from released contents is present.

Thermal hazards

Use heat-resistant protective equipment during firefighting.

Environmental exposure controls

Avoid release to the environment.



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid article
Colour:	varies by battery pack
Odour:	odourless
Odour threshold:	not applicable
Melting point/freezing point:	not applicable
Boiling point or initial boiling point and boiling range:	not applicable
Flammability:	not available; batteries may burn when damaged or exposed to fire
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not applicable
Auto-ignition temperature:	not available
Decomposition temperature:	not available
pH-Value:	not applicable
Viscosity / kinematic:	not applicable
Water solubility:	not applicable to the intact article
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not applicable
Density:	not available
Relative vapour density:	not determined
Particle characteristics:	not determined

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reaction is expected when handled and stored as intended.

10.2. Chemical stability

Stable under normal ambient storage conditions.

10.3. Possibility of hazardous reactions

May burst, leak or release heat if short-circuited, overcharged, crushed, punctured, heated or exposed to fire.

10.4. Conditions to avoid

Heat, sparks, open flames, short circuits, reverse polarity, overcharging and mechanical damage.

10.5. Incompatible materials

Strong oxidising agents, acids and bases.

10.6. Hazardous decomposition products

Fire or thermal decomposition may produce carbon monoxide, carbon dioxide and metal oxide fumes.



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SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

No acute toxicity is expected from an intact sealed battery. Exposure to internal components is possible only if the battery is damaged or opened.

ATEmix calculated

ATE (oral) not established for the intact article; ATE (dermal) not established for the intact article; ATE (inhalation vapour) not established for the intact article; ATE (inhalation dust/mist) not established for the intact article

Irritation and corrosivity

Released alkaline electrolyte may irritate or burn skin and eyes.

Sensitising effects

Nickel and cobalt compounds may cause sensitisation after exposure to released cell contents.

Carcinogenic/mutagenic/toxic effects for reproduction

Nickel and certain nickel or cobalt compounds have hazardous classifications as substances; exposure is not expected from the intact sealed article.

STOT-single exposure

No information available for the intact article.

STOT-repeated exposure

No information available for the intact article.

Aspiration hazard

Not applicable to the intact article.

Information on likely routes of exposure

Only after damage or leakage: inhalation, skin contact, eye contact or ingestion.

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

12.1. Toxicity

No ecological effects are expected from an intact sealed battery. Released cell contents may be harmful to the environment.

12.2. Persistence and degradability

No information available for the article.

12.3. Bioaccumulative potential

No information available for the article.

12.4. Mobility in soil

No information available for the article.

12.5. Results of PBT and vPvB assessment

No assessment is available for the complete article.

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

Further information

Do not allow batteries or released contents to enter surface water, drains, soil or subsoil.



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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not dispose of batteries with household waste. Do not pierce, crush or burn. Collect separately and dispose of or recycle in accordance with applicable battery and waste legislation.

Contaminated packaging

Dispose of contaminated packaging in accordance with applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number: Not applicable

14.2. UN proper shipping name: Not regulated as dangerous goods

14.3. Transport hazard class(es): Not applicable

14.4. Packing group: Not applicable

Hazard label: Not applicable

Protect terminals against short circuit and prevent unintentional activation.

Inland waterways transport (ADN)

14.1. UN number or ID number: Not applicable

14.2. UN proper shipping name: Not regulated as dangerous goods

14.3. Transport hazard class(es): Not applicable

14.4. Packing group: Not applicable

Hazard label: Not applicable

Protect terminals against short circuit and prevent unintentional activation.

Marine transport (IMDG)

14.1. UN number or ID number: UN 3496

14.2. UN proper shipping name: BATTERIES, NICKEL-METAL HYDRIDE

14.3. Transport hazard class(es): 9

14.4. Packing group: Not applicable

Hazard label: Class 9

IMDG Special Provision 963 applies.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: Not applicable

14.2. UN proper shipping name: Not restricted when the conditions of IATA Special Provision A199 are met

14.3. Transport hazard class(es): Not applicable

14.4. Packing group: Not applicable

Hazard label: Not applicable

IATA Special Provision A199 applies. Include 'Not Restricted' and A199 on the air waybill when required.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Prevent short circuits, protect exposed terminals, prevent unintentional activation and pack securely against movement and damage.

14.7. Maritime transport in bulk according to IMO instruments

not applicable



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SECTION 15: Regulatory information

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

EU regulatory information

Observe Regulation (EU) 2023/1542 concerning batteries and waste batteries and applicable REACH/CLP provisions for released internal substances.

Additional information

The intact sealed battery is an article and is not classified as a dangerous substance or mixture according to GHS/CLP.

National regulatory information

Observe applicable national battery, waste, occupational safety and transport regulations.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.



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SECTION 16: Other information

Abbreviations and acronyms

Water-react: Substance and mixture which, in contact with water, emits flammable gas
Flam. Sol: Flammable solid
Acute Tox: Acute toxicity
Skin Corr: Skin corrosion
Eye Dam: Eye damage
Skin Sens: Skin sensitisation
Carc: Carcinogenicity
STOT RE: Specific target organ toxicity - repeated exposure
Aquatic Acute: Acute aquatic hazard
Aquatic Chronic: Chronic aquatic hazard
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
M-Factor: Multiplication Factor
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
TI: Technical Instructions
DGR: Dangerous Goods Regulations
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
VOC: Volatile Organic Compounds
EG or EC: European Community
IE: Industrial Emissions
SVHC: Substance of Very High Concern

Key literature references and sources for data

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations). (v.1.2, 2013)

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
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Not classified as a dangerous substance or mixture according to GHS/CLP.

Calculation method

Relevant H and EUH statements (number and full text)

- No H statements are assigned to the intact sealed battery article.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)