

Product name Nickel Metal Hydride Battery

The batteries referenced herein are exempt articles and are not subject to the OSHA Hazard Communication Standard requirement. This safety data sheet is provided as a service to our customers.

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY / UNDERTAKING**Identification of the substance/preparation**

Product name **Nickel Metal Hydride Battery**
Use of the substance/preparation **Battery**
Company/Undertaking Identification
Supplier **FORSEE POWER SAS**
 240 rue de la Motte
 Actipark Senart3
 77550 Moissy-cramayel
 FRANCE

Emergency telephone number : **+33 (0)1 85 51 30 30**

2. COMPOSITION / INFORMATION ON INGREDIENTS

The Nickel Metal Hydride battery is hermetically sealed ; among its components, the following ones could potentially be hazardous upon release.

Product name	Nickel Metal Hydride Battery			
Hazardous components	CAS-No.	EC-No.	Weight %	Classification
Nickel hydroxide	12054-48-7	235-008-5	15-30%	Carcinogenic Category 3 R40 sensitizing R43, Xn R20/22 N R50-53
Metal Hydride Alloy			15-40%	Carcinogenic Category 3 R40 sensitizing R42/43, C R35, Xn R22
Potassium hydroxide	1310-58-3	215-181-3	3-15%	C R35, Xn R22
Cobalt hydroxide	21041-93-0	244-166-4	2.5-7%	Xn R22, sensitizing R42/43

For the full text of the R phrases mentioned in this Section, see Section 15.

3. HAZARDS IDENTIFICATION

Classification Carcinogenic Category 3 R40, sensitizing R42/43, Xn R20/22, C R35,
N R50-53

Most important hazards Limited evidence of a carcinogenic effect. Causes severe burns.
Harmful by inhalation and if swallowed. May cause sensitization by
inhalation and skin contact. Very toxic to aquatic organisms, may cause
long-term adverse effects in the aquatic environment.

Further information The Nickel Metal Hydride is a sealed battery which is not hazardous when used
according to recommendations.
Under normal conditions of use, the integrity of the battery casing and security
vent are maintained, the ingredients are not expected to pose a significant risk to
man or the environment.
On some bad using conditions (high over-charge, inverse charge, external short
circuit) and in case of a bad functioning, some electrolyte leakage can occur by
the safety vent. In these cases, the risk is the caustic nature of electrolyte
(potassium hydroxide).
The classification above is based on the contents being considered as a
preparation in accordance with Directive 1999/45/EC

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4. FIRST AID MEASURES**General advice**

Show this safety data sheet to the doctor in attendance.

The information below refers to exposure to the ingredients.

Inhalation

Immediate medical attention is required. Move to fresh air. If symptoms persist, call a physician.

Skin contact

Immediate medical attention is required. Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician.

Eye contact

Immediate medical attention is required.
Remove contact lenses. Rinse immediately with plenty of water for at least 15 minutes.

Ingestion

Immediate medical attention is required. Gently wipe or rinse the inside of the mouth with water. Give small amounts of water to drink. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Centre immediately.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Dry powder, carbon dioxide (CO₂), sand.

Extinguishing media which must not be used for safety reasons

Water, water spray.

Specific hazards

Risk of receptacle bursting.

Special protective equipment for firefighters

In the event of fire, wear self contained breathing apparatus. Wear personal protective equipment.

Hazardous decomposition products

Nickel and cobalt compounds.

6. ACCIDENTAL RELEASE MEASURES

The information below refers to exposure to the ingredients.

Personal precautions

Use personal protective equipment.
Avoid contact with skin and eyes.

Environmental precautions

Prevent further leakage or spillage if safe to do so.
Do not allow material to contaminate ground water system.

Methods for cleaning up

Pick up and transfer to properly labelled containers.
Dispose of in accordance with local regulations.

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7. HANDLING AND STORAGE**Handling****Technical measures/Precautions**

No special technical protective measures required.
Do not obstruct safety vent by soldering or welding tabs on the positive top.

Safe handling advice

Avoid contact with skin and eyes.
Use personal protective equipment.

Storage**Technical measures/Storage conditions**

Keep in a dry, cool and well-ventilated place, preferably in the temperature range of +5 to +25°C at 65%(± 5%) relative humidity.
Keep away from heat and sources of ignition.
Ensure battery terminals are protected during storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Occupational exposure controls****Engineering measures**

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Not required under normal use.

The information below refers to exposure to the ingredients.

Respiratory protection

Wear a positive-pressure supplied-air respirator with full facepiece.

Hand protection

Neoprene gloves (EN374).

Eye protection

Safety glasses with side-shields conforming to EN166.

Skin and body protection

Boots, apron, protective suit.

Hygiene measures

General industrial hygiene practice.

Environmental exposure controls

The information below refers to exposure to the ingredients.

Prevent product from entering drains.
Do not allow material to contaminate ground water system.

9. PHYSICAL AND CHEMICAL PROPERTIES**General Information**

Form battery (sealed unit) **Colour** not applicable **Odour** odourless

Important Health Safety and Environmental Information

not applicable

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10. STABILITY AND REACTIVITY**Stability**

Stable under normal conditions.

Hazardous polymerisation

Hazardous polymerisation does not occur.

Conditions to avoid

Keep away from heat and sources of ignition.

Materials to avoid

Exposure to moisture.

Hazardous decomposition productsNickel and cobalt compounds.

11. TOXICOLOGICAL INFORMATION*The information below refers to exposure to the ingredients.***Local effects**

Causes severe burns. Risk of serious damage to eyes. Harmful by inhalation and if swallowed.

Long term toxicity

No data available. Avoid repeated exposure.

Specific effectsMay cause sensitization by inhalation and skin contact.
Limited evidence of a carcinogenic effect.

12. ECOLOGICAL INFORMATION

If used as directed, and if the integrity of the battery casing and security vent are maintained, the ingredients are not expected to pose a significant risk to the environment.

Mobility

No data available.

Persistence and degradability

No data available.

Ecotoxicity effects*The information below refers to exposure to the ingredients.*Nickel hydroxide: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS**Waste from residues / unused products**

Dispose of in accordance with local regulations. It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations. Should not be released into the environment.

Contaminated packaging

Not applicable.

Further information

EWC waste disposal No: 200133 - batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries.

Never incinerate Ni-MH batteries. Never dispose Ni-MH batteries as landfill.

Nickel-Metal Hydride batteries - which in some countries may not be subject to collection & recycling and/or disposal requirements - do however contain recyclable materials and FORSEE recommends proper recycling of these batteries whenever possible.

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14. TRANSPORT INFORMATION

UN No.: 3496
Classification: 9
Proper shipping name: BATTERIES, NICKEL-METAL HYDRIDE

Ship by air:

IATA DGR (58th edition) Special Provision A199 identifies that UN 3496 only applies in sea transport and that provided that nickel-metal hydride batteries are prepared in accordance with the special provision, they are "not restricted" in air transport.

Ship by sea:

IMDG CODE (2012 edition) Special Provision 963 identifies that nickel metal hydride batteries are considered as UN3496 dangerous goods when shipping by sea, unless the batteries are packed with or contained in equipment, or loaded in a cargo transport unit in a total quantity less than 100Kg gross.

Ship by road:

UN3496 is not subject to ADR (2015 edition)

Not restricted as per special provision a123.

15. REGULATORY INFORMATION

Symbol C – Corrosive
 N – Dangerous for the environment

Text of R phrases mentioned in Section 2

R22 - Harmful if swallowed.
R20/22 - Harmful by inhalation and if swallowed
R35 - Causes severe burns
R40 - Limited evidence of a carcinogenic effect.
R42/43 - May cause sensitization by inhalation and skin contact.
R43 - May cause sensitization by skin contact.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16. OTHER INFORMATION

S-phrases S 1/2 - Keep locked up and out of the reach of children.
 S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
 S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 S60 - This material and its container must be disposed of as hazardous waste.
 S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
