



# Safety Data Sheet

## Nickel-Metal Hydride (NiMH) Battery

Version :

1

Issue date :

14/04/2019

### Section 1: Product and Company Identification

#### 1.1 Product identifier:

Product Form:

Battery

Product name:

BH-HU05 – NiMH Robot batteries

#### 1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Standby use or cyclic use

1.2.2 Uses advised against:

Automotive, motorcycle, commercial applications

#### 1.3 Details of the supplier of the safety data sheet:

Supplier:

BS BATTERY S.a.s

Address:

23 bis rue Edouard Nieuport

92150 Suresnes

France

Telephone:

+33 1 83 62 45 55

#### 1.4 Emergency telephone Number:

CHEMTREC (US, Canada & Mexico)

0086-1-800-424-9300

CHEMTREC (International)

0086-1-703-527-3887

Available outside office hours?

YES

☐

NO

☒

### Section 2: Hazard Identification

No specific health hazards for normal use.

#### Routes of Entry

Eyes, Skin, Inhalation, Ingestion.

#### Health Hazards

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. The most likely risk is acute exposure when a battery vents. Leaking material exposure to skin, eyes may cause irritation. Inhalation of fumes may cause respiratory irritation.

#### Sign/Symptoms of Exposure

Leaking can cause thermal and chemical burns upon contact with the skin.



### Section 3: Composition/Information on Ingredients

Chemical Composition	Chemical Formula	CAS No.	Weight (%)
Nickel Hydroxide	Ni(OH) <sub>2</sub>	12054-48-7	29
Cobaltous Oxide	CoO	1307-96-6	5
Steel	Fe	7439-89-6	8
Nickel	Ni	7440-02-0	10
PVC	(C <sub>2</sub> H <sub>3</sub> Cl) <sub>n</sub>	9002-86-2	5
Potassium Hydroxide (Liquid)	KOH	1310-58-3	3
Sodium Hydroxide	NaOH	1310-73-2	2
Polypropylene	(C <sub>3</sub> H <sub>6</sub> ) <sub>n</sub>	9003-07-0	3
Rare Earth Alloy	----	----	35

### Section 4: First-Aid Measures

In case of battery rupture or explosion, evacuate personnel from contaminated area and provide maximum ventilation to clear out corrosive fumes/gases and pungent odors.

In all case, seek immediate medical attention,

**Eye contact:** Flush with plenty of water (eyelids-held open) for at least 15 minutes

**Skin contact:** Remove all contaminated clothing and flush affected areas with plenty of water and sop for at least 15minutes.

**Ingestion:** Dilute by giving plenty of water and get immediate medical attention.  
Assure that the victim does not aspirate vomited material by use of positional drainage.  
Assure that mucus does not obstruct the airway.  
Do not give anything by mouth to an unconscious person

**Inhalation:** Remove to fresh air and ventilate the contaminated area.  
Give oxygen or artificial respiration if needed.

### Section 5: Fire-Fighting Measures

Flash Point: N/A.

Auto-Ignition Temperature: N/A.

Extinguishing Media

Co<sub>2</sub>, dry chemical.

Special Fire-Fighting Procedures

Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards

Cell may vent when subjected to excessive heat-exposing battery contents.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, other metallic oxide fumes.

### Section 6: Accidental Release Measures

#### Steps to be Taken in case Material is Released or Spilled

If the battery is accidental broken and leaks out, wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate. Provide



maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled material with absorbent.

#### **Waste Disposal Method**

It is recommended to discharge the battery to the end, recycle copper and other metal, handing in the abandoned batteries to related department unified, dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental protection agency and/or federal EPA.

### **Section 7: Handling and Storage**

The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery or immerse in liquids.

#### **Precautions to be taken in handling and storing**

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

#### **Other Precautions**

Do not short or install with incorrect polarity.

### **Section 8: Exposure Controls/Personal Protection**

#### **Respiratory Protection**

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting batteries. Respiratory Protection is not necessary under conditions of normal use.

#### **Other Protective Clothing or Equipment**

Not necessary under conditions of normal use.

Personal Protection is recommended for venting batteries: Respiratory Protection, Protective Gloves, Protective Clothing and Safety Glass with side shields.

### **Section 9: Physical and Chemical Properties**

Appearance (Physical shape and color as supplied.)

Temperature range

	Temperature range
In storage	-20~+25°C (less than 1 year)
During discharge	-20~+60°C

### **Section 10: Stability and Reactivity**

#### **Stability**

Stable

#### **Conditions to Avoid**

Heating, fire, mechanical abuse and electrical abuse.

#### **Hazardous Decomposition Products**

When exposed to fire or extreme heat, batteries may emit toxic fumes.



## Section 11: Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened. Exposure to internal contents, the corrosive fumes will be irritation to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibroid lung injury and membrane irritation.

## Section 12: Ecological Information

When properly used or disposed, the battery does not present environmental hazard.

When disposed, keep away from water, rain and snow.

## Section 13: Disposal Considerations

### Appropriate Method of Disposal of Substance or Preparation

Dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental agency.

## Section 14: Transport Information

Ni-MH battery is exempt from dangerous goods. It is considered non-dangerous goods by the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA) DGR 61<sup>th</sup>, IATA Special Provisions A123, International Maritime Dangerous Goods Regulations (IMDG), or 《Recommendations on the transport of Dangerous Goods Model Regulations》 (17<sup>th</sup>).

## Section 15: Regulatory Information

### Law Information

《Dangerous Goods Regulation》

《Recommendations on the Transport of Dangerous Goods Model Regulations》

《International Maritime Dangerous Goods》

《Technical Instructions for the Safe Transport of Dangerous Goods》

《Classification and code of dangerous goods》

《Occupational Safety and Health Act》 (OSHA)

《Toxic Substances Control Act》 (TSCA)

《Consumer Product Safety Act》 (CPSA)

《Federal Environmental Pollution Control Act》 (FEPCA)

《The Oil Pollution Act》 (OPA)

《Superfund Amendments and Reauthorization Act Title III (302/311/312/313)》 (SARA)

《Resource Conservation and Recovery Act》 (RCRA)

《Safety Drinking Water Act》 (CWA)

《California Proposition 65》

《Code of Federal Regulations》 (CFR)

In accordance with all Federal, State and Local laws.



## Section 16: Other Information

This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and

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