

Revised date: 10 August 2023

1. Identification of the products and of the supplier

1.1 Product identifier

Trade name: BATTERY ASSY, HV SUPPLY

Article number: G9510-52102

1.2 Details of the supplier

Manufacturer/Supplier: TOYOTA INDUSTRIES CORPORATION (Kyowa plant)
8, Chaya, Kyowa-cho, Obu-shi, Aichi 474-8601 Japan
Tel.: +81-562-48-9628

The Nickel metal hydride battery cells referenced herein are articles which have tightly sealed enclosure. Therefore, it is not necessary to publish SDS. We provide this "Product Information Sheet" for customer's safer handling and environmental care.

2. Hazards identification

Hazard:

Chemicals of this battery are contained in hermetically sealed enclosure, so there is no chemical hazard when used properly.

It may cause heat generation and leakage of the electrolyte if cathode and anode terminals contact each other.

Effects on human health:

Contact with the electrolyte causes sore and irritation to skin.

The electrolyte contains substances that cause severe injury to eyes.

Impact on environment:

The electrolyte must not be released into the environment because it remains in the environment.

3. Composition/information on ingredients

Chemical characterization

Description: Mixture of substances listed below.

Composition: Positive electrode	nickel hydroxide	10-30wt%
	cobalt hydroxide	0-5wt%
Negative electrode	nickel	10-30wt%
	lanthanum	0-15wt%
	samarium	0-5wt%
electrolyte	potassium hydroxide	} 0-15wt%
	sodium hydroxide	
	lithium hydroxide	
Enclosure	plastic , aluminum , steel	

4. First aid measures

Description of first aid measures

In case of contact with leaked electrolyte, actions described below are required.

When inhaled:

Transfer the affected person to fresh air immediately. Rest and keep warm.

Take a medical treatment and provide artificial respiration if necessary.

When contacted with skin:

Remove tainted clothes and shoes immediately.

Wash off the contact area thoroughly with plenty of water and soap.

Take a medical treatment if needed.

When contacted with eyes:

Immediately flush eyes with plenty of clean water for at least 15 minutes.

Do not rub eyes. Take a medical treatment immediately.

When ingested:

Don't force to vomit in order to avoid chemical pneumonitis.

Rinse mouth with plenty of water, get immediate medical treatment.

If spontaneous vomit occurs, tilt body so as not to enter into a trachea.

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If spontaneous vomit occurs, tilt body so as not to enter into a trachea.

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: CO₂, N₂, alcohol-resistant foam, dry chemical, dry sand or large amount of water.

5.2 Special hazards arising from the substance or mixture

There is a possibility that toxic gases (carbon monoxide, metal fumes, etc.) may occur when burned.

5.3 Advice for fire fighters

Use dry chemical or CO₂ for small fire. If the fire gets larger, use foam extinguisher for smothering.

Work from the windward to prevent inhalation or exposure during the fire fighting.

Use plenty of water to cool surrounding area and prevent the spread fire.

Move the cells from fire area if possible.

Protective equipment: Wear self-contained respiratory protective device.

6. Accidental release measures (Measures for electrolyte leakage from the battery)

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Avoid downwind side when clean up.

6.2 Environmental precautions

Avoid allowing electrolyte leakage from the battery to contaminate soil, sanitary sewers, or waterways.

6.3 Methods and material for containment and cleaning up

Take up with absorbent cloth and store in an airtight container.

Remove fire or any other ignition source from area. Do not use tools that may emit sparks.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7. Handling and storage

7.1 Precautions for safe handling

When packing, do not allow battery terminals to contact each other or with other metals.

Use strong material for packaging boxes so that they will not be damaged by vibration, impact, dropping and stacking during transportation.

Do not let water penetrate into packaging boxes during storage and transportation.

7.2 Conditions for safe storage

Do not store in high temperature exceeding 45deg.C, under direct sunlight or near a heating device.

Avoid high humidity. Be sure not to expose to condensation, water drop or freezing condition.

Pack in such a way to prevent short circuits when package is damaged under conditions normally encountered in transport. Avoid storing near static electricity generating devices that damage the protective devices built into the battery pack.

8. Exposure controls/personal protection

8.1 Facilities

Store in a cool dry place. Keep away from heat and open flame.

8.2 Exposure controls

(During normal operation of the cell)

No personal protective equipment is required beyond safety practices of employer.

(In case of electrolyte leakage)

The following personal protection should be taken.

Protection of hands: safety gloves (Material must be impermeable and resistant to alkaline solutions.)

Eye protection: safety goggle or face shield

Others: safety apron, protective garment, rubber boots, airline respirators

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance: Rectangular shape

Nominal voltage: 201.6V

10. Stability and reactivity

10.1 Chemical stability

Stable when used in accordance with specifications.

10.2 Possibility of hazardous reactions

There is a possibility that toxic gases (carbon monoxide, metal fumes, etc.) may occur when it is heated strongly and burned.

11. Toxicological information

Chemicals of this battery are contained in hermetically sealed enclosure, so there is no chemical hazard when used properly.

12. Ecological information

Ecotoxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulation potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Results of PBT and vPvB assessment: No further relevant information available.

Hazard to ozone layer: No further relevant information available.

13. Disposal considerations

13.1 Waste treatment methods

Do not dispose of used battery with household waste.

When batteries are worn out, dispose of them in accordance with the ordinance of local government or the law issued by relating government.

If package or container is contaminated with leaked electrolyte, remove the contaminant thoroughly before dispose the package or container.

13.2 Additional information

Disposal considerations (Precautions for recycling):

Disposal of the worn-out battery may be subjected to Collection and Recycling Regulation.

14. Transport information

14.1 IATA DGR (International Air Transport Organization Dangerous Goods Regulations)

This battery is considered not restricted once the shipper complies with Special Provision A199.

Special Provision A199:

The UN number UN 3496 is only applicable in sea transport.

Nickel-metal hydride batteries or nickel-metal hydride battery-powered devices, equipment or vehicles having the potential of a dangerous evolution of heat are not subject to these Regulations provided they are prepared for transport so as to prevent: (a) a short circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or, in the case of equipment, by disconnection of the battery and protection of exposed terminals); and (b) unintentional activation.

The words "Not Restricted" and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued.

14.2 IMDG CODE (International Maritime Organization International Maritime Dangerous Goods Code)

This battery shall be assigned to UN 3496.

Special Provision 963:

Nickel-metal hydride button cells or nickel-metal hydride cells or batteries packed with or contained in equipment are not subjected to the provisions of this code.

All other nickel-metal hydride cells or batteries shall be securely packed and protected from short circuit.

They are not subjected to other provisions of this Code provided that they are loaded in a cargo transport unit in a total quantity of less than 100 kg gross mass.

When loaded in a cargo transport unit in a total quantity of 100 kg gross mass or more, they are not subjected to other provisions of this Code except those of 5.4.1, 5.4.3 and column (16) of the Dangerous Goods List in chapter 3.2

14.3 Code of Federal Regulations (U.S.A)

This battery must be transported in accordance with § 172.101 Purpose and use of hazardous materials table.

Transport by modes other than vessel :

See "Batteries, dry, sealed, n.o.s."

Transport by vessel :

See "Batteries, nickel-metal hydride see Batteries, dry, sealed, n.o.s. for nickel-metal hydride batteries transported by modes other than vessel"

15. Regulatory information

IATA (International Air Transport Organization):

Dangerous Goods Regulations, Edition 61 (IATA DGR)

IMO (International Maritime Organization):

International Maritime Dangerous Goods Code, 2020 Edition (IMDG Code)

UN (United Nations):

Recommendations on the Transportation of Dangerous Goods, Model Regulations

Recommendations on the Transportation of Dangerous Goods, Manual of Tests and Criteria

EU (European Union):

EU Battery Directive (2006/66/EC,2013/56/EU)

Regulation (EC) No.1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals

US (Code of Federal Regulations):

Hazardous Materials Regulations (49 CFR parts 171 through 180)

OSHA hazard communication standard (29 CFR 1910.1200)

16. Other information

The information in this document has been compiled from sources considered to be dependable and is believed to be accurate as of the date of preparation.

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Users should make independent determinations of suitability and completeness of this document to assure proper and safe use of this article.

Contact information for inquiries: Toyota Industries Corporation

Phone: +81-562-48-9628

References

Japan National Institute of Technology and Evaluation: GHS Classification Results

EU European Chemical Agency (ECHA)

International Uniform Chemical Information Database (IUCLID)

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