

Section 1. Identification of the material and the supplier

Product: **Battery Module**
 Product Type: Secondary (rechargeable) Nickel-Metal Hydride battery pack sealed in an injection moulded plastic case.
 Part Number: **6487180**
 Ratings: **12.0V, 3500mAh**

ANZ Distributor:

Getinge Australia	Getinge Australia (NZ Branch)
Address 11 Help Street Level 7, Suite 701 Chatswood NSW 2067 AUS	600 Great South Road Building A, Ground Floor, unit D Ellerslie, Auckland, 1051 NZ
Telephone 1800 438 464	0800 1 438 4643

Emergency Telephone: **AUS +61 2 8014 4558**
NZ +64 9 929 1483 or **0800 764 766** (National Poison Centre)

Date of SDS Preparation: 13 June 2023

Section 2. Hazards Identification

This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2020 - This product is considered as a Manufactured Article.

In normal use and handling, this product poses no hazards.
 Hazard under abnormal conditions if the battery pack and internal contents have ruptured - releasing fumes, liquids or solid fragments. Fumes and liquids may cause irritation to eyes, skin, breathing passages or throat. Solids and liquids from cell internals may cause irritation to the skin.

Section 3. Composition / Information on Ingredients

Ingredient	CAS No.	Risk Phrase	Safety Phrase
Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) (C8H8.C4H6.C3H3N)n	PC 25971-63-5 ABS 9003-56-9		
Hydrogen Absorbing Alloy	7440-02-0(Ni) 7440-48-4(Co) 7439-96-5(Mn) 7429-90-5(Al)		
Nickel-Cobalt-Zinc oxide	7440-02-0(Ni) 7440-48-4(Co) 7440-66-6(Zn)		
Nickel	7440-02-0		
Iron	7439-89-6		
Carbon Black	1333-86-4		
Potassium Hydroxide	1310-58-3	R22, R35	S26, S36, S37, S39,
Sodium Hydroxide	1310-73-2		
Lithium Hydroxide	1310-65-2		

Section 4. First Aid Measures

In normal use and handling, this product poses no injury or health threat to personnel. First Aid measures are only required if the battery pack and internal contents have been subjected to abusive conditions causing rupture and exposing personnel to fumes, liquids or solid fragments.

If in Eyes	In normal use and handling, this product poses no irritation threat to the eyes. Fumes from ruptured internal contents may cause irritation. Remove patient away from source. In more severe cases, flush the eye(s) with a recognised sterile eye-wash. If necessary, seek medical advice.
If on Skin	In normal use and handling, this product poses no irritation threat to the skin. Material from ruptured internal contents may cause irritation. Remove patient away from source. Where there is no irritation, clean area with soap and water. If irritation occurs, flush the affected area with clean water for a minimum of 10 minutes. If necessary, seek medical advice.
If Swallowed	In normal use and handling, this product poses no irritation threat to the throat. Material from ruptured internal contents may cause irritation. Ensure breathing passages are not obstructed. Ingestion is very unlikely unless the battery has ruptured and there is hand-to-mouth contact. Drink plenty of water or milk. If necessary, seek medical advice.
If Inhaled	In normal use and handling, this product poses no irritation threat to the breathing passages. Fumes from ruptured internal contents may cause irritation. Ensure breathing passages are not obstructed. Remove patient to fresh air. If symptoms persist, seek medical advice.

Most important symptoms and effects, both acute and delayed

Symptoms: No effect under routine handling and use.

Section 5. Fire Fighting Measures

Hazard Type	In normal use, handling and storage, this product poses no risk of fire. Risk of fire may occur if the battery pack and internal contents have ruptured or the battery pack is exposed to excessive temperatures.
Hazards from products	Corrosive fumes may be present during fire. Gases from the burning fire will include Hydrogen Fluoride, Carbon oxides, Hydrocarbons among others.
Suitable Extinguishing media	If it is involved in a fire, use dry powder, foam or carbon dioxide (CO ₂) or an inert material – soil, sand etc. Water based extinguishers may be used providing the battery is in isolation and not connected to any mins powered equipment.
Precautions for firefighters and special protective clothing	Use protective equipment (gloves, breathing apparatus, goggles etc.)
HAZCHEM CODE	2Y

Section 6. Accidental Release Measures

In normal use, handling and storage, this product will not cause any accidental release. In abnormal conditions, if the battery pack and internal contents have ruptured (releasing fumes, liquids or solid fragments) then the following precautions should be taken: Ventilate the area. Wear suitable gloves. Use cloth or paper towels to collect battery residue.

Solid material must not be disposed of in general waste or be incinerated. Dispose of in accordance with local authority regulations for batteries and accumulators.

Section 7. Handling and Storage

In normal use and handling, this product poses no threat to Handling or Storage.

Precautions for Handling:

- Do not incinerate.
- Do not drop or crush.
- Do not use if case shows signs of damage or contents are exposed.
- Do not allow connector terminals to be short-circuited.

Precautions for Storage:

- Store The battery storage specification is -20°C to +60°C max 95% relative humidity (non-condensing), however for optimum storage life, store in a cool (<30°C), dry, well ventilated conditions away from direct sunlight.
- Storage at temperatures above +60°C can lead to electrolyte leakage and/or overheating of the battery pack and may cause damage to it.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance		TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Aluminium, Metal dust (as Al)	[7429-90-5]	-	10	-	-
Nickel, elemental or metallic	[7440-02-0]	-	0.005	-	-
Cobalt metal dust and fume, as Co	[7440-48-4]	-	0.02	-	-
Manganese fume, dust	[7439-96-5]	-	0.2	-	-
and compounds, as Mn		-	0.02	-	-
Carbon black	[1333-86-4]	-	3	-	-
Potassium hydroxide	[1310-58-3]	Ceiling	2		
Sodium hydroxide	[1310-73-2]	Ceiling	2		
Lithium hydroxide	[1310-65-2]	-	1	-	-

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APRIL 2022 13TH EDITION.

Engineering Controls

Local exhaust ventilation.

Personal Protection Equipment:

Eyes	In normal use and handling, this product poses no threat to the eyes. If the battery pack is ruptured, wear suitable eye protection conforming to BS EN 166.
Hands	In normal use and handling, this product poses no irritation threat to the hands. If the battery pack is ruptured, use gloves – made of polyethylene or polypropylene materials only; do not use PVC, rubber, nylon or cotton gloves.
Respiratory	Use air mask if exposed to internal content of the cell/battery.

Section 9 Physical and Chemical Properties

Appearance	Solid. Battery pack sealed in an injection moulded plastic case
Form Factor	Not available
Odour	Negligible
Odour Threshold	Not available
pH	Not available
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Specific Gravity	Not available
Reactivity in Water	Not available
Water Solubility	Insoluble in water
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	Stable at 0°C to +50°C (charging) and +0°C to +50°C (discharging), humidity 10-80%RH.
Possibility of hazardous reactions	No data available.
Conditions to Avoid	Extreme temperatures.
Incompatible Materials	Water, alcohols, alkalis. Cleaning is done with dampened cloth with a neutral detergent or alcohol-free wipes.
Hazardous Decomposition Products	None.

Section 11 Toxicological Information

This product does not elicit toxicological properties during routine handling and use. Chemicals used in Nickel-Metal Hydride cells are not health threatening in their bound form. However, in their non-bound form they can be a mild irritant to eyes, skin and respiratory system. The effects are not long lasting unless continually exposed.

Sensitization	None (under normal handling, storage and use)
Reproductive	None (under normal handling, storage and use)
Toxicity	None (under normal handling, storage and use)
Acute toxicity	None (under normal handling, storage and use)
Routes of exposure	None (under normal conditions); Inhalation, Absorption and Ingestion (under abnormal conditions).

Section 12. Ecotoxicological Information

No adverse environmental effects are foreseen, but as with any electrical or electronic product, the battery or its contents are not biodegradable (and some of the materials are bio-accumulative). Product must not be disposed into landfill or water course; or incinerated to atmosphere, without specialised treatment.

Section 13. Disposal Considerations

Disposal Method:

Dispose of in accordance with local and national regulations.

Disposal methods to avoid: Do not incinerate or expose cells to

high temperatures. Such abuse may result in cell venting, electrolyte leakage and/or cell fire.

Section 14	Transport Information
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This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2020 and SNZ HB 5433:2021

Road, Rail, Sea and Air Transport**Battery Pack:**

UN No	3496
Class - Primary	9
Packing Group	N/A
Proper Shipping Name	BATTERIES, NICKEL-METAL HYDRIDE
Marine Pollutant	No
Special Provisions	No: 117 Instructions and contents of Special Provisions (117 and 963) for this UN number include: • Specifying it is only regulated when transported by sea, • Ni-MH cells or batteries packed with or contained in equipment are not subject to the provisions of this code. • All other Ni-MH cells or batteries shall be securely packed and protected from short circuit. They are not subject to other provisions of this code provided they are loaded in a cargo transport unit in a total quantity of less than 100 Kg gross mass. Prior to transportation, confirmation that there is no leakage and no spillage from a container is necessary. Cargo must be handled without falling, dropping or breakage. Care must be taken to prevent the collapse of cargo piles or saturation by rain. Containers must be handled carefully. Packaging is constructed to prevent short-circuiting and/or electric shock.

Section 15	Regulatory Information
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This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2020 - This product is considered as a Manufactured Article.

Section 16	Other Information
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Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices April 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact the New Zealand distributor, if further information is required.

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