

Section 1. Identification of the material and the supplier

Product: **Lithium Ion Battery (701049130)**
Use: Rechargeable lithium-ion battery for use in medical equipment.
Product Model No: 3S3P NCR-18650A
Nominal voltage: 10.8V
Nominal capacity: 9.21 Ah
Nominal energy: 99.47 Wh
Lithium-NCA / Graphite
Rechargeable: Yes
Never use chargers which are not approved for this battery.

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 B, Level 2 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.

Lithium-ion batteries are gas-tight and harmless, provided the manufacturer's instructions are observed during use and handling.
Please read the operating instructions carefully.

Warning:
Never use chargers which are not approved for this battery.

If handled improperly, lithium-ion batteries may develop fire, explode or cause chemical burns. Never short-circuit, pierce, fire, squeeze, submerge, forcefully discharge, or expose to temperatures outside the specified operating range of the product.

Under normal conditions, no hazardous substances are emitted and no contact with toxic substances can occur. An exposure risk exists only in the case of improper handling (mechanical, thermal, electrical), which leads to the activation of the safety valves and / or to the breaking of the housing. Leakage of the electrolyte fluid, reaction of the electrode materials with moisture / water or battery venting / fire / explosion can be the result, depending on the accompanying circumstances.

Touching live parts may cause electrical shock which may result in thermal heating or muscle paralyzing effects. The latter may cause ventricular fibrillation, sudden cardiac arrest or respiratory paralysis with fatal ending.

Toxicity:
If a battery burns, the vapors can irritate eyes, skin and the respiratory tract.

Section 3. Composition / Information on Ingredients

The batteries are a mixture.

The following components are contained in the sealed cell.

Chemical name	CAS number
Lithium nickel cobalt aluminuimoxid	207803-51-8
Graphite	7782-42-5
Ethyl acetate	141-78-6
Ethylene carbonate	96-49-1
Dimethyl carbonate	616-38-6
Lithium hexafluorophosphate	21324-40-3
Polyvinylidene difluoride	24937-79-9

Further information:

Heavy metals like mercury, cadmium, lead and chromium are not used for this battery.
Under normal conditions, contact with the ingredients is excluded.

Section 4. First Aid Measures

The chemicals listed under point 3 are contained in a sealed housing so that they can't escape during normal use. The risk of leakage exists only through mechanical, thermal or electrical abuse.

If chemicals leak, attend these advices:

If in Eyes	It may cause irritation to the eyes. If eye contact occurs, flush eyes thoroughly with water for 30 minutes, then consult a doctor immediately
If on Skin	Wash skin thoroughly with soap and water, seek medical advice immediately.
If Swallowed	Rinse mouth and surrounding area thoroughly with water. Seek medical attention without delay.
If Inhaled	Ventilate immediately or go to fresh air, seek medical attention if respiratory tract irritation occurs.
Electric Shock	If an electric shock has occurred, the following is important: Do not touch the injured person before you have ensured the absence of voltage; Remove exposed, live cables away from injured person using non-conductive objects; In unconscious patients, priority is given to ensuring respiration and cardiovascular function; If necessary, initiate immediate cardiopulmonary resuscitation. In the case of accessible patients, burn injuries should be cooled and be covered with a germ-free, non-flushing wound dressing.

Indication of any immediate medical attention and special treatment needed

Immediate medical attention is necessary as untreated burns can lead to severe healing

wounds. Symptoms can occur only after many hours, therefore medical supervision at least up to 48 hours after the accident.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable.
Hazards from products	The resulting combustion gases can cause health damage.
Suitable Extinguishing media	Fires of lithium-ion batteries can basically be combated with water. There are no special extinguishing medias required. Ambient fires are to be combated with conventional extinguishing medias. The fire of a battery can't be considered separately from the surrounding fire. The cooling effect of water inhibits the spread of fire to battery cells ("thermal runaway") that have not yet reached the critical temperature for inflammation.
Precautions for firefighters and special protective clothing	Stay in danger area only with self-contained breathing apparatus. Watch for flashback. Avoid skin contact by wearing suitable protective clothing and observing the safety distance.
HAZCHEM CODE	2Y

Section 6. Accidental Release Measures

Wear appropriate personal protective equipment (Protective gloves, protective clothing, face protection, respiratory protection), keep unauthorized and unprotected persons away.

Do not allow to seep into drains or soil.

Liquefied electrolyte should be wiped up with absorbent material or tied with dry sand, chalk powder or vermiculite. Batteries should be sealed airtight in a plastic bag if possible.

Section 7. Handling and Storage

Precautions for Handling:

- The warnings on batteries and the instructions for use of devices must always be carefully observed.
- Do not open, crush or disassemble the battery, or drop it from a height or solder it on.
- Keep out of reach of children.

Precautions for Storage:

- Batteries should preferably be stored at room temperature and dry.
- The charging temperature must be between 0°C and +45°C.
- The battery may only be charged with the associated charger.
- Discharge: The battery should only be discharged between -20°C and +60°C.
- Warning: Improper handling can cause an explosion or cause a fire.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance		TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Graphite, all forms except graphite fibres	[7782-42-5]	-	3	-	-
Ethyl acetate	[141-78-6]	200	720	-	-

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

Engineering Controls

Ensure adequate ventilation and punctual extraction at critical points. The instructions under section 7 must be observed. It must therefore be checked regularly, if the storage temperature is within the specified limits. Likewise, adequate ventilation must be ensured to prevent waterlogging.

Personal Protection Equipment:

Batteries are products (products) from which no substances are released under normal and reasonably foreseeable conditions of use. If handled properly, no protective equipment is required.

When dealing with a damaged battery:

Eyes	Wear eye protection.
Hands	Wear protective gloves. Wear appropriate protective clothing.
Respiratory	Not required.

Section 9 Physical and Chemical Properties

Appearance	Battery pack in plastic housing with 5 contacts
Colour	Black
Mass	470g
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	Not available
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	Exceeding the upper temperature limits (e.g., 120°C) may result in bursting of the batteries or in pressure relief.
Conditions to Avoid	Exceeding the storage temperature of 60°C may result in accelerated aging and premature loss of function. Protect against short circuits, moisture and fire.
Incompatible Materials	Strong oxidizing and acidic agents as well as conductive materials.
Hazardous Decomposition Products	Fire releases harmful vapors.

Section 11 Toxicological Information

No danger when used as intended. If damaged or used improperly, irritant or sensitizing components may leak out.

Section 12. Ecotoxicological Information

In normal and reasonably foreseeable uses, no negative consequences for the environment are to be expected.

The batteries do not contain heavy metals (such as lead, cadmium or mercury).

Section 13. Disposal Considerations

Disposal Method:

Must be disposed of in accordance with local and national regulations.

Batteries must not be disposed of with household waste, but must be collected separately from the remaining waste. Used batteries must be returned to the point of sale or to a disposal system.

Disposal methods to avoid: Do not pierce, crush or burn.

Section 14 Transport Information

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	3480
Class - Primary	9
Packing Group	II
Proper Shipping Name	LITHIUM ION BATTERIES.
Marine Pollutant	No
Special Provisions	No: 188, 230, 310, 348

Section 15 Regulatory Information

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

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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