SAFETY DATA SHEET (SDS)

Prepared in accordance with the REACH Regulation (EC) No. 1907/2006 as amended.

Date of issue: 2026-02-23
Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:
Li-ion Battery (Model: 902025).

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Power supply for electronic devices (Vasco Translator E1).

1.3 Details of the supplier of the safety data sheet:
Manufacturer:
SER GROUP LIMITED
Address: 8B501,Dongfang Industrial Zone, Shigang Road NO.8, Panyu District, Guangzhou City, P.R.C.
Importer:
VASCO ELECTRONICS S.A.
Al. 29 Listopada 20
31-401 Krakow, Poland

1.4 Emergency telephone number:
Instituto Nacional de Toxicología y Ciencias Forenses (INTCF)
Telephone number: +34 917689800
Emergency telephone number: 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:
Not classified as hazardous under normal use. Hazards occur only if the battery is damaged, opened, or exposed to high temperatures.

2.2 Label elements:
No label required for finished articles.
In case of damage: H302 (Harmful if swallowed),
H314 (Causes severe skin burns and eye damage)

2.3 Other hazards:

This substance/mixture does not contain ingredients considered to be either persistent, bioaccumulative and toxic, or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Ecological information: This substance/mixture does not contain ingredients considered to have endocrine disrupting properties under Article 57(f) of REACH Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100 at levels of 0.1% or higher.
Toxicological information: This substance/mixture does not contain ingredients considered to have endocrine disrupting properties under Article 57(f) of REACH Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100 at levels of 0.1% or higher.
Physical/Chemical: Risk of fire or explosion if leaked or vented.

SECTION 3: Composition/information on ingredients

3.1 Substances / 3.2 Mixtures:

Ingredient	CAS No	EC no	Concentration (%)	Classification according to 1272/2008 (CLP)
Cobalt lithium manganese nickel oxide	182442-95-1	695-690-9	29.4	Carc. 2, H351; Acute Tox. 4, H302
Lithium manganese oxide	12057-17-9	235-027-0	12.6	Acute Tox. 4, H302; Acute Tox. 4, H332
Graphite	7782-42-5	231-955-3	22	Unclassified (solid form)
Dimethyl carbonate	616-38-6	210-478-4	15	Flam. Liq. 2, H225
Copper (Cu)	7440-50-8	231-159-6	7	Unclassified (solid form)
Aluminium (Al)	7429-90-5	231-072-3	10	Unclassified (solid form)
Polypropylene	9003-07-0	618-352-4	4	Unclassified (solid form)

SECTION 4: First aid measures

4.1 Description of first aid measures:

Inhalation: Move to fresh air.
Skin contact: Wash with plenty of water and soap.
Eye contact: Flush with water for at least 15 minutes; seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed:

None under normal conditions. In case of leakage: severe skin burns and eye damage. Inhalation of fire fumes may cause delayed pulmonary edema. Suspected carcinogenic effect with chronic exposure to dust from damaged cells.

4.3 Indication of any immediate medical attention and special treatment needed:
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media:
Dry chemical, CO_2, or water spray (if large volume).

5.2 Special hazards arising from the substance or mixture:
May emit toxic fumes (HF, CO, CO_2) if burned.

5.3 Advice for firefighters:
Self-contained breathing apparatus (SCBA) required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Avoid contact with spilled electrolyte. Use gloves.

6.2 Environmental precautions:
Prevent from entering drains or soil.

6.3 Methods and material for containment and cleaning up:
Clean up with inert absorbent material (sand).

6.4. Reference to other sections:
not applicable

SECTION 7: Handling and storage

7.1 Precautions for safe handling:
Do not crush, pierce, or short-circuit.

7.2 Conditions for safe storage, including any incompatibilities:
Store in a cool, dry, well-ventilated area (optimal 20°C). Keep away from heat sources.

7.3 Specific end use(s):
Apart from the uses mentioned in Section 1.2, no other specific uses are foreseen.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:
Not applicable for intact batteries.

8.2 Exposure controls:
Wear safety glasses and protective gloves if handling damaged batteries.

SECTION 9: Physical and chemical properties

9.1 Basic properties:

Physical state:	Solid, cell in a sealed housing
Appearance:	Cell in a sealed housing (prismatic)
Color:	Black
Odor:	No data available
Melting/freezing point:	No data available
Boiling point:	No data available
Flammability:	No data available
Upper explosive limit/Upper flammability limit:	No data available
Lower explosive limit/Lower flammability limit:	No data available
Flash point:	Not applicable
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	No data available
Dynamic viscosity:	No data available
Kinematic viscosity:	No data available
Flow time:	No data available
Solubility:	No data available
Water solubility:	Insoluble
Partition coefficient: n-butyl alcohol/water:	Not applicable for article
Vapor pressure:	No data available
Relative density:	No data available
Density:	No data available
Relative vapor density:	No data available
Particle characteristics:	No data available

9.2 Other information:

Nominal Voltage:	3.7 V
Capacity:	400 mAh
Total energy:	1.48 Wh
Cell configuration:	1ICP9/20/27 (Prismatic)
Approximate dimensions:	8.6 mm x 19.7 mm x 26.9 mm

SECTION 10: Stability and reactivity

10.1 Reactivity:

None under normal use.

10.2 Chemical stability:

Stable.

10.3 Possibility of hazardous reactions:

- Under normal storage and use conditions, hazardous reactions do not occur.
- If mechanically damaged, opened, or exposed to temperatures above 60°C, violent thermal decomposition and fire may occur.
- Leaking electrolyte may react exothermically with water or moisture in the air, releasing toxic and irritating gases, including hydrogen fluoride.
- If the battery terminals are shorted, the cell will rapidly heat up, which may lead to swelling, electrolyte leakage, or explosion.
- During combustion, toxic fumes of carbon monoxide (CO), carbon dioxide (CO_2), and hydrogen fluoride (HF) are released.

10.4 Conditions to avoid:

Temperatures above 60°C, mechanical abuse.

10.5 Incompatible materials:

Conductive materials, strong oxidizers.

10.6 Hazardous decomposition products:

- During normal use and storage, the product does not decompose and does not release hazardous substances.
- In a fire or as a result of thermal overheating (above 60°C), the battery may release toxic and irritating vapors and gases.
- The most important thermal decomposition products include:
  - Hydrogen fluoride (HF): A highly corrosive and toxic gas produced by the decomposition of lithium salts (electrolyte).
  - Carbon monoxide (CO): A highly toxic gas produced by the incomplete combustion of organic compounds.
  - Carbon dioxide (CO^2): Produced by the combustion of graphite and solvents.
  - Metal oxides: Including cobalt oxides, which may be harmful if inhaled.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Intact battery has no toxicological risk. Internal components are corrosive and toxic if released.

11.2 Information on other hazards:

Based on available data, the mixture does not contain substances with endocrine disrupting properties according to the criteria set out in Regulations (EU) 2017/2100 or (EU) 2018/605.

SECTION 12: Ecological information

12.1 Toxicity:

Heavy metals (Cobalt) may be harmful to the environment.

12.2 Persistence and degradability:

Not biodegradable.

12.3 Bioaccumulative potential:

- The product itself (a sealed battery) is not considered bioaccumulative.
- The internal metallic components, such as lithium cobalt oxide (LiCoO2), copper, and aluminum, are inorganic substances for which traditional bioaccumulation parameters (such as the n-octanol/water partition coefficient) do not apply.
- These components are not biodegradable and may accumulate in the environment if the housing is damaged and if exposed for long periods.
- The mixture does not contain components considered persistent, bioaccumulative, and toxic (PBT) at levels of 0.1% or greater.

12.4 Mobility in soil:

- Under normal use conditions, the product is a solid and sealed product, preventing the release of components into the soil and groundwater.
- In the event of mechanical damage to the housing, the liquid electrolyte may leak and become highly mobile in the soil, posing a risk of groundwater contamination.
- Metal components (lithium cobalt oxide, copper, aluminum) are virtually immobile in soil and settle in its surface layers unless dissolved in an environment with a very low pH (acidic).
- Prevent any internal components from entering the sewage system, surface water, or soil.

12.5 Results of PBT and vPvB assessment:

- Based on available data, the substances in the mixture do not meet the criteria for classification as PBT (persistent, bioaccumulative, and toxic substances).
- None of the components present at concentrations of 0.1% or higher is considered very persistent and very bioaccumulative (vPvB).
- As an article (finished product), the battery consists primarily of inorganic metals and polymers, which are not subject to the standard PBT/vPvB assessment for chemicals placed on the market as raw materials.

12.6 Endocrine disrupting properties

Based on available data, the mixture does not contain substances with endocrine disrupting properties according to the criteria set out in Regulations (EU) 2017/2100 or (EU) 2018/605.

12.7 Other adverse effects

- Ozone Depleting Potential: The mixture does not contain any substances listed in Regulation (EC) No. 1005/2009 that could deplete the ozone layer.
- Photochemical Ozone Creation Potential: The ingredients do not exhibit significant photochemical smog-forming potential.
- Global Warming Potential: The product contains metals and chemical compounds whose mining and processing have a high carbon footprint; the battery itself does not emit greenhouse gases during normal use.

- Hazards to Aquatic and Terrestrial Life: In the event of fire or improper disposal (landfill), thermal decomposition products and heavy metals may negatively impact local ecosystems.
- Endocrine Disruption: The substance does not contain ingredients with endocrine disrupting properties in non-target species.

SECTION 13: Disposal considerations

13.1 Waste treatment methods:

Do not dispose of with household waste. Recycle at specialized battery collection points.

SECTION 14: Transport information

14.1 UN Number:

UN 3481 (Lithium ion batteries contained in equipment).

14.2. UN proper shipping name:

Lithium ion batteries contained in equipment.

14.3 Hazard Class:

Class 9 (Miscellaneous dangerous goods).

14.4 Packing Group:

Not applicable.

Packing instructions:

- Air transport (IATA): PI 967, Section II (for batteries < 100Wh).
- Road transport (ADR): Special Provision 188.
- Sea transport (IMDG): Special Provision 188.

14.5. Environmental hazards:

The product is not classified as environmentally hazardous during normal transport (according to the criteria of IMDG and ADR codes).

14.6. Special precautions for user:

Shipments must be secured against movement within the outer packaging. A durable outer casing is required to protect against mechanical damage. Accidental activation of the device during transport must be prevented.

14.7. Maritime transport in bulk according to IMO instrument:

Does not apply to the product in its "as delivered" condition.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Regulation (EU) 2023/1542 on batteries and waste batteries, amending Directive 2008/98/EC and Regulation (EU) 2019/1020, and repealing Directive 2006/66/EC.

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

Commission Regulation (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 (REACH) – specifying the current format of this safety data sheet.

Regulation (EC) No 1272/2008 (CLP) on classification, labeling and packaging of substances and mixtures.

Regulation (EU) 2019/1021 (POP) on persistent organic pollutants (concerns, among other things, restrictions on SCCPs in plastic components and cables).

Directive 2011/65/EU (RoHS 2) and Delegated Directive (EU) 2015/863 (RoHS 3) on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Directive 2012/19/EU (WEEE) on waste electrical and electronic equipment.

Interpretation of the **METI** Regulation on Technical Requirements **(R05.05.01), Annex 12:** Lithium-ion Batteries, based on the Japanese Industrial Standard **JIS C 62133-2:2020 (J62133-2(2021)).**

15.2 Chemical safety assessment:

not applicable

SECTION 16: Other information

16.1 List of relevant hazard statements (H):

The following statements refer to the chemical components listed in Section 3 and apply only in the event of a leak or cell failure:

- H301: Toxic if swallowed.
- H302: Harmful if swallowed.
- H314: Causes severe skin burns and eye damage.
- H319: Causes serious eye irritation.
- H351: Suspected of causing cancer.
- H373: May cause damage to organs through prolonged or repeated exposure.

16.2 Abbreviations and acronyms:

- REACH: Registration, Evaluation, Authorization and Restriction of Chemicals.
- CLP: Classification, Labeling and Packaging Regulation (1272/2008/EC).
- CAS: Identification number assigned by the Chemical Abstracts Service.
- EC: Reference number used in the European Union to identify hazardous substances.
- PBT: Persistent, Bioaccumulative and Toxic.

- vPvB: Very Persistent and Very Bioaccumulative.
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
- IATA: International Air Transport Association (Lithium Battery Regulations).

16.3 Training Advice:

This product should only be handled by persons trained in the safe handling of electronic devices and lithium batteries.

16.4 Disclaimer:

The information contained in this safety data sheet is based on our current knowledge and is intended to describe the product for health, safety, and environmental protection purposes only. It should not be construed as a guarantee of any specific product properties. The user is responsible for determining the suitability of this information for their specific applications.