Material Safety Data Sheet

Date of issue 2023-12-04 Versie 1

Section 1: IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE MANUFACTURER

1.1. Product identification

Product code R03P

Product name Battery

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended uses N/A

Restrictions on use N/A

1.3. Details of the supplier of the safety data sheet

Supplier Intronics B.V
P.O. box 123, 3770 AC Barneveld
the Netherlands

For more information, please contact:
Technical support: +31 342 407 050

1.4 Emergency contact:

National Poisons Information Center / University Medical Center Utrecht
PO Box 85500, 3508 GA Utrecht, The Netherlands
+31 88 75 585 61
productnotificatie(at)umcutrecht.nl
http://www.productnotification.nl/

Section 2: HAZARD IDENTIFICATION

2.1. Classification of the substance or mixture

Emergency overview: This product is a battery. Intended use of the product should not result in exposure to the chemical substance. In case of rupture the below hazards exist.

Classification according to GHS
Acute toxicity, oral (4)
Acute toxicity, inhalation: Dust and mists (4)
Skin corrosion/irritation (1A, 1B, 1C)
Sensitisation, respiratory (1, 1A, 1B)
Sensitisation, skin (1, 1A, 1B)
Carcinogenicity (2)
Specific target organ toxicity, single exposure; Respiratory tract irritation (3)
Specific target organ toxicity, repeated exposure (2)
Hazardous to the aquatic environment, long-term hazard (1)

2.2. Label elements

Product identification
Hazard pictograms:

Signal word
Danger

Hazard statements:

H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H317 May cause an allergic skin reaction
H332 Harmful if inhaled
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 May cause respiratory irritation
H351 Suspected of causing cancer
H373 May cause damage to organs through prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects

Precautionary statements:
Preventation:

P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P260 Do not breathe dusts or mists
P264 Wash skin and clothing thoroughly after handling
P270 Do not eat, drink or smoke when using this product
P271 Use only outdoors or in a well-ventilated area
P273 Avoid release to the environment
P280 Wear protective gloves, protective clothing, eye protection, face protection

Response:

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331 IS SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take of immediately all contaminated clothing. Rinse skin with water.
P310 Immediatly call a Poison center
P321 Specific treatment (see additinal emergency instructions)
P330 Rinse mouth
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Storage:

P405 Store locked up

Disposal:

P501 Send contents to approved waste treatment plants.

2.3. Other hazards

Physical and chemical hazards: See Section 10
Human health hazards: See Section 11
Environmental hazards: See Section 12

Section 3: COMPOSITION AND INFORMATION ON INGREDIENTS

3.1 Mixtures

Weight	Chemical Composition	CAS No.	EC#
26	Manganese dioxide	1313-13-9	215-202-6
20	Graphite	7782-42-5	231-955-3
8	Ammonium Chloride	12125-02-9	235-186-4
7	Zinc Chloride	7646-85-7	231-592-0
7	Starch	9005-25-8	232-679-6
22	Zinc	7440-66-6	231-175-3
10	Other	---	---

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medial attention.

Skin contact Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

Eye contact Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.

Swallowing Do not induce vomiting. Get medical attention.

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

No data available.

4.3. Personal protective equipment for first-aid responders

No data available.

4.4 Indication of immediate medical attention and special treatment needed

Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media Use extinguishing agent suitable for local conditions and surrounding environment. Such as dry powder, CO_2

Unsuitable extinguishing material No data available

5.2. Specific Hazards arising from the chemical

Special hazards arising from the substance or mixture.
Battery may burst and release hazardous decomposition products when exposed to a situation.
Some may burn but none ignite readily. Containers may explode when heated. Some may be transported hot.

5.3. Specific protective actions for firefighters

Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment, and emergency procedures

Wear protection equipment. Keep unprotected persons away. Ensure adequate ventilation.
Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, place the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water.

6.2. Environmental precautions

Do not allow material to be released to the environment without proper governmental permits.

6.3. Methods and material for containment and cleaning up

For all waste handing must refer to United Nations, National and Local Regulations for disposal.

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.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid short circuiting the battery. Avoid mechanical damage of the battery. Do not open or disassemble. Batteries may explode or cause burns, if dissambled, crushed or exposed to fire or high temperatures. Do not short or install with incorrrect polarity. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in al well-ventilated area. Prevent concentration in hollows and sumps.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated place. Keep away from heat, avoiding the long time of sunlight.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

CAS No.	ACGIH	NIOSH	OSHA
1313-13-9	N/A	N/A	N/A
7782-42-5	TLV-TWA 2mg/m³	REL-TWA 2.5mg/m³	PEL-TWA 15mppcf PEL-TWA 20mppcf
12125-02-9	TLV-TWA 10mg/m³ TLV-STEL 20mg/m³	REL-TWA 10mg/m³ REL-STEL 20mg/m³	N/A
7646-85-7	TLV-TWA 1mg/m³ TLV-STEL 2mg/m³	REL-TWA 1mg/m³ REL-STEL 2mg/m³	PEL-TWA 1mg/m³
9005-25-8	TLV-TWA 10mg/m³	REL-TWA 5mg/m³ REL-TWA 10mg/m³	PEL-TWA 5mg/m³ PEL-TWA 15mg/m³
7440-66-6	N/A	N/A	N/A

8.2. Measures to control exposure

Eye / face protection Wear safety goggles or eye protection combined with respiratory protection.

Hand protection Wear appropiate gloves to reduce skin contact.

Skin and body protection Working environment required, wear suitable protective clothing to minimize contact with skin. The type of protective equipment must be according to the concentration and the content of certain hazardous substances in the workplace.

Respiratory protection Wear suitable protective mask. For a large number of battery leakages, wear chemical protective clothing, including self-contained breathing apparatus.

Appropriate engineering controls: The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information about basic physical and chemical properties

Properties	Value
Physical state:	Cylindrical
Colour:	Blue
Odour:	Not available
Melting point / freezing point:	Not available
Boiling point or initial boiling point and boiling range:	Not available
Flammability:	Not available
Lower and upper explosion limit/flammability limit:	Not available
Flash point:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
pH	Not available
Kinematic viscosity:	Not available
Solubility	Not available
Partition coefficient (n-octanol/water):	Not available
Vapour pressure:	Not available
Density and/or relative density:	Not available
Relative vapour density:	Not available
Particle characteristics:	Not available

Other information:

Voltage:	1.5V

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity No data available.

10.2. Chemical stability Stable.

10.3. Possibility of hazardous reactions No data available

10.4. Conditions to avoid Flames, sparks, and other sources of ignition, incompatible materials.

10.5. Incompatible materials Oxidizing agents, acid base

10.6. Hazardous decomposition products Carbon monoxide, carbon dioxide

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity:

CAS No.	LC50/LD50
1313-13-9	No data available
7782-42-5	No data available
12125-02-9	LD50 Rat (oral): 1650mg/kg
7646-85-7	LD50 Rat (oral): 1100mg/kg
9005-25-8	No data available
7440-66-6	LD50 Rat (oral): >2000mg/kg

Skin corrosion / irritation No data available

Serious eye damage / eye irritation No data available

Respiratory or skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity No data available

Reproductive toxicity No data available

Specific target organ toxicity-Single exposure No data available

Specific target organ toxicity-Repeated exposure No data available

Aspiration hazard No data available

Information on the likely routes of exposure No data available

Eye No data available

Skin No data available

Ingestion No data available

Inhalation No data available

Section 12: ECOLOGICAL INFORMATION

12.1. Ecological Toxicity

CAS# 7646-85-7
EC50: 0.1mg/L – Crustacea (Daphnia magna) – 48h

CAS # 7440-66-6
ErC50: 0.15mg/L – Algae (pseudokirchneriella subcapitata) – 72h

12.2. Persistence and degradability No data available

12.3. Bioaccumulation Potential No data available

12.4. Mobility in soil No data available

12.7. Other adverse effects No data available

Section 13: DISPOSAL CONSIDERATIONS

13.1. Disposal methods

Recommendation Consult state, local or national regulations to ensure proper disposal.

13.2 Uncleaned packaging

Recommendation Dispoasl must be made according to official regulations.

Section 14: INFORMATION REGARDING TRANSPORT

14.1 UN / ID No	IATA-Un number:	N/A
	IMDG-Un number:	N/A
14.2 Proper shipping name	IATA-Technical name:	N/A
	IMDG-Technical name:	N/A
14.3 Transport hazard class(es)	IATA-Class:	Not subjected for transport of dangerous goods
	IMDG-Class:	Not subjected for transport of dangerous goods
14.4 Packing group	IATA-Packing group:	N/A
	IMDG-Packing group:	N/A
14.5 Environmental hazards		
Marine pollution		No
14.6 Special precautions for user		No information available

Transport information: Battery R03P AAA UM-4 1.5V 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 64th, IATA Special Provisions A123, International Martine Dangerous Goods Regulations (IMDG) (40-20), or the <<Recommendations On The Transport Of Dangerous Goods-Model Regulations>> (22nd).

S.P.A123 This entry applies to Batteries, electric storage, not otherwise listed in Subsection 4.2-List of Dangerous Goods. Examples of such batteries are: alkali-manganese, zinc-carbon and nickel-cadmium batteries. Any electrical battery or battery powered device, equipment or vehicle having the potential of a dangerous evolution of heat must be 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) accidental 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.

Transport Fashion: By air, by sea, by railway, by road.

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations and legislation for the substance or mixture

CAS No.	TSCA	IECSC	DSL/NDSL	EINECS/ELINCS/NLP
1313-13-9	Listed	Listed	Listed DSL	Listed
7782-42-5	Listed	Listed	Listed DSL	Listed
12125-02-9	Listed	Listed	Listed DSL	Listed
7646-85-7	Listed	Listed	Listed DSL	Listed
9005-25-8	Listed	Listed	Listed DSL	Listed
7440-66-6	Listed	Listed	Listed DSL	Listed

Section 16: OTHER INFORMATION

Notice to reader
To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards exist.

Other information:

ACGIH:	American Conference of Governmental Industrial Hygienists
BCF:	Bioconcentration Factor.
BOD:	Biochemical Oxygen Demand.
CAS:	Chemical Abstracts Service
DNEL:	Derived No Effect Level.
DSL:	The Domestic Substances List of Canada.
EC:	European Commision
EC50:	Median effective concentration
IARC:	International Agengy for Research on Cancer
IATA:	International Air Transport Association.
IECSC:	Inventory of Existing Chemical Substances in China
IMDG:	International Maritime Code for Dangerous Goods.
LC50:	Lethal concentration, 50 percent kill.
LD50:	Lethal dose, 50 percent kill.
NDSL:	The Non-domestic Substances List of Canada.
NOEC:	No Observed Effect Concentration
NIOSH:	US National Institute for Occupational Safety and Health
NTP:	US National Toxicology Program
OSHA:	US Occupational Safety and Health
PC-STEL:	Permissible concentration-short time exposure limit
PC-TWA:	Permissible concentration-time weighted average
PEL:	Permissible Exposure Level
REL:	Recommended Exposure Limit
RTECS:	Registry of Toxic Effects of Chemical Substances
STEL:	Short Term Exposure limit.
TDG:	Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations
TLV:	Threshold Limit Value.

TOC:	Total Organoc Carbon
TSCA:	Toxic Substances Control Act of USA
TWA:	Time-weighted average

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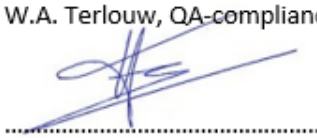
Disclaimer

The information in this MSDS is prepared to the best of our ability and reflects the state of knowledge at the time of publication. The data is presented as a guideline for the safe handling, use, storage, transport, and disposal of the substance, and cannot be regarded as a guarantee certificate or quality specification. The information given relates to the substance as such and may no longer be valid when the substance is used together with other substances or in processes.

End of the material safety data sheet

Intronics BV
W.A. Terlouw, QA-compliance officer



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