Alkaline Manganese Button Cell (Mercury Free)

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 3/11/2026 Version: 1.0

SECTION 1 Identification

1.1. Product identifier

Product form	:	Article
Trade name	:	Alkaline Manganese Button Cell (Mercury Free)
Product code	:	20112

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use	:	Consumer use,Batteries and accumulators
Restrictions on use	:	No additional information available

1.4. Supplier's details

Supplier
ITW Global Tire Repair
125 Venture Drive, Suite 210,
San Luis Obispo, CA 93401, USA
Tel: (888) 457-5463 (Toll Free)

1.5. Emergency phone number

Emergency number	:	Chemtel: +1(813)248-0585 (International)

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR § 1910.1200)

Not classified

2.2. Label elements

GHS US labeling

No labeling applicable

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

Other hazards which do not result in classification	:	This product is not classified as hazardous but contains hazardous components. Risk of exposure only occurs if the battery cell is mechanically, thermally, or electrically abused and the enclosure is compromised. If this occurs, exposure to electrolyte solutions contained in the battery cell may occur by inhalation, eye contact, skin contact, or ingestion. The batteries described in this Safety Data Sheet are sealed units which are not hazardous when used according to the Manufacturer's recommendations.

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR § 1910.1200)
Manganese dioxide	CAS-No.: 1313-13-9	≥ 15 – < 40	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373
Zinc powder- zinc dust (pyrophoric)	CAS-No.: 7440-66-6	≥ 7– < 13	Water-react. 1, H260 Pyr. Sol. 1, H250 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Potassium hydroxide	CAS-No.: 1310-58-3	≥ 3 – < 7	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314
Graphite	CAS-No.: 7782-42-5	≥ 3 – < 7	Not classified
Mercury	CAS-No.: 7439-97-6	< 0.1	Acute Tox. 2 (Inhalation), H330 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Repr. 1B, H360
Cadmium (non-pyrophoric)	CAS-No.: 7440-43-9	< 0.1	Carc. 1B, H350 Muta. 2, H341 Acute Tox. 2 (Inhalation), H330 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Repr. 2, H361
Lead powder; [particle diameter < 1 mm]	CAS-No.: 7439-92-1	< 0.1	Lact., H362 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Repr. 1A, H360

Comments : The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of § 1910.1200

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : If medical advice is needed, have product container or label at hand.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

First-aid measures after skin contact : Take off contaminated clothing. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Get medical attention if symptoms occur.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Contact ophthalmologist immediately.

First-aid measures after ingestion : Rinse mouth out with water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects : Risk of exposure only occurs if the battery cell is mechanically, thermally, or electrically abused and the enclosure is compromised. If this occurs, exposure to electrolyte solutions contained in the battery cell may occur by inhalation, eye contact, skin contact, or ingestion.

Symptoms/effects after inhalation : Vapors or mists from a ruptured battery may cause respiratory irritation.

Symptoms/effects after skin contact : Skin contact with a ruptured battery can cause skin irritation. Redness. Itching. Swelling. Burns.

Symptoms/effects after eye contact : Eye contact with the contents of a ruptured battery can cause severe irritation to the eye. Redness. Lacrimation. Itching. Blurred vision. Burns. Can cause blindness.

Symptoms/effects after ingestion : Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Abdominal pain. Swallowing this material will result in serious health hazard, potentially leading to collapse and death.

Chronic symptoms : May cause damage to organs through prolonged or repeated exposure.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Carbon dioxide. Foam. Dry powder. Water spray. Use extinguishing agent suitable for surrounding fire.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : Burning produces stinking and toxic fumes. In case of fire and/or explosion do not breathe fumes.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Explosion risk in case of fire.

Reactivity in case of fire : Damaged or opened cells or batteries can result in rapid heating and the release of flammable vapors.

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Evacuate the danger area. Move containers from fire area if it can be done without personal risk. Exercise caution when fighting any chemical fire. Fight fire with normal precautions from a reasonable distance. Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid all contact with skin, eyes, or clothing. Use special care to avoid static electric charges.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures	:	Ventilate spillage area. Avoid breathing vapors, fume. Do not get in eyes, on skin, or on clothing. Do not touch or walk on the spilled product. Evacuate unnecessary personnel. No action shall be taken without appropriate training or involving any personal risk.

For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Evacuate unnecessary personnel.
Environmental precautions	:	Avoid release to the environment. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Notify authorities if product enters sewers or public waters.

6.2. Methods and materials for containment and cleaning up

For containment	:	Stop leak, if possible without risk.
Methods for cleaning up	:	Move containers from spill area. Mechanically recover the product. Clean up any spills as soon as possible, using an absorbent material to collect it. Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). Prevent entry to sewers and public waters.
Other information	:	Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques.

For further information refer to section 13,For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Provide local exhaust or general room ventilation. Wear personal protective equipment. Avoid contact with skin and eyes. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Take precautionary measures against static discharge. Use explosion-proof equipment. Use only non-sparking tools. Do not short circuit, puncture, incinerate, crush, immerse in water, or expose to temperatures outside the temperature range stipulated by the manufacturer for the product. If this occurs, electrolyte leakage, or battery vent/explosion/fire may also occur depending on the circumstances.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including incompatibilities

Storage conditions	:	Store in a well-ventilated place. Keep cool. Store in a dry place. Store in accordance with local, regional, national or international regulation. Keep away from food, drink and animal feed. Proper grounding procedures to avoid static electricity should be followed. Protect from moisture. Protect from freezing.
Storage area	:	Store in dry, cool, well-ventilated area.
Incompatible products	:	Strong oxidizing agents. Strong reducing agents. Strong acids. Alcohols. Combustible materials.
Incompatible materials	:	Direct sunlight. Heat sources. Ignition sources. Keep away from any possible contact with water.
Heat and ignition sources	:	Do not expose the battery to high temperatures or fire.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Potassium hydroxide (1310-58-3)	
USA - ACGIH® - Threshold Limit Values	
Local name	Potassium hydroxide
ACGIH® TLV® C	2 mg/m³
Remark (ACGIH®)	TLV® Basis: Eye, Skin & URT irr
Regulatory reference	ACGIH 2025
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Potassium hydroxide; caustic potash
Cal/OSHA PEL (OEL TWA)	2 mg/m³
Cal/OSHA C	2 mg/m³
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)

Graphite (7782-42-5)	
USA - ACGIH® - Threshold Limit Values	
Local name	Graphite, all forms except graphite fibers
ACGIH® TLV® TWA	2 mg/m³ (R - Respirable particulate matter)
Remark (ACGIH®)	TLV® Basis: Pneumoconiosis
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Graphite (Natural)
OSHA PEL TWA	15 mppcf
Remark (OSHA)	Table Z-3. CAS No. source: eCFR Table Z-1.
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-3 Mineral Dusts
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Graphite, natural
Cal/OSHA PEL (OEL TWA)	2.5 mg/m³ (Respirable dust)
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - NIOSH - Occupational Exposure Limits	
Local name	Graphite (Natural)
NIOSH REL 10h TWA	2.5 mg/m³ (Respirable fraction)
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-3 Mineral Dusts (NIOSH Pocket Guide to Chemical Hazards (NPG))

Mercury (7439-97-6)	
USA - ACGIH® - Threshold Limit Values	
Local name	Mercury, elemental and inorganic forms, as Hg
ACGIH® TLV® TWA	0.025 mg/m³
Remark (ACGIH®)	TLV® Basis: CNS impair; kidney dam. Notations: Skin; A4 (Not classifiable as a Human Carcinogen); BEI
Regulatory reference	ACGIH 2025

Mercury (7439-97-6)	
USA - ACGIH® - Biological Exposure Indices	
Local name	Mercury, elemental and inorganic forms
BEI (BLV)	20 µg/g Kreatinin Parameter: Mercury - Medium: urine - Sampling time: Prior to shift
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Mercury
OSHA PEL (Ceiling)	0.1 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Mercury alkyls, as Hg
Cal/OSHA PEL (OEL TWA)	0.01 mg/m³
Cal/OSHA STEL	0.03 mg/m³
Cal/OSHA C	0.04 mg/m³
Remark (Cal/OSHA)	S - Skin notation and Protecting Clothing
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - NIOSH - Occupational Exposure Limits	
Local name	Mercury
NIOSH REL 10h TWA	0.05 mg/m³
NIOSH REL (Ceiling)	0.1 mg/m³
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-2 (NIOSH Pocket Guide to Chemical Hazards (NPG))

Cadmium (non-pyrophoric) (7440-43-9)	
USA - ACGIH® - Threshold Limit Values	
Local name	Cadmium and compounds, as Cd
ACGIH® TLV® TWA	0.01 mg/m³ 0.002 mg/m³ (R - Respirable particulate matter)
Remark (ACGIH®)	Notations: A2 (Suspected Human Carcinogen); BEI. Respirable particulates = TLV® Basis: Kidney dam
Regulatory reference	ACGIH 2025
USA - ACGIH® - Biological Exposure Indices	
Local name	Cadmium and compounds
BEI (BLV)	5 µg/g Kreatinin Parameter: Cadmium - Medium: urine - Sampling time: Not critical - Notations: B 5 µg/l Parameter: Cadmium - Medium: blood - Sampling time: Not critical - Notations: B
Regulatory reference	ACGIH 2025
USA - OSHA - Occupational Exposure Limits	
Local name	Cadmium (as Cd)
OSHA PEL TWA	0.1 mg/m³ (fume) 0.2 mg/m³ (dust)

Cadmium (non-pyrophoric) (7440-43-9)	
OSHA PEL (Ceiling)	0.3 mg/m³ (fume) 0.6 mg/m³ (dust)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-2
USA - Cal/OSHA - Occupational Exposure Limits	
Local name	Cadmium metal dust, as Cd
Cal/OSHA PEL (OEL TWA)	0.005 mg/m³
Regulatory reference	California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1)
USA - NIOSH - Occupational Exposure Limits	
Local name	Cadmium (as Cd)
Remark (NIOSH)	Ca = Potential occupational carcinogens
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))

Lead powder; [particle diameter < 1 mm] (7439-92-1)	
USA - ACGIH® - Threshold Limit Values	
Local name	Lead and inorganic compounds, as Pb
ACGIH® TLV® TWA	0.05 mg/m³
Remark (ACGIH®)	TLV® Basis: CNS & PNS impair; hematologic eff. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2025
USA - ACGIH® - Biological Exposure Indices	
Local name	Lead and inorganic compounds
BEI (BLV)	200 µg/l Parameter: Lead - Medium: blood - Sampling time: Not critical
Remark	Persons applying this BEI® are encouraged to counsel female workers of child-bearing age about the risk of delivering a child with a PbB over the current CDC reference value.
Regulatory reference	ACGIH 2025
USA - NIOSH - Occupational Exposure Limits	
Local name	Lead inorganic (as Pb)
NIOSH REL 10h TWA	0.05 mg/m³
Regulatory reference (US-NIOSH)	OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG))
Monitoring methods	
Monitoring methods	Refer to all applicable national, international and local regulations or provisions.

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation. Handle in accordance with good industrial hygiene and safety procedures. Avoid all unnecessary exposure.

Environmental exposure controls : Avoid release to the environment. Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:
Wear recommended personal protective equipment. Personal protective equipment should be chosen according to the NIOSH standards and in discussion with the supplier of the protective equipment.

Hand protection:
Not required for normal conditions of use. In case of repeated or prolonged contact wear gloves

Eye protection:
No special eye protection equipment recommended under normal conditions of use

Skin and body protection:
No special clothing/skin protection equipment is recommended under normal conditions of use

Respiratory protection:
No respiratory protection needed under normal use conditions

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Button batteries.
Color	:	Silver
Odor	:	No data available
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	Insoluble.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	Not applicable
Explosion limits	:	Not applicable
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

Other properties	:	Voltage: 3.0 V.

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. Damaged or opened cells or batteries can result in rapid heating and the release of flammable vapors.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Exothermic reaction on contact with : acids.

10.4. Conditions to avoid

Direct sunlight. High temperature. Heat and ignition sources. Moisture. Do not allow contact with water. Do not freeze.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids. Water.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Manganese dioxide (1313-13-9)	
ATE US (oral)	500 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Zinc powder- zinc dust (pyrophoric) (7440-66-6)	
LD50 oral rat	> 2000 mg/kg

Potassium hydroxide (1310-58-3)	
LD50 oral rat	273 mg/kg
ATE US (oral)	500 mg/kg body weight

Mercury (7439-97-6)	
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h

Cadmium (non-pyrophoric) (7440-43-9)	
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Mercury (7439-97-6)	
IARC group	3 - Not classifiable

Cadmium (non-pyrophoric) (7440-43-9)	
IARC group	1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Known Human Carcinogens

Lead powder; [particle diameter < 1 mm] (7439-92-1)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

Manganese dioxide (1313-13-9)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Mercury (7439-97-6)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Cadmium (non-pyrophoric) (7440-43-9)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Alkaline Manganese Button Cell (Mercury Free)	
Viscosity, kinematic	Not applicable

Symptoms/effects : Risk of exposure only occurs if the battery cell is mechanically, thermally, or electrically abused and the enclosure is compromised. If this occurs, exposure to electrolyte solutions contained in the battery cell may occur by inhalation, eye contact, skin contact, or ingestion.
Symptoms/effects after inhalation : Vapors or mists from a ruptured battery may cause respiratory irritation.
Symptoms/effects after skin contact : Skin contact with a ruptured battery can cause skin irritation. Redness. Itching. Swelling. Burns.
Symptoms/effects after eye contact : Eye contact with the contents of a ruptured battery can cause severe irritation to the eye. Redness. Lacrimation. Itching. Blurred vision. Burns. Can cause blindness.
Symptoms/effects after ingestion : Harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Abdominal pain. Swallowing this material will result in serious health hazard, potentially leading to collapse and death.
Chronic symptoms : May cause damage to organs through prolonged or repeated exposure.
Other information : No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation.

SECTION 12 Ecological information

12.1. Ecotoxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Not classified

Zinc powder- zinc dust (pyrophoric) (7440-66-6)	
EC50 72h - Algae [1]	0.15 mg/l (72 h, Pseudokirchneriella Subcapitata)

12.2. Persistence and degradability

Alkaline Manganese Button Cell (Mercury Free)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

Alkaline Manganese Button Cell (Mercury Free)	
Bioaccumulative potential	No data available concerning bioaccumulation.

12.4. Mobility in soil

Alkaline Manganese Button Cell (Mercury Free)	
Ecology - soil	No additional information available.

12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No other effects known.
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : Must not be disposed together with household garbage. Dispose in a safe manner in accordance with local/national regulations. To be disposed of as hazardous waste. Do not disassemble, short circuit, puncture, incinerate, crush, or puncture the battery. Do not mix new and used batteries.
Ecological waste information : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
UN3028	UN3028	3028	3028
14.2. Proper Shipping Name			
Batteries, dry, containing potassium hydroxide solid	BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE SOLID	BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE, SOLID	Batteries, dry, containing potassium hydroxide, solid
14.3. Transport hazard class(es)			
8	8	8	8
			

DOT	TDG	IMDG	IATA
14.4. Packing group			
Not applicable	Not applicable	III	Not applicable
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No. (DOT) : UN3028

DOT Special Provisions (49 CFR 172.102) : 237 - “Batteries, dry, containing potassium hydroxide solid, electric storage ” must be prepared and packaged in accordance with the requirements of §173.159(a), (b), and (c). For transportation by aircraft, the provisions of §173.159(b)(2) are applicable.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Packaging Non Bulk (49 CFR 173.xxx) : 213

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 230 kg

DOT Vessel Stowage Location : A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 52 - Stow ‘‘separated from’’ acids

TDG

UN-No. (TDG) : UN3028

TDG Special Provisions : 111 - This shipping name must not be used for the transport of non-activated batteries unless they contain dry potassium hydroxide and are intended to be activated prior to use by the addition of an appropriate amount of water to each cell.

Explosive Limit and Limited Quantity Index : 2 kg

Excepted quantities (TDG) : E0

Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 25 kg

Emergency Response Guide (ERG) Number : 154

IMDG

Special provision (IMDG) : 295, 304

Limited quantities (IMDG) : 5 kg

Excepted quantities (IMDG) : E0

Packing instructions (IMDG) : P801

EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE

EmS-No. (Spillage) : S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES

Stowage category (IMDG) : A

Segregation (IMDG) : SGG18, SG35

Properties and observations (IMDG) : Series of metal plates immersed in dry potassium hydroxide in a closed receptacle. When electrically charged may cause fire through short-circuiting of terminals. Batteries need not be individually marked and labelled if the pallet bears the appropriate mark and label. Used batteries being transported for disposal or reclamation should be carefully checked prior to shipment to ensure the integrity of each battery and its suitability for transport. React violently with acids.

IATA

Special provision (IATA)	:	A183, A184, A802
PCA Excepted quantities (IATA)	:	E0
PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	871
PCA max net quantity (IATA)	:	25kg
CAO packing instructions (IATA)	:	871
CAO max net quantity (IATA)	:	230kg
ERG code (IATA)	:	8L

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory		
Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S		
Zinc powder- zinc dust (pyrophoric)	CAS-No. 7440-66-6	≥ 7– < 13%
Mercury	CAS-No. 7439-97-6	< 0.1%
Lead powder; [particle diameter < 1 mm]	CAS-No. 7439-92-1	< 0.1%

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.		
Zinc powder- zinc dust (pyrophoric)	CAS-No. 7440-66-6	≥ 7– < 13%
Mercury	CAS-No. 7439-97-6	< 0.1%
Cadmium (non-pyrophoric)	CAS-No. 7440-43-9	< 0.1%
Lead powder; [particle diameter < 1 mm]	CAS-No. 7439-92-1	< 0.1%

Zinc powder- zinc dust (pyrophoric) (7440-66-6)	
CERCLA RQ	1000 lb

Potassium hydroxide (1310-58-3)	
CERCLA RQ	1000 lb

Mercury (7439-97-6)	
CERCLA RQ	1 lb

Cadmium (non-pyrophoric) (7440-43-9)	
Listed on EPA Hazardous Air Pollutant (HAPS) Listed on EPA HAPs Chronic Dose Response Assessment List - Carcinogens Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits	
CERCLA RQ	10 lb

Lead powder; [particle diameter < 1 mm] (7439-92-1)	
Listed on EPA Hazardous Air Pollutant (HAPS) Listed on EPA HAPs Chronic Dose Response Assessment List - Carcinogens Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits	
CERCLA RQ	10 lb

15.2. International regulations

CANADA

Manganese dioxide (1313-13-9)
Listed on the Canadian DSL (Domestic Substances List)

Zinc powder- zinc dust (pyrophoric) (7440-66-6)
Listed on the Canadian DSL (Domestic Substances List)

Potassium hydroxide (1310-58-3)
Listed on the Canadian DSL (Domestic Substances List)

Graphite (7782-42-5)
Listed on the Canadian DSL (Domestic Substances List)

Mercury (7439-97-6)
Listed on the Canadian DSL (Domestic Substances List)

Cadmium (non-pyrophoric) (7440-43-9)
Listed on the Canadian DSL (Domestic Substances List)

Lead powder; [particle diameter < 1 mm] (7439-92-1)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Manganese dioxide (1313-13-9)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Zinc powder- zinc dust (pyrophoric) (7440-66-6)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Potassium hydroxide (1310-58-3)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Graphite (7782-42-5)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Mercury (7439-97-6)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Cadmium (non-pyrophoric) (7440-43-9)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA HAPs Chronic Dose Response Assessment List - Carcinogens Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits Listed on INSQ (Mexican National Inventory of Chemical Substances)

Lead powder; [particle diameter < 1 mm] (7439-92-1)
Listed on IARC (International Agency for Research on Cancer) Listed as carcinogen on NTP (National Toxicology Program) Listed on EPA HAPs Chronic Dose Response Assessment List - Carcinogens Listed on EPA HAPs Acute Dose Response Assessment List – Exposure limits Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Issue date : 3/11/2026

Data sources : Supplier's safety documents.

Training advice : Training staff on good practice.

Full text of hazard classes and H-statements	
H250	Catches fire spontaneously if exposed to air
H260	In contact with water releases flammable gases, which may ignite spontaneously
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H330	Fatal if inhaled
H332	Harmful if inhaled
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child
H361	Suspected of damaging fertility or the unborn child
H362	May cause harm to breast-fed children
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure

Full text of hazard classes and H-statements	
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Indication of changes:
1.1. Product identifier.

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.