

# Article Information Sheet

# Fiche d'information Article

Product name: Alkaline Battery

Printing date: 22-Dec -2022

Nom du produit: Batterie alcaline

Date d'impression: 22-Dec -2022

## Article Information Sheet (AIS)

This Article Information Sheet (AIS) provides relevant battery information to retailers, consumers, OEMs and other users requesting a GHS - compliant SDS. Articles, such as batteries, are exempt from GHS SDS classification criteria. The GHS criteria is not designed or intended to be used to classify the physical, health and environmental hazards of an article. Branded consumer batteries are defined as electro - technical devices. The design, safety, manufacture, and qualification of Energizer branded consumer batteries follow ANSI and IEC battery standards.

### 1. DOCUMENT INFORMATION

Product name: Alkaline Battery  
Model: LR6  
Issue Date: 22-Dec -2022

### 2. COMPANY INFORMATION

Company name NINGBO GP & SONLUK BATTERY CO., LTD.  
Address: No.600 Qingfeng Road, Cicheng Town, Jiangbei District, Ningbo, Zhejiang, China  
E-mail: hyt@sonluk.com  
Telephone: +86-0574-87911000

### 3. ARTICLE INFORMATION

Description	Alkaline Battery
Use	Alkaline Battery
Brand	----
Image	----

## Article Feuille d'information (AIS)

Cette fiche d'information Article (AIS) fournit des informations sur la batterie correspondant aux détaillants, aux consommateurs, aux OEM et aux autres utilisateurs qui demandent un SDS SGH-conforme. Les articles, tels que les piles, sont exemptés de critères de classification SGH SDS. Les critères du SGH ne sont pas conçus ou destinés à être utilisés pour classer les risques physiques, la santé et l'environnement d'un article. batteries de consommation de marque sont définis comme des dispositifs électro-technique. La conception, la sécurité, la fabrication, et la qualification des batteries de consommation de marque Energizer sont conformes aux normes de la batterie ANSI et IEC.

### 1. DOCUMENT D'INFORMATION

Produit Nom: Batterie alcaline  
Modèle: LR6  
Date d'émission: 22-Dec -2022

### 2. INFORMATIONS SUR LA SOCIÉTÉ

Nom de l'entreprise NINGBO GP & SONLUK BATTERY CO., LTD.  
Adresse: Route de No.600 Qingfeng, ville de Cicheng, secteur de Jiangbei, Ningbo, Zhejiang, Chine  
Email: hyt@sonluk.com  
Téléphone: +86-0574-87911000

### 3. ARTICLE D'INFORMATION

La description	Batterie alcaline
Utilisation	Batterie alcaline
Marque	----
Image	----

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## 4. ARTICLE CONSTRUCTION

**IMPORTANT NOTE: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.**

Chemical name	CAS No.	Concentration%
Manganese Dioxide (MnO <sub>2</sub> )	1313-13-9	42.9
Zinc (Zn)	7440-66-6	16.7
Water (H <sub>2</sub> O)	7732-18-5	12.2
Potassium Hydroxide (KOH)	1310-58-3	5.2
Graphite	7782-42-5	3
Brass	12597-71-6	2.4
Steel	7439-89-6	15.7
Ni-plating	7440-02-0	0.3
Nylon-66	32131-17-2	1.6

## 5. HEALTH AND SAFETY

Ingestion:	Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.
Inhalation:	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.
Skin contact:	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required. May cause an allergic skin

## 4. ARTICLE CONSTRUCTION

**REMARQUE IMPORTANTE: La batterie ne doit pas être ouvert ou brûlé. L'exposition aux ingrédients contenus dans leurs produits ou de combustion pourrait être nocif.**

Nom chimique	N ° CAS.	Concentration%
Dioxyde de manganèse (MnO <sub>2</sub> )	1313-13-9	42.9
Zinc (Zn)	7440-66-6	16.7
Eau (H <sub>2</sub> O)	7732-18-5	12.2
Hydroxyde de Potassium (KOH)	1310-58-3	5.2
Graphite	7782-42-5	3
Laiton	12597-71-6	2.4
Acier	7439-89-6	15.7
Ni-placage	7440-02-0	0.3
Nylon-66	32131-17-2	1.6

## 5. SANTÉ ET SÉCURITÉ

Ingestion:	Ne pas faire vomir. Se rincer la bouche et boire beaucoup d'eau. Ne portez rien à la bouche d'une personne inconsciente. Appeler un centre de contrôle médecin ou de poison immédiatement.
Inhalation:	À l'air frais. Si la respiration est arrêtée, pratiquer la respiration artificielle. Consulter un médecin immédiatement. Ne pas utiliser le bouche-à-bouche si la victime a ingéré ou inhalé la substance; pratiquer la respiration artificielle à l'aide d'un masque de poche muni d'une valve à une voie ou d'un autre appareil médical approprié. Si la respiration est difficile, (du personnel qualifié devrait) donner de l'oxygène. œdème pulmonaire retardé peut se produire. Consulter un médecin si des symptômes apparaissent.
Contact avec la peau:	Laver immédiatement avec du savon et beaucoup d'eau tout en enlevant les vêtements contaminés et les chaussures. Une attention médicale immédiate est nécessaire. Peut provoquer une réaction allergique cutanée.

# Article Information Sheet

# Fiche d'information Article

Product name: Alkaline Battery

Printing date: 22-Dec -2022

Nom du produit: Batterie alcaline

Date d'impression: 22-Dec -2022

reaction.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice.

Self-protection of the first aider: Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Lentilles de contact: Rincer immédiatement et abondamment avec de l'eau, y compris sous les paupières, pendant au moins 15 minutes. Gardez l'œil ouvert pendant le rinçage. Ne pas frotter les zones touchées. lentilles de contact Retirer, si elle est présente et facile à faire. Continuer à rincer. Consulter un / des conseils médicaux immédiats.

Auto-protection du secouriste: Veiller à ce que le personnel médical sont au courant de la matière (s) impliqués, prendre des précautions pour se protéger et prévenir la propagation de la contamination. Éviter tout contact avec la peau, les yeux ou les vêtements. Éviter tout contact direct avec la peau. Utilisez barrière pour donner la respiration artificielle bouche-à-bouche. Utiliser un équipement de protection individuel requis. Porter des vêtements de protection individuelle (voir la section 8).

## 6. FIRE HAZARD & FIREFIGHTING

Fire Hazard Batteries may rupture or leak if involved in a fire.

Extinguishing Media Use any extinguishing media appropriate for the surrounding area.

Special hazards arising from the chemical In case of fire where lithium batteries are present, flood area with water or smother with a Class D fire extinguishant appropriate for lithium metal, such as Lith-X. Water may not extinguish burning batteries but will cool the adjacent batteries and control the spread of fire. Burning batteries will burn themselves out. Virtually all fires involving lithium batteries can be controlled by flooding with water. However, the contents of the battery will react with water and form hydrogen gas. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended. A smothering agent will extinguish burning lithium batteries.

## 6. RISQUE D'INCENDIE & POMPIERS

Risque d'incendie Les piles peuvent se rompre ou fuir si elle est impliquée dans un incendie.

Moyens d'extinction Utilisez tous les moyens d'extinction appropriés pour la région environnante.

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Precautions for fire-fighters Emergency Responders should wear self-contained breathing apparatus. Burning lithium manganese dioxide batteries produce toxic and corrosive lithium hydroxide fumes.

## 7. HANDLING AND STORAGE

**Storage** Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life. In locations that handle large quantities of lithium batteries, such as warehouses, lithium batteries should be isolated from unnecessary combustibles.

**Handling** Avoid mechanical and electrical abuse. Do not short circuit or install incorrectly. Batteries may rupture or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions.

**Spills of Large Quantities Batteries (unpackaged)** Notify spill personnel of large spills. Irritating and flammable vapors may be released from leaking or ruptured batteries. Spread batteries apart to stop shorting. Eliminate all ignition sources. Evacuate area and allow vapors to dissipate. Clean-up personnel should wear appropriate PPE to avoid eye and skin contact and inhalation of vapors or fumes. Increase ventilation. Carefully collect batteries and place in appropriate container for disposal. Remove any spilled liquid with absorbent material and contain for disposal.

## 8. DISPOSAL CONSIDERATIONS

Dispose of used (or excess) batteries in compliance with federal,

**Dangers particuliers résultant de la substance chimique** En cas d'incendie où des batteries au lithium sont présents, zone inondable avec de l'eau ou avec un ÉTOUFFER approprié incendie Classe d'extinction D pour le métal de lithium, comme Lith-X. L'eau ne peut pas éteindre les piles qui brûlent mais refroidir les batteries adjacentes et contrôler la propagation du feu. Les piles qui brûlent va se brûler. Pratiquement tous les feux impliquant des piles au lithium peuvent être contrôlées par les inondations avec de l'eau. Cependant, le contenu de la batterie réagiront avec l'eau et sous forme d'hydrogène gazeux. Dans un espace confiné, le gaz d'hydrogène peut former un mélange explosif. Dans cette situation, les agents étouffants sont recommandés. Un agent étouffant éteindra la combustion des batteries au lithium.

**Précautions à prendre pour les pompiers** Équipe d'intervention doivent porter un appareil respiratoire autonome. La combustion des piles de dioxyde de manganèse au lithium produisent toxique et corrosif fumées lithium hydroxyde.

## 7. MANIPULATION ET STOCKAGE

**Espace de rangement** de Conserver dans un endroit frais et bien ventilé. Les températures élevées peuvent entraîner dans la vie de la batterie raccourcie. Dans les endroits qui traitent de grandes quantités de

**Manipulation** Les piles au lithium, tels que les entrepôts, les batteries au lithium doivent être isolés à partir de combustibles inutiles. Éviter les abus mécaniques et électriques. Ne pas court-circuiter ou installer correctement. Les piles peuvent se rompre ou de ventilation si elles sont démontées, écrasées, rechargées ou exposé à une forte températures. Installez les piles conformément aux instructions du fabricant.

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# Fiche d'information Article

Product name: Alkaline Battery

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state/provincial and local regulations. Do not accumulate large quantities of used batteries for disposal as accumulations could cause batteries to short-circuit. Do not incinerate. In countries, such as Canada and the EU, where there are regulations for the collection and recycling of batteries, consumers should dispose of their used batteries into the collection network at municipal depots and retailers. They should not dispose of batteries with household trash.

## 9. Transport information

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in "strong outer packaging" that prevents spillage of contents. All original packaging for FULLWIN alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, the IMDG International Maritime Dangerous Goods Code, UN Dangerous Goods Regulations, IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions.

All FULLWIN alkaline batteries are packed in such a way to prevent short circuits or the generation of dangerous quantities of heat and meet the special provisions listed above. In addition, the 2023 IATA (64th edition) Dangerous Goods Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

**ADR** Not regulated

**IMDG** Not regulated

Déversements de grandes quantités de Batteries (non emballés) Informer le personnel de déversement de grands déversements. Irritant et vapeurs inflammables peuvent être libérés de fuites ou les piles endommagées. piles écarter pour arrêter les courts-circuits. éliminer tous les sources d'allumage. Évacuer la zone et laisser les vapeurs se dissiper. Le personnel de nettoyage devrait porter des EPI appropriés pour éviter les yeux et contact avec la peau et l'inhalation des vapeurs ou fumées. Augmenter la ventilation. batteries cueillent et les placer dans un récipient approprié pour disposition. Retirez tout liquide déversé avec une matière absorbante et contiennent pour l'élimination.

## 8. CONSIDERATIONS RELATIVES À L'ÉLIMINATION

En général, toutes les batteries de tous les modes de transport (terrestre, aérien ou maritime) doivent être emballées de manière sûre et responsable. Les préoccupations réglementaires de tous les organismes en matière d'emballage sécuritaire exigent que les batteries soient emballées de manière à prévenir les courts-circuits et qu'elles soient contenues dans un «emballage extérieur solide» qui empêche les déversements de contenu. Tous les emballages d'origine des batteries alcalines FULLWIN ont été conçus pour être conformes à ces préoccupations réglementaires.

Les piles à piles (parfois appelées «piles sèches») ne sont pas énumérées comme des marchandises dangereuses en vertu de l'accord européen ADR concernant le transport International de marchandises dangereuses par route, du Code Maritime International des marchandises dangereuses IMDG, de la réglementation des marchandises dangereuses de l'ONU, de la réglementation des marchandises dangereuses de l'IATA, des Instructions techniques de l'OACI et de la réglementation des matières dangereuses des États-Unis (49 CFR). Ces batteries ne sont pas assujetties au règlement sur les marchandises dangereuses pourvu qu'elles répondent aux exigences énoncées dans les dispositions spéciales suivantes.

# Article Information Sheet

# Fiche d'information Article

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UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	Not regulated

## 10. REGULATORY INFORMATION

### (a) Safety, health and environmental regulations specific for the product in question

CAS No.	USA TSCA	EU EINECS	Japan ENCS	Korea ECL	China IECSC	Canada DSL
1313-13-9	Listed	Listed	Listed	Listed	Listed	Listed
7440-66-6	Listed	Listed	Not listed	Listed	Listed	Listed
7732-18-5	Not listed	Listed	Listed	Listed	Listed	Not listed
1310-58-3	Not listed	Listed	Listed	Listed	Listed	Not listed
7782-42-5	Listed	Not listed	Listed	Listed	Listed	Listed
12597-71-6	Not listed	Listed	Listed	Listed	Not listed	Not listed
7439-89-6	Listed	Listed	Not listed	Listed	Listed	Listed
7440-02-0	Not listed	Listed	Listed	Listed	Listed	Not listed
32131-17-2	Listed	Not listed	Listed	Listed	Listed	Listed

## 11. OTHER INFORMATION

TSCA:	Toxic Substances Control Act, The American chemical inventory.
DSL	Domestic Substances List
EINECS:	European Inventory of Existing Commercial chemical Substances
ENCS	Japanese Existing and New Chemical Substances
ECL:	Existing Chemicals List, the Korean chemical inventory.
IECSC:	Inventory of existing chemical substances in China.

Because all of our batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. The information in this AIS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their

## 9. Informations de transport

Le transport des piles et les batteries est réglementé par l'Organisation internationale de l'aviation civile, l'Association internationale du transport aérien, Code maritime international des marchandises dangereuses et le Département américain des Transports. Les batteries doivent répondre aux critères suivants pour l'expédition: 1. les livraisons d'air doivent satisfaire aux exigences énumérées à disposition spéciale A45 de l'Association internationale du transport aérien des marchandises dangereuses Règlement. 2. Répondre aux exigences du ministère américain des Transports répertoriés dans 49 CFR 173,185. 3. Le transport des piles au lithium primaire est interdit à bord des avions de passagers. Reportez-vous au Registre fédéral de 15 Décembre 2004 (matières dangereuses, interdites sur le transport des piles et cellules Aboard passagers d'avion Règle finale)

Toutes les batteries alcalines FULLWIN sont emballées de manière à éviter les courts-circuits ou la production de quantités dangereuses de chaleur et à respecter les dispositions spéciales énumérées ci-dessus. En outre, le règlement sur les marchandises dangereuses de l'iata (64e édition) de 2023 et les instructions techniques de l'oaci exigent que les mots «non restreint» et le numéro spécial A123 soient indiqués sur le connaissement aérien, lorsqu'un connaissement aérien est émis.

ADR	Non réglementé
IMDG	Non réglementé
UN	Non réglementé
US DOT	49 CFR 172.102 disposition 130
IATA	A123
ICAO	Non réglementé

## 10. INFORMATIONS RÉGLEMENTAIRES

### (A) la sécurité, de santé et de l'environnement spécifique pour le produit en question

N ° CAS.	Etats-Unis	UE	Japon	Corée	Chine	Canada
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# Fiche d'information Article

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Date d'impression: 22-Dec -2022

absolute extensiveness and accuracy. This AIS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this AIS should make independent judgment for the applicability of this AIS under special conditions. In these special cases, we do not assume responsibility for the damage.

----- End of the AIS -----

	TSCA	Einecs	ENCS	ECL	IECSC	DSL
1313-13-9	Listed	Listed	Listed	Listed	Listed	Listed
7440-66-6	Listed	Listed	Non listé	Listed	Listed	Listed
7732-18-5	Non listé	Listed	Listed	Listed	Listed	Non listé
1310-58-3	Non listé	Listed	Listed	Listed	Listed	Non listé
7782-42-5	Listed	Non listé	Listed	Listed	Listed	Listed
12597-71-6	Non listé	Listed	Listed	Listed	Non listé	Non listé
7439-89-6	Listed	Listed	Non listé	Listed	Listed	Listed
7440-02-0	Non listé	Listed	Listed	Listed	Listed	Non listé
32131-17-2	Listed	Non listé	Listed	Listed	Listed	Listed

## 11. LES AUTRES INFORMATIONS

TSCA: Toxic Substances Control Act, l'inventaire chimique américain.  
DSL: Liste intérieure  
Einecs: Inventaire européen des substances chimiques existantes commerciales  
ENCS: Existantes et nouvelles substances chimiques japonaises  
ECL: Liste des produits chimiques existants, l'inventaire chimique coréenne.  
IECSC: Inventaire des substances chimiques existantes en Chine.

Parce que toutes nos batteries sont définis comme des « articles », ils sont exemptés des exigences de la norme de communication des risques. Les informations contenues dans ce AIS est fourni tous les pleinement et véritablement les données pertinentes. Cependant, les informations sont fournies sans aucune garantie sur leur extensification absolue et la précision. Cet AIS a été préparé à des mesures préventives de sécurité pour les utilisateurs qui ont obtenu la formation professionnelle. L'utilisateur personnel qui a obtenu ce SIA devrait porter un jugement indépendant pour l'applicabilité de cette AIS dans des conditions particulières. Dans ces cas particuliers, nous n'assumons la responsabilité pour les dommages.

----- Fin de l'AIS -----

# Safety Data Sheet

29 CFR 1910.1200

Effective Date : 01/01-2025

Trade Name : Alkaline Manganese Dry Battery

## 1 Identification

- **Product identifier**
- **Trade name :** Alkaline Manganese Dry Battery
- **Item No.:**  
AM1/LR20、AM2/LR14、AM3/LR6、AM4/LR03、LR50、LR61、AM9VF
- **Recommended use of the chemical and restrictions on use :**
- **Application of the substance / the preparation :** Electronic products
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier :**  
CHUNG PAK BATTERY WORKS LIMITED  
CHUNG PAK (GUANG DONG) BATTERY INDUSTRIAL CO., LTD
- **Full address :**  
UNIT B, 2/F., WAH SHUN INDUSTRIAL BUILDING, No.4 CHO YUEN STREET, YAU TONG BAY, KOWLOON, HONGKONG  
GANCUN SECTION FOCHEN ROAD CHEN CUN COUNTY SHUNDE DISTRICT  
FOSHAN CITY GUANGDONG PROVINCE CHINA
- **Phone number :**  
852-27171338  
Fax : 852 2772 7727
- **Email :** [yinnic@chungpak.com](mailto:yinnic@chungpak.com)
- **Other US contact point :** No available
- **Further information obtainable from :**  
CHUNG PAK BATTERY WORKS LIMITED  
CHUNG PAK (GUANG DONG) BATTERY INDUSTRIAL CO., LTD
- **Emergency telephone number :**  
USA Poison Center Tel: +1 800 222 1222  
+86-757-23312338 Bobo
- **Remark :**  
\*This sample is likely to be classified as article and is out of scope of a SDS as set out in 29 CFR Part 1910.1200. This SDS is generated for client's reference only.

## 2 Hazard(s) identification

### • Classification of the substance or mixture

Classification according to OSHA Hazard Communication Standard (29 CFR 1910.1200)



GHS05 Corrosion

Skin Corr.	1A	H314	Causes severe skin burns and eye damage.
Eye Dam.	1	H318	Causes serious eye damage.



GHS07

Acute Tox.	4	H302	Harmful if swallowed.
Acute Tox.	4	H332	Harmful if inhaled.

### • Information concerning particular hazards for human and environment :

The product has to be labeled due to the calculation procedure of OSHA Hazard Communication Standard (29 CFR 1910.1200).

### • Classification system :

The classification is according to the latest edition of OSHA Hazard Communication Standard (29 CFR 1910.1200), and extended by company and literature data.

(Contd. on page 2)

# Safety Data Sheet

## 29 CFR 1910.1200

Effective Date : 01/01-2025

Trade Name : Alkaline Manganese Dry Battery

(Contd. on page 1)

- Label elements
- Labeling according to OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Hazard pictograms



GHS05 GHS07

- Signal word : Danger
- Hazard-determining components of labeling :

manganese dioxide  
potassium hydroxide

- Hazard statements

H302+H332 Harmful if swallowed or if inhaled.  
H314 Causes severe skin burns and eye damage.

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P103 Read label before use.  
P260 Do not breathe dusts or mists.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a poison center/doctor.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local / regional / national / international regulations.

- Hazards not otherwise classified (HNOC) No further relevant information available.

### 3 Composition / information on ingredients

- Chemical characterization: Mixtures

- Description:

Mixture of the substances listed below with nonhazardous additions.  
For the wording of listed risk phrases refer to section 16.

• Composition:		
1313-13-9	manganese dioxide Acute Tox.4, H302; Acute Tox. 4, H332	42.0-45.0%
7439-89-6	iron	15.0-20.0%
7440-66-6	zinc	15.0-18.0%
7732-18-5	water	7.0-9.0%
1310-58-3	potassium hydroxide Skin Corr. 1A, H314;  Acute Tox. 4, H302	6.0-7.0%
7440-50-8	copper	1.0-3.5%
7782-42-5	Graphite	2.0-3.0%
32131-17-2	Nylon-66	0.6-1.5%
25038-59-9	Polyethylene terephthalate	1.0-1.5%
9004-34-6	Cellulose	0.5-1.0%

(Contd. on page 3)

# Safety Data Sheet

29 CFR 1910.1200

Effective Date : 01/01-2025

Trade Name : Alkaline Manganese Dry Battery

(Contd. on page 2)

**• Remark :**

zinc (CAS: 7440-66-6)

Note: Zn

manganese dioxide (CAS: 1313-13-9)

Note: MnO<sub>2</sub>

potassium hydroxide (CAS: 1310-58-3)

Note: KOH

Graphite (CAS: 7782-42-5)

Note: Carbon(C)

copper(CAS: 7440-50-8)

Note: Cu

Nylon-66 (CAS: 32131-17-2)

Note: C36H66N6O6X2

iron (CAS: 7439-89-6)

Note: Fe

water (CAS: 7732-18-5)

Note: H<sub>2</sub>O

Cellulose (CAS: 9004-34-6)

Note: Paper

Polyethylene terephthalate (CAS: 25038-59-9)

Note: PET((C10H8O4)n)

## 4 First-aid measures

**• Description of first aid measures**

**• General description:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**• After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

**• After skin contact:** Immediately wash with water and soap and rinse thoroughly. Then consult a doctor.

**• After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**• After swallowing:**

Do not induce vomiting; immediately call for medical help.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

**• Most important symptoms and effects, both acute and delayed** No further relevant information available.

**• Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Fire-fighting measures

**• Suitable extinguishing agents:**

CO<sub>2</sub>、 extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**• Special hazards arising from the substance or mixture:** No further relevant information available.

**• Special protective equipment and precautions for firefighters**

**• Protective equipment:** Mouth respiratory protective device.

(Contd. on page 4)

# Safety Data Sheet

29 CFR 1910.1200

Effective Date : 01/01-2025

Trade Name : Alkaline Manganese Dry Battery

(Contd. on page 3)

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures:**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.
- **Methods and material for containment and cleaning up:**  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.

## 7 Handling and storage

- **Precautions for safe handling:**  
Thorough dedusting.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage:**
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

## 8 Exposure controls / personal protection

### • Components with limit values that require monitoring at the workplace:

#### 1313-13-9 manganese dioxide (42.0-45.0%)

PEL (USA)	Ceiling limit value: 5mg/m <sup>3</sup> as Mn
REL (USA)	Short-term value: 3mg/m <sup>3</sup> Long-term value: 1mg/m <sup>3</sup> as Mn
TLV (USA)	Long-term value: 0.02*0.1* mg/m <sup>3</sup> as Mn; * respirable **inhalable fraction

#### 1310-58-3 potassium hydroxide (6.0-7.0%)

REL (USA)	Ceiling limit value: 2mg/m <sup>3</sup>
TLV(USA)	Ceiling limit value: 2mg/m <sup>3</sup>

#### 7440-50-8 copper (1.0-3.5%)

PEL (USA)	Long-term value: 1*0.1**mg/m <sup>3</sup> as Cu *dusts and mists **fume
REL (USA)	Long-term value: 1*0.1**mg/m <sup>3</sup> as Cu *dusts and mists **fume
TLV(USA)	Long-term value: 1*0.2**mg/m <sup>3</sup> *dusts and mists **fume; as Cu

#### 7782-42-5 Graphite (2.0-3.0%)

PEL (USA)	Long-term value: 15mppcf*mg/m <sup>3</sup>
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(Contd. on page 5)

# Safety Data Sheet

## 29 CFR 1910.1200

Effective Date : 01/01-2025

Trade Name : Alkaline Manganese Dry Battery

(Contd. on page 4)

	*impinge samples counted by light field techn.
REL (USA)	Long-term value: 2.5mg/m <sup>3</sup> *respirable dust
TLV(USA)	Long-term value:2*mg/m <sup>3</sup> all forms except graphite fibers; *resp. fraction
<b>9004-34-6 Cellulose (0.5-1.0%)</b>	
PEL (USA)	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL (USA)	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV(USA)	Long-term value: 10mg/m <sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Based on the composition shown in Section 3, the following measures are suggested for occupational safety measure.**
- **Appropriate engineering controls:**  
Wash clothing and shoes before reuse.  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.  
See Section 7 for information about design of technical facilities.

- **Personal protective equipment:**

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands :**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

(Contd. on page 6)

# Safety Data Sheet

29 CFR 1910.1200

Effective Date : 01/01-2025

Trade Name : Alkaline Manganese Dry Battery

(Contd. on page 5)

## 9 Physical and chemical properties

### . General Information

#### . Appearance:

**Form:** Cylindrical  
**Color:** Blue, silvery

**. Odor:** Odorless

**. Odour threshold:** Not available

**. pH-value:** Not available

### . Change in condition

**Melting point/ Melting range:** Not available

**Freezing point:** Not available

**Boiling point/ Boiling range:** Not available

**. Flash point:** Not available

**. Flammability (solid, gaseous):** Not available

**. Auto-Ignition temperature:** Not available

**. Decomposition temperature:** Not available

### . Explosion limits:

**Lower:** Not available

**Upper:** Not available

**. Vapor pressure:** Not available

**. Density:** Not available

**. Relative density:** Not available

**. Vapour density:** Not available

**. Evaporation rate:** Not available

### . Solubility in/ Miscibility with

**Water:** Not available

**. Partition coefficient (n-octanol/water)** Not available

### . Viscosity:

**Dynamic:** Not available

**Kinematic:** Not available

**. Other information** Voltage 1.5V

## 10 Stability and reactivity

- . Reactivity:** Data not available
- . Chemical stability:** Stable under normal operating and storage conditions.
- . Possibility of hazardous reactions:** No dangerous reactions known.
- . Conditions to avoid:** No further relevant information available.
- . Incompatible materials:** No further relevant information available.
- . Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

### . Acute toxicity:

#### . LD/LC50 values that are relevant for classification:

**1310-58-3 potassium hydroxide**

Oral	LD50	273 mg/kg (rat)
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(Contd. on page 7)

# Safety Data Sheet

29 CFR 1910.1200

Effective Date : 01/01-2025

Trade Name : Alkaline Manganese Dry Battery

(Contd. on page 6)

<b>7439-89-6 iron</b>		
Oral	LD50	30000 mg/kg (rat)

<b>9004-34-6 Cellulose</b>		
Oral	LD50	>5000 mg/kg (rat)

• **Primary irritant effect:**

• **on the skin:** Strong caustic effect on skin and mucous membranes.

• **on the eye:** Strong caustic effect.

• **Sensitization:** No sensitizing effects known.

• **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

• **Carcinogenic categories**

• **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

• **NTP (National Toxicology Program)**

None of the ingredients is listed.

• **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

• **Toxicity**

• **Aquatic toxicity:** No further relevant information available.

• **Persistence and degradability:** No further relevant information available.

• **Bioaccumulative potential:** No further relevant information available.

• **Mobility in soil:** No further relevant information available.

• **Other adverse effects:** No further relevant information available.

## 13 Disposal considerations

• **Waste treatment methods**

• **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

• **Uncleaned packagings:**

• **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

• Alkaline Manganese Dry Battery is exempt from dangerous goods. It is considered non-dangerous goods by the international Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), International Maritime Dangerous Goods regulations (IMDG), the «Recommendations on the Transport of Dangerous Goods Model Regulations» and also is not classified as dangerous goods under the 66<sup>th</sup> Edition of the IATA Dangerous Goods Regulation 2025 Special Provision A123.

(Contd. on page 8)

# Safety Data Sheet

29 CFR 1910.1200

Effective Date : 01/01-2025

Trade Name : Alkaline Manganese Dry Battery

(Contd. on page 7)

Separate batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport.

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

## 15 Regulatory information

### • Safety, health and environmental regulations/legislation specific for the substance or mixture

#### • Sara

##### • Section 335 (extremely hazardous substances):

None of the ingredients is listed.

##### • Section 313 (specific toxic chemical listings):

1313-13-9	manganese dioxide
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7440-50-8	copper
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##### • TSCA (Toxic Substances Control Act):

1313-13-9	manganese dioxide
-----------	-------------------

7439-89-6	iron
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7732-18-5	water
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1310-58-3	potassium hydroxide
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7440-50-8	copper
-----------	--------

7782-42-5	Graphite
-----------	----------

32131-17-2	Nylon-66
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25038-59-9	Polyethylene terephthalate
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9004-34-6	Cellulose
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#### • Proposition 65

##### • Chemical known to cause cancer:

None of the ingredients is listed.

##### • Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

##### • Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

##### • Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

#### • Cancerogenity categories

##### • EPA (Environmental Protection Agency)

1313-13-9	manganese dioxide	D
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7440-66-6	zinc	II
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7440-50-8	copper	D
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##### • TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

##### • NIOSH-Ca (National Institution for Occupational Safety & Health)

None of the ingredients is listed.

(Contd. on page 9)

# Safety Data Sheet

29 CFR 1910.1200

Effective Date : 01/01-2025

Trade Name : Alkaline Manganese Dry Battery

(Contd. on page 8)

## 16 Other information

### NFPA ratings (scale 0-4)



Health = 3  
Fire = 0  
Reactivity = 0

### • HMIS ratings (scale 0-4)



Health = 4  
Fire = 0  
Reactivity = 0

### • Relevant phrases

- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H332 Harmful if inhaled.

\*\*\*\*\*

The contents and format of this SDS are in accordance with 29 CFR 1910.1200 (g)

### DISCLAIMER OF LIABILITY

The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in anyway connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Remark:

\*This sample is likely to be classified as article and is out of scope of a SDS as set out in 29 CFR Part 1910.1200. This SDS is generated for client's reference only.

**Date of preparation/last revision 2025.01.01/-**

### Abbreviations and acronyms:

- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- ACGIH: American Conference of Governmental Industrial Hygienists
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
- Eye Dam . 1: Serious eye damage/eye irritation, Hazard Category 1

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End of document