

Safety DATA SHEET

FICHE DE DONNÉES SUR LA SÉCURITÉ

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.IDENTIFICATION DE LA SUBSTANCE/PRÉPARATION ET DE LA ENTREPRISE/ENTREPRISE

Product identifier

Identificateur de produit

Product Name

Nom du produit

alkaline zinc manganese battery

Batterie de bouton de manganèse alcalin sans mercure

Model name

AA,AAA,LR41,LR1130,LR44

Details of the supplier of the Safety data sheet

Détails du fournisseur de la fiche de données de sécurité

Supplier Name

Nom du fournisseur

AGAWO NEW ENERGY TECHNOLOGY CO.,LTD

Supplier Address

Adresse du fournisseur

3# STANDARD WORKSHOP ,HIGH-TECH DEVELOPMENT ZONE II
QINZHOU ,GUANGXI,China

Supplier Phone Number

Numéro de téléphone du fournisseur

Phone:+86 0754-85835955

Téléphone : +86 755-6182 8818

Supplier Email

Courriel du fournisseur

2881007099@qq.com

2. HAZARDS IDENTIFICATION

2.HAZARDS IDENTIFICATION

Classification

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

Ce produit chimique n'est pas considéré comme dangereux par la norme de communication des dangers de l'OSHA 2012 (29 CFR 1910.1200) Ce produit est un article qui est une batterie scellée et qui, à ce titre, ne nécessite pas de SMDPar selon la norme de communication sur les risques de l'OSHA, à moins d'être rompue. Les dangers indiqués sont pour une batterie rompue.


Serious eye damage/eye irritation Lésions oculaires graves/irritation des yeux	Category 1 Catégorie 1
Skin corrosion/irritation Corrosion/irritation de la peau	Category 1 Sub-category B Catégorie 1 Sous-catégorie B
Acute toxicity – Oral Toxicité aiguë - Oral	Category 4 Catégorie 4
Acute toxicity –Dermal Toxicité aiguë -Dermal	Category 4 Catégorie 4
Acute toxicity - Inhalation (Gases) Toxicité aiguë - Inhalation (Gaz)	Category 4 Catégorie 4
Acute toxicity - Inhalation (Dusts/Mists) Toxicité aiguë - Inhalation (Poussières/Brumes)	Category 4 Catégorie 4
Specific target organ toxicity (repeated exposure) Toxicité spécifique des organes cibles (exposition répétée)	Category 2 Catégorie 2

GHS Label elements, including precautionary statements

Éléments de l'étiquette GHS, y compris les déclarations de précaution

Emergency Overview

Vue d'ensemble d'urgence

Signal word Mot de signal	Danger Danger				
Hazard Statements Déclarations de dangers					
Causes serious eye damage Cause de graves lésions oculaires					
Causes severe skin burns and eye damage Provoque de graves brûlures cutanées et des lésions oculaires					
Harmful in contact with skin Nocif au contact de la peau					
Harmful if swallowed Nocif s'il est avalé					
Harmful inhaled Inhalé nocif					
Cause damage to organs through prolonged or repeated exposure Causer des dommages aux organes par une exposition prolongée ou répétée					
					
<p>This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. Intended use of the product should not result in exposure to the chemical substance.</p> <p>This is a battery. In case of rupture: the above hazards exist.</p> <p>Ce produit est un article qui contient une substance chimique. Des informations sur la sécurité sont données pour l'exposition à l'article tel qu'il a été vendu. L'utilisation prévue du produit ne devrait pas entraîner l'exposition à la substance chimique. C'est une batterie. En cas de rupture : les dangers ci-dessus existent.</p>					
Appearance Apparence	Silver Silver	Physical State État physique	Solid Liquide solide contenant	Odor Odeur	Odorless Inodore

Precautionary Statements – Prevention

Déclarations de précaution – Prévention

Wash face, hands and any exposed skin thoroughly after handling

Lavez le visage, les mains et toute peau exposée à fond après la manipulation

Wear protective gloves/protective clothing/eye protection/face protection

Portez des gants de protection/vêtements de protection/protection oculaire/protection du visage

Wear eye/face protection

Portez une protection pour les yeux et le visage

Precautionary Statements – Response

Déclarations de précaution - Réponse

Specific treatment (see supplemental first aid instructions on this label)

Traitement spécifique (voir instructions de premiers soins supplémentaires sur cette étiquette)

Eyes

Yeux

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

SI EN YEUX: Rincer prudemment avec de l'eau pendant plusieurs minutes. Enlever les lentilles cornéennes, si elles sont présentes et faciles à faire. Continuer le rinçage

If eye irritation persists: Get medical advice/attention

Si l'irritation oculaire persiste : Obtenez des conseils médicaux/attention

Skin

Peau

IF ON SKIN: Wash with plenty of soap and water

SI SUR SKIN: Laver avec beaucoup de savon et d'eau

Take off contaminated clothing and wash before reuse

Enlever les vêtements contaminés et les laver avant de les réutiliser

If skin irritation or rash occurs: Get medical advice/attention

En cas d'irritation ou d'éruption cutanée : Obtenez des conseils médicaux/attention

Precautionary Statements – Storage

Déclarations de précaution - Stockage

Store locked up

Magasin verrouillé

Precautionary Statements – Disposal

Déclarations de précaution - Disposition

Dispose of contents/container to an approved waste disposal plant

Disposer du contenu/conteneur dans une usine d'élimination des déchets approuvée

Hazards not otherwise classified (HNOC)

Risques non classés autrement

Not applicable

Non applicable

Interactions with Other Chemicals

Interactions avec d'autres produits chimiques

No information available

Aucune information disponible

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.COMPOSITION/INFORMATION SUR INGREDIENTS

Chemical Name	CAS No	Weight-%
Zinc	7440-66-6	8
Graphite	7782-42-5	3
Manganese dioxide	1313-13-9	30
Potassium Hydroxide	1310-58-3	10
Iron	7439-89-6	37
Water	7732-18-5	12

4. FIRST AID MEASURES

4.MESURES DE PREMIERS SOINS

First aid measures

Mesures de premiers secours

General Advice

Conseils généraux

First aid is upon rupture of sealed battery. Show this Safety data sheet to the doctor in attendance

Les premiers soins sont sur la rupture de la batterie scellée. Montrez cette fiche de données sécurité au médecin présent

Eye Contact

Contact visuel

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

Rincer immédiatement avec beaucoup d'eau, également sous les paupières, pendant au moins 15 minutes. Gardez les yeux grands ouverts tout en rinçant. Retirez les lentilles cornéennes, si elles sont présentes et faciles à faire. Continuer le rinçant. Obtenir des soins médicaux si l'irritation se développe et persiste. Ne frottez pas la zone touchée

Skin Contact

Contact peau

Wash off immediately with soap and plenty of water for at least 15 minutes. In the case of skin irritation or allergic reactions see a physician. May cause an allergic skin reaction.

Laver immédiatement avec du savon et beaucoup d'eau pendant au moins 15 minutes. Dans le cas d'une irritation de la peau ou des réactions allergiques voir un médecin. Peut provoquer une réaction cutanée allergique.

Inhalation

Remove to fresh air. If symptoms persist, call a physician. Get medical

Inhalation	attention immediately if symptoms occur. Retirer à l'air frais. Si les symptômes persistent, appelez un médecin. Obtenez immédiatement des soins médicaux en cas de symptômes.
Ingestion 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. Ne pas induire des vomissements. Rincer la bouche immédiatement et boire beaucoup d'eau. Ne donnez jamais rien par la bouche à une personne inconsciente. Appelez un médecin.
Self-protection of the first aider Autoprotection du secouriste	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8) Évitez tout contact avec la peau, les yeux ou les vêtements. Utilisez de l'équipement de protection individuelle au besoin. Porter des vêtements de protection individuelle (voir la section 8)

Most important symptoms and effects, both acute and delayed

Les symptômes et effets les plus importants, aigus et retardés

Most Important Symptoms and Effects Symptômes et effets les plus importants	Coughing and/ or wheezing. Itching. Toux et/ou respiration sifflante. Démangeaisons.
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Indication of any immediate medical attention and special treatment needed

Indication de toute attention médicale immédiate et traitement spécial nécessaire

Notes to Physician Notes au médecin	Treat symptomatically Traiter symptomatiquement
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5. FIRE-FIGHTING MEASURES

5.MESURES DE LUTTE CONTRE L'INCENDIE

Suitable Extinguishing Media

Médias d'extinction appropriés

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Utiliser des mesures d'extinction adaptées aux circonstances locales et aux Environnement.

Unsuitable Extinguishing Media

Médias d'extinction inappropriés

CAUTION: Use of water spray when fighting fire may be inefficient

CAUTION: L'utilisation de pulvérisation d'eau lors de la lutte contre l'incendie peut être inefficace

Specific Hazards Arising from the Chemical

Risques spécifiques découlant de la

No information available.

Aucune information disponible.

Hazardous Combustion Products

Produits de combustion dangereux

Carbon Oxides

Oxydes de carbone

Protective equipment and precautions for firefighters

Équipement de protection et précautions pour les pompiers

As in any fire, wear self-contained breathing apparatus pressure-demand,MSHA/NIOSH (approved or equivalent) and full protective gear.

Comme dans tout incendie, porter un appareil respiratoire autonome à la demande de pression,MSHA/NIOSH (approuvé ou équivalent) et un équipement de protection complet.

6. ACCIDENTAL RELEASE MEASURES

6.MESURES DE LIBÉRATION ACCIDENTELLE

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Précautions personnelles

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

Évitez tout contact avec la peau, les yeux ou les vêtements. Assurer une ventilation adéquate. Utilisez de l'équipement de protection individuelle au besoin. Évacuer le personnel vers des zones sûres.

Other Information

Autres informations

Refer to protective measures listed in Sections 7 and 8

Se référer aux mesures de protection énumérées aux articles 7 et 8

Environmental Precautions

Précautions environnementales

Refer to protective measures listed in Sections 7 and 8.

Se référer aux mesures de protection énumérées aux articles 7 et 8

Methods for cleaning up

Méthodes de nettoyage

Pick up and transfer to properly labeled containers

Ramassage et transfert dans des contenants correctement étiquetés

Methods for Containment

Méthodes de confinement

Prevent further leakage or spillage if safe to do so.

Empêchez d'autres fuites ou déversements s'ils sont sécuritaires.

Methods for cleaning up

Méthodes de nettoyage

Pick up and transfer to properly labeled containers.

Ramassage et transfert dans des contenants correctement étiquetés.

7. HANDLING AND STORAGE

7.MANIPULATION ET STOCKAGE

Precautions for safe handling

Précautions pour une manipulation sécuritaire

Handling

Manipulation

In case of rupture. Use personal protection equipment. Avoid contact with skin, eyes or clothing.

En cas de rupture. Utilisez de l'équipement de protection individuelle. Évitez tout contact avec la peau, les yeux ou les vêtements.

Conditions for safe storage, including any incompatibilities

Conditions d'entreposage sécuritaire, y compris les incompatibilités

Storage

Stockage

Keep containers tightly closed in a dry, cool and well-ventilated place.

Gardez les contenants bien fermés dans un endroit sec, frais et bien aéré.

Incompatible Products

Produits incompatibles

Strong acids. Strong oxidizing agents. Strong bases.

Des acides forts. Agents oxydants forts. Des bases solides.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.CONTRÔLES D'EXPOSITION/PROTECTION PERSONNELLE

Control parameters

Paramètres de contrôle

Exposure Guidelines

Ligne directrice sur l'exposition

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium hydroxide 1310-58-3	TWA: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³
Manganese dioxide 1313-13-9	TWA: 0.02 mg/m ³ Mn TWA: 0.1 mg/m ³ Mn	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn
Zinc 7440-66-6	STEL: 10 mg/m ³ respirable fraction TWA: 2 mg/m ³ respirable fraction	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume

Graphite 7782-42-5	TWA: 2 mg/m ³ respirable fraction all forms except graphite fibers	TWA: 15 mg/m ³ total dust synthetic TWA: 5 mg/m ³ respirable fraction synthetic (vacated) TWA: 2.5 mg/m ³ respirable dust natural (vacated) TWA: 10 mg/m ³ total dust synthetic (vacated) TWA: 5 mg/m ³ respirable fraction synthetic TWA: 15 mppcf natural	IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³ respirable dust
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ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL:
Occupational Safety and Health
Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health
ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL:
Occupational Safety and Health Administration - Limites d'exposition admissibles immédiatement dangereuses pour
la vie ou la santé

Other Exposure Guidelines

Autres lignes directrices sur
l'exposition

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters
Limites libérées révoquées par la décision de la Cour d'appel dans l'affaire AFL-CIO c. OSHA, 965 F.2d 962 (11e cir., 1992) Voir l'article 15 des paramètres nationaux de contrôle de l'exposition

Appropriate engineering controls

Contrôles techniques appropriés

Engineering Measures

Mesures techniques

Showers

Douches

Eyewash stations

Stations de lavage des yeux

Ventilation systems

Systèmes de ventilation

Individual protection measures, such as personal protective equipment

Mesures de protection individuelles, telles que l'équipement de protection individuelle

Eye/Face Protection

Protection œil/visage

If splashes are likely to occur: Wear Safety glasses with side shields (or goggles). None required for consumer use.

Si des éclaboussures sont susceptibles de se produire: Portez des lunettes de sécurité avec des boucliers latéraux (ou des lunettes). Aucun n'est requis pour l'usage du consommateur.

Skin and Body Protection

Protection de la peau et du corps

Wear protective gloves and protective clothing. Long sleeved clothing.

Impervious gloves

Portez des gants de protection et des vêtements de protection. Vêtements à manches longues. Gants imperméables

Respiratory Protection

Protection respiratoire

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Aucun équipement de protection n'est nécessaire dans des conditions d'utilisation normales. Si les limites d'exposition sont dépassées ou si l'irritation est ressentie, une ventilation et une évacuation peuvent être nécessaires.

Hygiene Measures

Mesures d'hygiène

Handle in accordance with good industrial hygiene and Safety practice.

Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

Poignée conformément aux bonnes pratiques d'hygiène et de sécurité. Ne mangez pas, ne buvez pas ou ne fumez pas lorsque vous utilisez ce produit. Enlever les vêtements contaminés et les laver avant de les réutiliser. Évitez tout contact avec la peau, les yeux ou les vêtements. Portez des gants appropriés et une protection pour les yeux et le visage. Lavez-vous les mains avant de se briser et immédiatement après la manipulation du produit.

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PROPRIÉTÉS PHYSIQUES ET CHIMIQUES

Physical and Chemical Properties

Propriétés physiques et chimiques

Physical State État physique	Solid containing liquid Liquide solide contenant		
Appearance Apparence	Silver Silver	Odor Odeur	Odorless Inodore
Color Couleur	No information available Aucune information disponible	Odor Threshold Seuil d'odeur	No information available Aucune information disponible
Property Propriété		Values Valeurs	Remarks/ Method Remarques/Méthode
Ph Ph		No data available Aucune information disponible	None known Inconnu
Melting / freezing point Point de fusion / point de congélation		No data available Aucune information disponible	None known Inconnu
Boiling point / boiling range Point d'ébullition / gamme d'ébullition		No data available Aucune information disponible	None known Inconnu
Flash Point Point d'éclair		No data available Aucune information disponible	None known Inconnu
Evaporation Rate Taux d'évaporation		No data available Aucune information disponible	None known Inconnu
Flammability (solid, gas) Flammabilité (solide, gaz)		No data available Aucune information disponible	None known Inconnu
Flammability Limit in Air Limite d'inflammabilité dans l'air			
Upper flammability limit Limite supérieure d'inflammabilité		No data available Aucune information disponible	
Lower flammability limit Limite d'inflammabilité inférieure		No data available Aucune information disponible	
Vapor pressure Pression de vapeur		No data available Aucune information disponible	None known Inconnu
Vapor density Densité de vapeur		No data available Aucune information disponible	None known Inconnu
Specific Gravity Spécifique Gravité		No data available Aucune information disponible	None known Inconnu
Water Solubility Hydrosolubilité		No data available Aucune information disponible	None known Inconnu
Solubility in other solvents Solubilité dans d'autres solvants		No data available Aucune information disponible	None known Inconnu
Partition coefficient: n-octanol/water Coefficient de partition : n-octanol/eau		0.00001 0.00001	None known Inconnu
Autoignition temperature Température d'auto-allumage		No data available Aucune information disponible	None known Inconnu
Decomposition temperature Température de décomposition		No data available Aucune information disponible	None known Inconnu
Kinematic viscosity Viscosité cinématique		No data available Aucune information disponible	None known Inconnu
Dynamic viscosity		0.00001	None known

Viscosité dynamique	0.00001	Inconnu
Explosive properties Propriétés explosives	No data available Aucune information disponible	
Oxidizing Properties Propriétés oxydantes	No data available Aucune information disponible	
Other Information Autres informations		
Softening Point Point d'adoucissement	No data available Aucune information disponible	
VOC Content (%) Contenu DE COV (%)	No data available Aucune information disponible	
Particle Size Taille des particules	No data available Aucune information disponible	

10. STABILITY AND REACTIVITY

10.STABILITÉ ET RÉACTIVITÉ

Reactivity

Réactivité

No data available

Aucune donnée disponible

Chemical stability

Stabilité chimique

Stable under recommended storage conditions.

Stable dans les conditions d'entreposage recommandées.

Possibility of Hazardous Reactions

Possibilité de réactions dangereuses

None under normal processing.

Aucun dans le cadre d'un traitement normal.

Hazardous Polymerization

Polymérisation dangereuse

Hazardous polymerization does not occur.

La polymérisation dangereuse ne se produit pas.

Conditions to avoid

Conditions à éviter

None known based on information supplied.

inconnu s'appuyant sur les informations fournies.

Incompatible materials

Matériaux incompatibles

Strong acids. Strong oxidizing agents. Strong bases.

Des acides forts. Agents oxydants forts. Des bases solides.

Hazardous Decomposition Products

Produits de décomposition dangereux

Carbon oxides.

Des oxydes de carbone.

11. TOXICOLOGICAL INFORMATION

11.INFORMATIONS TOXICOLOGIQUES

Information on likely routes of exposure

Product Information

Informations sur les produits

Product does not present an acute toxicity hazard based on known or supplied information In case of rupture

Le produit ne présente pas de risque de toxicité aigu fondé sur des informations connues ou fournies en cas de rupture

Inhalation

Inhalation

Specific test data for the substance or mixture is not available.
Corrosive by inhalation.(based on components).
Les données d'essai spécifiques pour la substance ou le mélange ne sont pas disponibles. Corrosif par inhalation. (basé sur des composants).

Eye Contact

Contact visuel

Specific test data for the substance or mixture is not available.
Expected to be and irritant based on components. Irritating to eyes.
May cause redness, itching, and pain. May cause temporary eye irritation.
Les données d'essai spécifiques pour la substance ou le mélange ne sont pas disponibles. Prévu pour être et irritant basé sur les composants. Irritant pour les yeux. Peut causer des rougeurs, des démangeaisons et de la douleur. Peut causer une irritation temporaire des yeux.

Skin Contact

Contact peau

Specific test data for the substance or mixture is not available.
Expected to be an irritant based on components. Irritating to skin.
Prolonged contact may cause redness and irritation.
Les données d'essai spécifiques pour la substance ou le mélange ne sont pas disponibles. On s'attend à être un irritant basé sur des composants. Irritant pour la peau. Un contact prolongé peut causer des rougeurs et de l'irritation.

Ingestion

Ingestion

Specific test data for the substance or mixture is not available.
Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Les données d'essai spécifiques pour la substance ou le mélange ne sont pas disponibles. L'ingestion peut causer une irritation des muqueuses. L'ingestion peut causer une irritation gastro-intestinale, des nausées, des vomissements et de la diarrhée.

Component Information

Informations sur les composants

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium hydroxide 1310-58-3	= 214 mg/kg (Rat)	-	-
Manganese dioxide 1313-13-9	= 9000 mg/kg (Rat)	-	-
Iron 7439-89-6	= 984 mg/kg (Rat)	-	-
Graphite 7782-42-5	> 10000 mg/kg (Rat)	-	-

Information on toxicological effects

Informations sur les effets toxicologiques

Symptoms

Symptômes

Erythema (skin redness). May cause redness and tearing of the eyes.
Coughing and/ or wheezing.Itching.
Érythème (rougeur de peau). Peut causer des rougeurs et des déchirures des yeux. Toux et/ou respiration sifflante. Démangeaisons.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Effets retardés et immédiats ainsi que effets chroniques de l'exposition à court et à long terme

Sensitization

Sensibilisation

May cause sensitization of susceptible persons. May cause sensitization by skin contact.
Peut provoquer la sensibilisation des personnes sensibles. Peut provoquer une sensibilisation par contact cutané.

Mutagenic Effects

Effets mutagènes

No information available
Aucune information disponible

12. ECOLOGICAL INFORMATION

12.INFORMATIONS ÉCOLOGIQUES

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Iron 7439-89-6		96h LC50: = 13.6 mg/L (Morone saxatilis)		
Zinc 7440-66-6	96h EC50: 0.11 - 0.271 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.09 - 0.125 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 2.16 - 3.05 mg/L (Pimephales promelas) 96h LC50: 0.211 - 0.269 mg/L (Pimephales promelas) 96h LC50: = 2.66 mg/L (Pimephales promelas) 96h LC50: = 30 mg/L (Cyprinus carpio) 96h LC50: = 0.45 mg/L (Cyprinus carpio) 96h LC50: = 7.8 mg/L (Cyprinus carpio) 96h LC50: = 3.5 mg/L (Lepomis macrochirus) 96h LC50: = 0.24 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.59 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.41 mg/L (Oncorhynchus mykiss)		48h EC50: 0.139 - 0.908 mg/L
Potassium hydroxide 1310-58-3		96h LC50: = 80 mg/L (Gambusia affinis)		

Persistence and Degradability

Persistence et dégradabilité

No information available.

Aucune information disponible.

Bioaccumulation

Bioaccumulation

No information available

Aucune information disponible.

Other adverse effects

Autres effets indésirables

No information available.

Aucune information disponible.

13. DISPOSAL CONSIDERATIONS

13. CONSIDÉRATIONS D'ÉLIMINATION

Waste treatment methods

Méthodes de traitement des déchets

Disposal methods

Méthodes d'élimination

Should not be released into the environment.

Ne doit pas être libéré dans l'environnement.

Contaminated Packaging

Emballage contaminé

Dispose of in accordance with federal, state and local regulations.

Disposer conformément aux réglementations fédérales, étatiques et locales.

California Hazardous Waste Codes 141

Codes de déchets dangereux de la Californie 141

Chemical Name	California Hazardous Waste
Zinc 7440-66-6	Ignitable powder
Potassium hydroxide 1310-58-3	Toxic Corrosive

14. TRANSPORT INFORMATION

14. INFORMATIONS SUR LES TRANSPORTS

DOT	NOT REGULATED NON RÉGLEMENTÉ
Proper Shipping Name Nom d'expédition approprié	NOT REGULATED NON RÉGLEMENTÉ
Hazard Class Catégorie de danger	N/A N/A
TDG	Not regulated NON RÉGLEMENTÉ
MEX	Not regulated NON RÉGLEMENTÉ
ICAO	Not regulated NON RÉGLEMENTÉ
IATA	Not regulated NON RÉGLEMENTÉ
Proper Shipping Name Nom d'expédition approprié	Not regulated NON RÉGLEMENTÉ
Hazard Class Catégorie de danger	N/A N/A
IMDG/IMO	Not regulated NON RÉGLEMENTÉ
Proper Shipping Name Nom d'expédition approprié	NON-REGULATED PER SP 188
Hazard Class Catégorie de danger	N/A
EmS No.	F-A, S-I
RID	Not regulated NON RÉGLEMENTÉ
ADR	Not regulated NON RÉGLEMENTÉ
AND	Not regulated NON RÉGLEMENTÉ

15. REGULATORY INFORMATION

15. INFORMATIONS RÉGLEMENTAIRES

International Inventories

Inventaires internationaux

TSCA	Complies Conforme
DSL	All components are listed either on the DSL or NDSL. Tous les composants sont répertoriés soit sur le DSL ou NDSL

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

TSCA -United States Toxic Substances Control Act Section 8(b) Inventaire

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List Liste des substances domestiques

DSL/NDSL - Canadiennes/Liste des substances non domestiques

US Federal Regulations

Règlement fédéral des États-Unis

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

L'article 313 du Titre III de la Superfund Amendments and Reauthorization Act of 1986 (SARA). Ce produit contient un produit chimique ou chimique qui est assujetti aux exigences de déclaration de la Loi et du titre 40 du Code de réglementation fédérale, Partie 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Manganese dioxide	1313-13-9	30	1.0
Zinc	7440-66-6	8	1.0

SARA 311/312 Hazard Categories

SARA 311/312 Catégories de dangers

Acute Health Hazard	No
Risque aigu pour la santé	non
Chronic Health Hazard	No
Risque chronique pour la santé	non
Fire Hazard	No
Incendie Risque	non
Sudden release of pressure hazard	No
Libération soudaine du risque de pression	non
Reactive Hazard	No
Risque réactif	non

CWA (Clean Water Act)**CWA (Loi sur l'eau propre)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Ce produit contient les substances suivantes qui sont des polluants réglementés en vertu de la Loi sur l'eau propre (40 CFR 122,21 et 40 CFR 122,42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc		X	X	
Potassium hydroxide	1000 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Ce matériel, tel qu'il est fourni, contient une ou plusieurs substances réglementées comme substance dangereuse en vertu de la Loi sur l'indemnisation et la responsabilité en matière d'indemnisation et de responsabilité environnementales globales (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Zinc 7440-66-6	1000 lb		RQ 454 kg final RQ RQ 1000 lb final RQ
Potassium hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

Règlement des États-Unis

California Proposition 65

Proposition de la Californie 65

This product does not contain the Proposition 65 chemicals.

Ce produit ne contient pas les produits chimiques de la Proposition 65

U.S. State Right-to-Know Regulations

Règlement sur le droit de savoir des États-Unis

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Manganese dioxide 1313-13-9		X	X	X	
Zinc 7440-66-6	X	X	X		X
Potassium hydroxide 1310-58-3	X	X	X		X
Graphite 7782-42-5	X	X	X		

International Regulations

Règlement international

Mexico**National occupational exposure limits**

Limites nationales d'exposition professionnelle

Component	Carcinogen Status	Exposure Limits
Manganese dioxide 1313-13-9		Mexico: TWA= 0.2 mg/m ³
Graphite 7782-42-5		Mexico: TWA= 2 mg/m ³

Mexico - Occupational Exposure Limits – Carcinogens

Mexico - Limites d'exposition professionnelle - Cancérogène

16. OTHER INFORMATION

16.AUTRES INFORMATIONS

Prepared By

Préparé par

AGAWO NEW ENERGY TECHNOLOGY CO.,LTD

Revision Date

Date de révision

27-Jan-2020

Revision Note

Note de révision

No information available

Aucune information disponible

End of Safety Data Sheet

Feuille de données de fin de sécurité

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: ALKALINE BATTERY LR03 FOREO (AAA)

Revision date: 19-Dec-2017

Printing date: 19-Dec-2017

1. Identification

(a) Product identifier

Product name: ALKALINE BATTERY LR03 FOREO (AAA)

(b) Other means of identification

Product description: Model: LR03 (AAA)
Nominal Voltage:1.5V
Weight: 11.0g
Dimension: 44.0mm×10.0mm (T×D)

(c) Recommended use of the chemical and restrictions on use

Recommended use: Alkaline Battery.
Restriction on use: No information available.

(d) Details of the supplier of the product

Company name(China) Guangdong Liwang New Energy Co., Ltd.
Address: shima District, Tangxia Town, Dongguan City, Guangdong Province, China
E-mail: qa1@liwangbattery.com
Telephone: +86-769-86201111-8062

(e) Emergency phone number

+86-769-86201111-8062

2. Hazard(s) identification

(a) Classification of the chemical

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 1

(b) GHS Label elements, including precautionary statements

Emergency Overview

Signal word

Danger

Hazard Statements

Harmful if swallowed

Harmful in contact with skin

Causes severe skin burns and eye damage

Causes serious eye damage

Causes damage to organs through prolonged or repeated exposure

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: ALKALINE BATTERY LR03 FOREO (AAA)

Revision date: 19-Dec-2017

Printing date: 19-Dec-2017



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. Intended use of the product should not result in exposure to the chemical substance. This is a battery. In case of rupture: the above hazards exist.

Precautionary Statements – Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

In case of inadequate ventilation wear respiratory protection

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements – Response

Specific measures (see .? on this label)

IF exposed or concerned: Get medical advice/attention

Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor/physician

Skin

IF ON SKIN: Wash with plenty of soap and water

Take off contaminated clothing and wash before reuse

If skin irritation or rash occurs: Get medical advice/attention

Inhalation

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor/physician.

if you feel unwell, Rinse mouth. Don't induce vomiting

Precautionary Statements – Storage: Store locked up

Precautionary Statements – Disposal: Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC): Not applicable

(c) Other information

Very toxic to aquatic life with long lasting effects;

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

(d) Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: ALKALINE BATTERY LR03 FOREO (AAA)

Revision date: 19-Dec-2017

Printing date: 19-Dec-2017

3. Composition/information on ingredients

(a) Mixtures information

Chemical name	CAS No.	Concentration%
Manganese Dioxide	1313-13-9	35.6
Manganese	7439-96-5	2.34
Calcium stearate	1592-23-0	2.13
Zinc	7440-66-6	13.2
Nylon-66	32131-17-2	2.45
Acrylic resin	9003-01-4	1.10
Potassium hydroxide	1310-58-3	6.60
Water	7732-18-5	7.56
Iron	7439-89-6	18.62
Graphite	7782-42-5	10.40

4. First-aid measures

(a) Description of first aid measures

General Advice	First aid is upon rupture of sealed battery. Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
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.
Skin contact:	Wash off immediately with soap and plenty of water for at least 15 minutes. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Inhalation:	Remove to fresh air. Get medical attention immediately if symptoms occur. May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Ingestion:	Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. May produce an allergic reaction. If an allergic reaction occurs, stop use and seek medical help right away. Call a physician or poison control center immediately.
Self-protection of the first aider:	Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

(b) Most important symptoms/effects, acute and delayed

Most important symptoms and effects	Burning sensation. Itching. Rashes. Hives. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing
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(c) Indication of any immediate medical attention and special treatment needed

Notes to Physician	May cause sensitization of susceptible persons. Treat symptomatically.
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Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: ALKALINE BATTERY LR03 FOREO (AAA)

Revision date: 19-Dec-2017

Printing date: 19-Dec-2017

5. Fire-fighting measures

(a) Extinguishing media

Suitable extinguishing media: Use foam, dry powder or dry sand, CO₂ as appropriate.

Unsuitable extinguishing media: No information available.

(b) Special hazards arising from the chemical

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation. This could result in the release of flammable or corrosive materials. Hazardous combustion products: CO, CO₂, Metal oxides, Irritating fumes

(c) Special protective equipment and precautions for fire-fighters

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

6. Accidental release measures

(a) Personal precautions, protective equipment and emergency procedures

Personal Precautions Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other Information Refer to protective measures listed in Sections 7 and 8.

(b) Environmental Precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

(c) Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

(a) Precautions for safe handling

In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

(b) Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

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According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: ALKALINE BATTERY LR03 FOREO (AAA)

Revision date: 19-Dec-2017

Printing date: 19-Dec-2017

Incompatible Products

Strong acids. Strong oxidizing agents. Strong bases.

8. Exposure controls/personal protection

(a) Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese dioxide 1313-13-9	TWA: 0.02 mg/m ³ Mn TWA: 0.1 mg/m ³ Mn	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³
Zinc 7440-66-6	STEL: 10mg/m ³ respirable fraction TWA: 2mg/m ³ respirable fraction	TWA: 5mg/m ³ fume TWA: 15mg/m ³ total dust TWA: 5mg/m ³ respirable fraction	IDLH: 50 mg/m ³ Ceiling: 15mg/m ³ dust TWA: 5mg/m ³ dust and fume STEL: 10mg/m ³ fume
Graphite 7782-42-5	TWA: 2 mg/m ³ respirable fraction all forms except graphite fibers	TWA: 15 mg/m ³ total dust synthetic TWA: 5 mg/m ³ respirable fraction synthetic (vacated) TWA: 2.5 mg/m ³ respirable dust natural (vacated) TWA: 10 mg/m ³ total dust synthetic (vacated) TWA: 5 mg/m ³ respirable fraction synthetic TWA: 15 mppcf natural	IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³ respirable dust

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value

OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

(b) Appropriate engineering controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems

(c) Individual protection measures, such as personal protective equipment

Eye/Face Protection

Face protection shield.

Skin and Body Protection

Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves.

Respiratory Protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: ALKALINE BATTERY LR03 FOREO (AAA)

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9. Physical and chemical properties

(a) Appearance	solid
(b) Odor	Odorless
(c) Odor threshold	Not available.
(d) pH	Not available.
(e) Melting point/freezing point	Not available.
(f) Initial boiling point and boiling range	Not available.
(g) Flash point	Not applicable.
(h) Evaporation rate	Not applicable.
(i) Flammability	Non flammable.
(j) Upper/lower flammability or explosive limits	Not available.
(k) Vapor pressure	Not applicable.
(l) Vapor density	Not available.
(m) Relative density	Not available.
(n) Solubility(ies)	Insoluble in water.
(o) Partition coefficient: n-octanol/water	Not available.
(p) Auto-ignition temperature	Not available.
(q) Decomposition temperature	Not available.
(r) Viscosity	Not available.

10. Stability and reactivity

(a) Reactivity

No data available.

(b) Chemical stability

Stable under recommended storage conditions.

(c) Possibility of hazardous reactions

None under normal processing.

(d) Conditions to avoid

None known based on information supplied.

(e) Incompatible materials

Strong acids. Strong oxidizing agents. Strong bases.

(f) Hazardous decomposition products

Carbon oxides.

11. Toxicological information

(a) Information on the likely routes of exposure

Product Information

Product does not present an acute toxicity hazard based on known or

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

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Product name: ALKALINE BATTERY LR03 FOREO (AAA)

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	supplied information.
	In case of rupture:
Inhalation:	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause sensitization of susceptible persons. (based on components)
Ingestion:	Specific test data for the substance or mixture is not available. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed. (based on components). May cause additional affects as listed under "Inhalation".
Skin contact:	Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Irritating to skin. Prolonged contact may cause redness and irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Eye contact:	Specific test data for the substance or mixture is not available. Expected to be an irritant based on components. Severely irritating to eyes. Causes serious eye damage. May cause burns. May cause irreversible damage to eyes.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Manganese dioxide 1313-13-9	= 9000 mg/kg (Rat)		
Iron 7439-89-6	= 984 mg/kg (Rat)		
Graphite 7782-42-5	> 10000 mg/kg (Rat)		

(b) Information on toxicological characteristics

Symptoms

Erythema (skin redness). May cause redness and tearing of the eyes. May cause blindness. Burning. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing.

(C) Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	May cause sensitization of susceptible persons. May cause sensitization by skin contact. May cause sensitization by inhalation.
Mutagenic Effects	No information available.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

IARC (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive Toxicity No information available

STOT - single exposure No information available

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication

Safety Data Sheet

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Product name: ALKALINE BATTERY LR03 FOREO (AAA)

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Chronic Toxicity	Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).
Target Organ Effects	No known effect based on information supplied. Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contains a known or suspected mutagen. Possible risk of irreversible effects. Contains a known or suspected carcinogen. Contains a known or suspected reproductive toxin. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system.
Aspiration Hazard	Respiratory system. Eyes. Skin. May affect the genetic material in germ cells (sperm and eggs). Gastrointestinal tract (GI). Reproductive System. Blood. Central Nervous System (CNS). Kidney. Lungs. Nasal cavities.
	No information available.

12. Ecological information

(a) Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia (Water Flea)	Magna
Iron 7439-89-6		96h LC50: = 13.6 mg/L (Morone saxatilis)			
Potassium hydroxide 1310-58-3		96h LC50: = 80 mg/L (Gambusia affinis)			
Zinc 7440-66-6	96h EC50: 0.11 - 0.271 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.09 - 0.125 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 2.16 - 3.05 mg/L (Pimephales promelas) 96h LC50: 0.211 - 0.269 mg/L (Pimephales promelas) 96h LC50: = 2.66 mg/L (Pimephales promelas) 96h LC50: = 30 mg/L (Cyprinus carpio) 96h LC50: = 0.45 mg/L (Cyprinus carpio) 96h LC50: = 7.8 mg/L (Cyprinus carpio) 96h LC50: = 3.5 mg/L (Lepomis macrochirus) 96h LC50: = 0.24 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.59 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.41 mg/L (Oncorhynchus mykiss)		48h EC50: 0.139 - 0.908 mg/L	

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Product name: ALKALINE BATTERY LR03 FOREO (AAA)

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(b) Persistence and Degradability

No information available.

(c) Bioaccumulative potential

No information available.

(d) Other adverse effects

No information available.

13. Disposal considerations

(a) Waste treatment methods

Disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of contents/containers in accordance with local regulations

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Zinc 7440-66-6	Ignitable powder Toxic
Potassium hydroxide 1310-58-3	Toxic Corrosive

14. Transport information

DOT	NOT REGULATED
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
IMDG/IMO	Not regulated
Hazard Class	N/A
Marine Pollutant	Product is a marine pollutant according to the criteria set by IMDG/IMO
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: ALKALINE BATTERY LR03 FOREO (AAA)

Revision date: 19-Dec-2017

Printing date: 19-Dec-2017

15. 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
7439-96-5	Listed	Not listed	Listed	Listed	Listed	Listed
1592-23-0	Listed	Listed	Listed	Listed	Listed	Listed
7440-66-6	Listed	Not listed	Listed	Listed	Listed	Listed
32131-17-2	Listed	Listed	Listed	Listed	Listed	Not listed
9003-01-4	Listed	Listed	Listed	Listed	Listed	Listed
1310-58-3	Listed	Not listed	Listed	Listed	Listed	Listed
7732-18-5	Listed	Listed	Not listed	Listed	Listed	Not listed
7439-89-6	Listed	Not listed	Listed	Listed	Listed	Not listed
7782-42-5	Listed	Listed	Listed	Listed	Listed	Listed

16. Other information, including date of preparation or last revision

(a) Preparation and revision information

Date of previous revision: Not applicable.

Date of this revision: 19-Dec-2017

Revision summary: The first New SDS

(b) Abbreviations and acronyms

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.

(c) Disclaimer

Because all of our batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

----- End of the SDS -----

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN
Product name: ALKALINE BATTERY

Revision date: 19/03/2015
Printing date: 19/03/2015

1. Identification

(a) Product identifier

Product name: ALKALINE BATTERY

(b) Other means of identification

Product description: Model: LR03
Nominal Voltage: 1.5V
Weight: 11.3g
Dimension: 10.5mm×44.5mm (D×H)

(c) Recommended use of the chemical and restrictions on use

Recommended use: Battery.
Restriction on use: No information available.

(d) Details of the supplier of the product

Company name(China) Guangdong Liwang New Energy Co., Ltd
Address: Liwang Industrial Estate, Shima Village, Tangxia Town, Dongguan City, GuangDong Province, CHINA
E-mail: Liwang@Liwangbattery.com
Telephone: +86-769-87888653

(e) Emergency phone number

+86-769-87888653

2. Hazard(s) identification

(a) Classification of the chemical

The batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. A sealed ALKALINE BATTERY is not hazardous in normal use.

(b) Label elements

Pictogram(s): No pictogram.
Signal word: No signal word.
Hazard statements: No hazard statement.
Precautionary statements: No precautionary statement.

(c) Description of any hazards not otherwise classified

In case of mistreatment (abusive over charge, reverse charge, external short circuit...) and in case of fault some electrolyte can leak from the cell through the safety device. In these cases refer to the risk of the electrolyte. Contact with internal components may cause irritation or severe burns. Irritating to eyes, respiratory system, and skin. The electrode materials are only hazardous, if the materials are released by mechanical damaging of the cell or if exposed to fire.

Skin touch: Contact with battery electrolyte may cause burns and skin irritation.

Eyes touch: Contact with battery electrolyte may cause burns. Eye damage is possible.

Inhalation: Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.

Ingestion: Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN
Product name: ALKALINE BATTERY

Revision date: 19/03/2015
Printing date: 19/03/2015

(d) Ingredient with unknown acute toxicity

No information available.

3. Composition/information on ingredients

(a) Mixtures information

Chemical name	CAS No.	Concentration%
Manganese dioxide	1313-13-9	40
Zinc	7440-66-6	16
Potassium hydroxide	1310-58-3	8
Water	7732-18-5	10
Iron	7439-89-6	17
Paper	RR-01108-5	1
Copper	7440-50-8	3
Nylon-6	25038-54-4	2
Graphite	7782-42-5	3

4. First-aid measures

(a) Description of first aid measures

- Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice / attention if you feel unwell.
- Skin contact: Remove contaminated clothes and rinse the skin with plenty of water. Get medical advice / attention if you feel unwell.
- Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing. Get medical advice / attention if you feel unwell.
- Ingestion: Have victim drink 60 to 240 mL (2-8 oz.) of water. and DO NOT induce vomiting. Get medical aid.

(b) Most important symptoms/effects, acute and delayed

Contact with internal components may cause allergic skin sensitization (rash) and irritate eyes, skin, nose, throat, respiratory system. Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).

(c) Immediate medical attention and special treatment

No information available.

5. Fire-fighting measures

(a) Extinguishing media

- Suitable extinguishing media: Use foam, dry powder or dry sand, CO₂ as appropriate.
- Unsuitable extinguishing media: No information available.

(b) Special hazards arising from the chemical

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation. This could result in the release of flammable or corrosive materials. Hazardous combustion products: CO,

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: ALKALINE BATTERY

Revision date: 19/03/2015

Printing date: 19/03/2015

CO₂, Metal oxides, Irritating fumes

(c) Special protective equipment and precautions for fire-fighters

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

6. Accidental release measures

(a) Personal precautions, protective equipment and emergency procedures

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area, dispose the case after the batteries cool and vapors dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors.

(b) Methods and materials for containment and cleaning up

If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters.

7. Handling and storage

(a) Precautions for safe handling

Always follow the warning information on the batteries and in the manuals of devices. Only use the recommended battery types. Keep batteries away from children. For devices to be used by children, the battery casing should be protected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery change always replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throw batteries into water. Do not throw batteries into fire. Avoid deep discharge. Do not short-circuit batteries Use recommended charging time and current.

(b) Conditions for safe storage, including any incompatibilities

Don't handling ALKALINE BATTERY with metalwork. Do not open, disassemble, crush or burn battery. Ensure good ventilation/ exhaustion at the workplace.

Prevent formation of dust.

Information about protection against explosions and fires: Keep ignition sources away- Do not smoke.

Recommended at 0°C~+35°C for long period storage.

Do not storage ALKALINE BATTERY haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

Keep out of reach of children.

Do not expose ALKALINE BATTERY to heat or fire. Avoid storage in direct sunlight.

Do not store together with oxidizing and acidic materials.

8. Exposure controls/personal protection

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Product name: ALKALINE BATTERY

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Printing date: 19/03/2015

(a) Control parameters

Not established.

(b) Appropriate engineering controls

Under normal conditions (during charge and discharge) release of ingredients does not occur.

(c) Personal protective equipment

Respiratory protection:	No personal respiratory protective equipment normally required. In case of inadequate ventilation wear respiratory protection.
Hand protection:	Wear protective gloves.
Eye/face protection:	No personal protective equipment normally required.
Skin/body protection:	Wear protective clothing to prevent contact.

9. Physical and chemical properties

(a) Appearance	Cylindrical solid
(b) Odor	Monotony
(c) Odor threshold	Not available.
(d) pH	Not available.
(e) Melting point/freezing point	Not available.
(f) Initial boiling point and boiling range	Not available.
(g) Flash point	Not applicable.
(h) Evaporation rate	Not applicable.
(i) Flammability	Non flammable.
(j) Upper/lower flammability or explosive limits	Not available.
(k) Vapor pressure	Not applicable.
(l) Vapor density	Not available.
(m) Relative density	Not available.
(n) Solubility(ies)	Insoluble in water.
(o) Partition coefficient: n-octanol/water	Not available.
(p) Auto-ignition temperature	130°C
(q) Decomposition temperature	Not available.
(r) Viscosity	Not available.

10. Stability and reactivity

(a) Reactivity

Stable under recommended storage and handling conditions.

(b) Chemical stability

Stable under normal conditions.

(c) Possibility of hazardous reactions

When heated above 150°C the risk of rupture occurs. Due to special safety construction, rupture implies controlled release of pressure without ignition.

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Product name: ALKALINE BATTERY

Revision date: 19/03/2015
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(d) Conditions to avoid

Do not subject ALKALINE BATTERY to mechanical shock. Keep away from open flames, high temperature.

(e) Incompatible materials

Strong oxidizer, strong acid.

(f) Hazardous decomposition products

Under fire conditions, the electrode materials can form carcinogenic nickel and cobalt oxides.

11. Toxicological information

(a) Information on the likely routes of exposure

Inhalation:	Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.
Ingestion:	Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.
Skin contact:	Contact with battery electrolyte may cause burns and skin irritation.
Eye contact:	Contact with battery electrolyte may cause burns. Eye damage is possible.

Under normal conditions (during charge and discharge) release of ingredients does not occur. If accidental release occurs see information in section 2, 3, and 4. Swallowing of a battery can be harmful. Call the local Poison Control Centre for advice and follow-up.

(b) Information on toxicological characteristics

Acute toxicity:	No data available.
Skin corrosion/irritation:	The liquid in the battery irritates.
Serious eye damage/irritation:	The liquid in the battery irritates.
Respiratory sensitization:	The liquid in the battery may cause sensitization to some person.
skin sensitization:	The liquid in the battery may cause sensitization to some person.
Carcinogenicity:	Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).
Germ Cell Mutagenicity:	No data available.
Reproductive Toxicity:	No data available.
STOT-Single Exposure:	No data available.
STOT-Repeated Exposure:	No data available.
Aspiration Hazard:	No data available.

12. Ecological information

(a) Ecotoxicity

Water hazard class 1(Self-assessment): slightly hazardous for water.

(b) Persistence and Degradability

No information available.

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(c) Bioaccumulative potential

No information available.

(d) Mobility in soil

No information available.

(e) Other adverse effects

No information available.

13. Disposal considerations

(a) Safe handling and methods of disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

14. Transport information

According to PACKING INSTRUCTION 965 ~ 970 of IATA DGR 56rd Edition for transportation, the special provision 188 of IMDG (inc Amdt 35-10). The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles. Don't put the goods together with oxidizer and chief food chemicals. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don't stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

(a) UN number	3480&3481
(b) UN Proper shipping name	LITHIUM ION BATTERIES (including lithium ion polymer batteries) or; LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)
(c) Transport hazard class(es)	9
(d) Packing group (if applicable)	II
(e) Marine pollutant (Yes/No)	No
(f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	No information available.
(g) Special precautions	No information available.

15. Regulatory information

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

CAS No.	USA	EU	Japan	Korea	China	Canada
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Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

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Product name: ALKALINE BATTERY

Revision date: 19/03/2015
Printing date: 19/03/2015

	TSCA	EINECS	ENCS	ECL	IECSC	DSL
1313-13-9	Listed	Listed	Listed	Listed	Listed	Listed
7440-66-6	Listed	Listed	Not listed	Listed	Listed	Not listed
1310-58-3	Listed	Not listed	Listed	Not listed	Listed	Not listed
7732-18-5	Listed	Listed	Listed	Listed	Listed	Not listed
7439-89-6	Listed	Listed	Listed	Listed	Listed	Not listed
RR-01108-5	Listed	Listed	Listed	Listed	Listed	Listed
7440-50-8	Not listed	Listed	Listed	Listed	Listed	Not listed
25038-54-4	Listed	Not listed	Listed	Not listed	Not listed	Not listed
7782-42-5	Listed	Listed	Not listed	Listed	Listed	Listed

16. Other information, including date of preparation or last revision

(a) Preparation and revision information

Date of previous revision: Not applicable.

Date of this revision: 19/03/2015

Revision summary: The first New SDS

(b) Abbreviations and acronyms

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.

(c) Disclaimer

Because all of our batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

----- End of the SDS -----

Article Information Sheet

Fiche d'information Article

Product name: Alkaline batteries

Printing date: 14-Jan-2020

Nom du produit: Piles alcalines

Date d'impression: 14-Jan-2020

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 batteries
Model: LR6
Issue Date: 14-Jan-2020

2. COMPANY INFORMATION

Company name(China) Guangdong Liwang New Energy Co.,Ltd.
Address: shima District,Tangxia Town,Dongguan City ,Guangdong Province,China
E-mail: qa1@liwangbattery.com
Telephone: +86-769-86201111-8062

3. ARTICLE INFORMATION

Description	Alkaline batteries
Use	Alkaline Battery.
Brand	----

Article Feuillet 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: Piles alcalines
Modèle: LR6
Date 14-Jan-2020
d'émission:

2. INFORMATIONS SUR LA SOCIÉTÉ

Nom de l'entreprise Guangdong Liwang New Energy Co., Ltd. (Chine)
Adresse: Shima District, Tangxia Town, la ville de Dongguan, province du Guangdong, en Chine
Email: qa1@liwangbattery.com
Téléphone: + 86-769-86201111-8062

3. ARTICLE D'INFORMATION

La description	Piles alcalines
Utilisation	Pile alcaline.

Article Information Sheet

Fiche d'information Article

Product name: Alkaline batteries

Printing date: 14-Jan-2020

Nom du produit: Piles alcalines

Date d'impression: 14-Jan-2020

Image



Marque

Image



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%
Iron	7439-89-6	18
Manganese dioxide	1313-13-9	40
Potassium hydroxide	1310-58-3	8
Water	7732-18-5	10
Zinc	7440-66-6	16
Copper	7440-50-8	3
Nylon	9008-75-7	2
Graphite	7782-42-5	3

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

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%
Le fer	7439-89-6	18
Dioxyde de manganèse	1313-13-9	40
L'hydroxyde de potassium	1310-58-3	8
Eau	7732-18-5	10
Zinc	7440-66-6	16
Cuivre	7440-50-8	3
Nylon	9008-75-7	2
Graphite	7782-42-5	3

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.

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Nom du produit: Piles alcalines

Date d'impression: 14-Jan-2020

	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 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).

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	Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation. This could result in the release of flammable or corrosive materials. Hazardous combustion products: CO, CO ₂ , Metal oxides, Irritating fumes
Precautions for fire-fighters	Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire

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.
Lentilles de 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).

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and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

7. HANDLING AND STORAGE

Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.
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, state/provincial and local regulations. Do not accumulate large quantities of used batteries for disposal as accumulations could cause batteries to

Special hazards arising from the chemical	Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation. This could result in the release of flammable or corrosive materials. Hazardous combustion products: CO, CO ₂ , Metal oxides, Irritating fumes
Precautions for fire-fighters	Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

7. HANDLING AND STORAGE

Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.
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

Article Information Sheet

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Product name: Alkaline batteries

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Nom du produit: Piles alcalines

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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

DOT	NOT REGULATED
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
IMDG/IMO	Not regulated
Hazard Class	N/A
Marine Pollutant	Product is a marine pollutant according to the criteria set by IMDG/IMO
RID	Not regulated
ADR	Not regulated
ADN	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
7439-89-6	Listed	Listed	Listed	Listed	Listed	Not listed
1313-13-9	Listed	Listed	Listed	Listed	Listed	Listed

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, 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

DOT	NOT REGULATED
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
IMDG/IMO	Not regulated
Hazard Class	N/A
Marine Pollutant	Product is a marine pollutant according to the criteria set by IMDG/IMO
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

Article Information Sheet

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Product name: Alkaline batteries

Printing date: 14-Jan-2020

Nom du produit: Piles alcalines

Date d'impression: 14-Jan-2020

1310-58-3	Listed	Not listed	Listed	Not listed	Listed	Not listed
7732-18-5	Listed	Listed	Listed	Listed	Listed	Not listed
7440-66-6	Listed	Listed	Not listed	Listed	Listed	Not listed
7440-50-8	Not listed	Listed	Listed	Listed	Listed	Not listed
9008-75-7	Not listed	Listed	Listed	Listed	Listed	Not listed
7782-42-5	Listed	Listed	Not 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 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 -----

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
7439-89-6	Listed	Listed	Listed	Listed	Listed	Not listed
1313-13-9	Listed	Listed	Listed	Listed	Listed	Listed
1310-58-3	Listed	Not listed	Listed	Not listed	Listed	Not listed
7732-18-5	Listed	Listed	Listed	Listed	Listed	Not listed
<u>7440-66-6</u>	Listed	Listed	Not listed	Listed	Listed	Not listed
7440-50-8	Not listed	Listed	Listed	Listed	Listed	Not listed
9008-75-7	Not listed	Listed	Listed	Listed	Listed	Not listed
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Article Information Sheet

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