Document #: ALK NA PSDS
 Issue Date: 4/16/2010

 Supersedes: GMEL 2002.9 – NA
 Reaffirmed: 01/01/2012

 Updated: 2/27/2013



Product Safety Data Sheet (PSDS)

US Office

Duracell, a P&G Business Berkshire Corporate Park 14 Research Drive Bethel, CT USA 06401 (203) 796-4000

Canadian Office

Duracell, a P&G Business 4711 Yonge Street Toronto, Ontario Canada M2N 6K8 (416) 730-4711

SECTION I - PRODUCT IDENTIFICATION



Representative Product Image/ Packaging

The battery products referenced in this PSDS document are consumer products. Under OSHA regulations, batteries are considered "articles" and are not subject to the OSHA Hazard Communication Standard MSDS/SDS requirements which apply for "hazardous chemicals in the workplace." Additionally, batteries are considered "articles" under the Global Harmonized System and are exempted from the GHS labeling and SDS classification criteria. This PSDS document is provided as service in response to requests for information on battery use, safety and regulatory compliance.

Identity: Alkaline Batteries Duracell® Sub-Brands: COPPERTOP®, ULTRA®,		Description: Consumer Product			
Duracell Designation	Size	Nominal Voltage			
MN/MX2400	AAA	1.5V			
MN/MX1500	AA	1.5V			
MN1400 / MX1400	С	1.5V			
MN1300 / MX1300	D	1.5V			
MN1604	9V	9V			
MN2500 / MX2500	AAAA	1.5 V			
Other alkaline designations covered by this PSDS: 7K67, MN1203, MN908, MN918, MN9100					
Consumer Relations 1-800-551-2355 (9:00 AM – 5:00 PM EST)					

SECTION II - HAZARDS IDENTIFICATION

CAUTION: Batteries may explode or leak, and cause burn injury, if recharged, disposed of in fire, mixed with a different battery type, inserted backwards or disassembled. Replace all used batteries at the same time. Do not carry batteries loose in your pocket or purse. Do not remove the battery label. Keep small batteries (i.e., AAA) away from children. If swallowed, consult a physician at once. **For information on treatment, call (202) 625-3333 collect.**

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SECTION III - COMPOSITION AND INGREDIENTS

The chemicals and metals in this product are contained in a sealed can. Exposure to the contents will not occur unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused. Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200. and/or WHMIS under the HPA:

Chemical Name	CAS No.	Composition Range	LD50/LC50	Exposure Limits
Manganese Dioxide	1313-13-9	35-40%	LD50 oral rat>3478 mg/kg	5 mg/m3 Ceiling OSHA PEL 0.2 mg/m3 TWA ACGIH TLV
Zinc	7440-66-6	10-25%		None established for zinc metal
Potassium Hydroxide	1310-58-3	5-10%	LD50 oral rat 273 mg/kg	2 mg/m3 Ceiling ACGIH TLV
Graphite (natural or synthetic)	7782-42-5; 7440-44-0	1-5%		Natural: 15 mppcf TWA OSHA PEL 2 mg/m3 TWA (respirable dust) ACGIH TLV; Synthetic: 5 mg/m3 TWA (respirable dust), 15 mg/m3 TWA (total dust) OSHA PEL 2 mg/m3

SECTION IV - FIRST AID INFORMATION

Damaged battery will release concentrated potassium hydroxide, which is caustic.

Ingestion: Do not induce vomiting. Seek medical attention immediately. **CALL NATIONAL BATTERY INGESTION HOTLINE at (202)-625-3333 collect, day or night.**

Eye Contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Seek medical attention if irritation persists.

Skin Contact: Remove contaminated clothing and wash skin with soap and water. If irritation persists, seek medical attention.

Inhalation: Move to fresh air. If irritation persists, seek medical attention.

SECTION V - FIRE FIGHTING INFORMATION

Hazardous Combustion Products: Thermal degradation may produce hazardous fumes of zinc and manganese; hydrogen gas, caustic vapors of potassium hydroxide and other toxic by-products.

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

Protection of Firefighters:

<u>Specific Hazards Arising from the Material</u>: Batteries may burst and release hazardous decomposition products when exposed to a fire situation.

<u>Protective Equipment and Precautions for Firefighters</u>: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Clean-up personnel should wear appropriate clothing to avoid eye and skin contact and inhalation of vapors and fumes. Ventilate area. Carefully collect batteries and place in an appropriate container for disposal.

SECTION VII - HANDLING AND STORAGE

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Precautions To Be Taken in Handling: Avoid mechanical or 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.

Precautions To Be Taken in Storage: Store batteries in a dry place at normal room temperature. Do not refrigerate – this will not make them last longer.

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

NOT APPLICABLE - Finished consumer product

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance (color, physical form, shape): Finished consumer product – cylindrical battery with Duracell[®] label

Volatile Organic Compound (VOC): Not applicable - Product not regulated for VOC Content at State or Federal level

SECTION X - STABILITY AND REACTIVITY

Finished consumer product – stable under normal conditions of use. Contents are incompatible with strong oxidizing agents. Do not heat, crush, disassemble, short circuit or recharge.

SECTION XI - TOXICOLOGICAL INFORMATION

This battery product is a finished consumer product. It is classified as an "article" and exempt under the federal OSHA Hazard Communication standard.

Chronic Effects: No chronic health effects reported.

Target Organs: No target organs reported.

Carcinogenicity: This finished consumer product is not carcinogenic.

SECTION XII - ECOLOGICAL INFORMATION

No eco-toxicity data are available. This product is not expected to present an environmental hazard. Duracell alkaline batteries do not contain any added mercury, cadmium or lead.

SECTION XIII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of in compliance with federal, state/provincial and local regulations. *Non-Household Setting (US Federal)*: Alkaline batteries covered by this PSDS, in their original form (finished consumer product), when disposed of as waste, are considered **non-hazardous** waste according to Federal RCRA regulation (40 CFR 261).

Non-Household Setting (California): None

Household Use: Alkaline batteries can be safely disposed of with normal household waste. Do not accumulate large quantities used batteries for disposal as accumulation could cause batteries to short-circuit. Do not incinerate.

SECTION XIV - TRANSPORT INFORMATION

Alkaline batteries (sometimes referred to as "Dry cell" or "household" batteries) are not listed or regulated as dangerous goods under the IATA Dangerous Goods Regulations, ICAO Technical Instructions, IMDG Code, UN Model Regulations or U.S. hazardous regulations (49CFR).

However, special regulatory provisions apply that require batteries to be packaged in a manner that prevents the generation of a dangerous quantity of heat and short circuits. Product shipped in its original unopened Duracell packaging is compliant with the following packaging special provisions:

Ground Transport (US DOT): 49 CFR172.102 Special Provision 130

Air Transport (IATA)/ICAO: Special Provision A123 (54th Edition – 2013)

The words 'NOT RESTRICTED' and the 'Special Provision A123' must be included on the description of the substance on the Air Waybill, when air waybill is issued.

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Marine/Water Transport (IMDG): NONE

For Transportation Emergencies, call:

CHEMTREC Emergency Response Hotline 1-800-424-9300 (US & Canada)

SECTION XV - REGULATORY INFORMATION

United States:

OSHA: The finished alkaline battery product is considered an article and not covered by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

CPSIA 2008: Alkaline batteries are exempt. See CPSC Exemption Letter posted on P&G web site.

EPA Mercury Containing and Rechargeable Battery Management Act of 1996: Compliant

EPA TSCA: All intentionally-added components of this product are listed on the US TSCA Inventory.

EPA SARA 313/302/304/311/312 chemicals: Manganese compounds 35-40%; Zinc 10-25%

California: This product has been evaluated and does not require warning labeling under California Proposition 65.

State Right-to-Know and CERCLA: The following ingredients present in the finished product are listed on state right-to-know lists or state worker exposure lists:

Ingredient	CAS#	Level	CERCLA RQ		Stat	e		
				IL	MA	NJ	PA	RI
Manganese Dioxide	1313-13-9	35-40%	None	Y	Y	N	Y	Y
Zinc	7440-66-6	10-25%	1000 lbs	Y	Y	Y	Y	N
Potassium Hydroxide	1310-58-3	5-10%	1000 lbs	Y	Y	Y	Y	Y
Graphite	7782-42-5	1-5%	None	Y	Y	N	Y	Y
	7440-44-0							

Canada:

All ingredients are CEPA approved for import to Canada by Procter & Gamble. This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and this MSDS contains all information required by the Controlled Products Regulations.

SECTION XVI - OTHER INFORMATION				
P&G Hazard Rating:	Health:	0	4=EXTREME	
	Flammability:	0	3=HIGH	
	Reactivity:	0	2=MODERATE	
			1=SLIGHT	
			0=NOT SIGNIFICANT	

Hazard Ratings are supplied for use only in connection with occupational safety and health.

DISCLAIMER: This PSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company's knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of the product.

SAFETY DATA SHEET

Revision Number 1

Revision Date 29-Jan-2015

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The supplier identified below generated this SDS using the UL SDS template. UL did not test, certify, or approve the substance described in this SDS, and all information in this SDS was provided by the supplier or was reproduced from publically available regulatory data sources. UL makes no representations or warranties regarding the completeness or accuracy of the information in this SDS and disclaims all liability in connection with the use of this information or the substance described in this SDS. The layout, appearance and format of this SDS is © 2014 UL LLC. All rights reserved.

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

Product identifier

Product Name Li-ion Battery

Other means of identification

Issuing Date No data available

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use LITHIUM ION BATTERIES

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name DONGGUAN NEWSNOW ELECTRONICAL TECHNOLOGY CO.,LTD.

Supplier Address No.9A, Puxinhu Road North, Tangxia Town, Dongguan, Guangdong Province, China

Dongguan Guangdong 523719

CN

Supplier Phone Number Phone:+86-18682080231

Fax:+86-0769-8908 6921

Contact Phone+86-18682080231

Supplier Email newsnow2015@126.com

Emergency telephone number

2. HAZARDS IDENTIFICATION

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.

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (repeated exposure)	Category 1



GHS Label elements, including precautionary statements

Emergency Overview

Signal word

Danger

Hazard Statements

Causes skin irritation
Causes serious eye damage



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.

Appearance Blue

Physical State Solid containing liquid Solid

Odor Odorless

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product

Precautionary Statements - Response

Specific treatment (see supplemental first aid instructions on this label) Get medical advice/attention if you feel unwell

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 If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash before reuse

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

71.51% of the mixture consists of ingredient(s) of unknown toxicity

(II)

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Other information

May be harmful if swallowed May be harmful in contact with skin Very toxic to aquatic life with long lasting effects

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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Chemical Name	CAS No	Weight-%	Trade Secret
Supplier Trade Secret	Proprietary	10 - 30	*
Supplier Trade Secret	Proprietary	10 - 30	*
Supplier Trade Secret	Proprietary	7 - 13	*
Supplier Trade Secret	Proprietary	5 - 10	*
Supplier Trade Secret	Proprietary	3 - 7	*
Supplier Trade Secret	Proprietary	1 - 5	*

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice First aid is upon rupture of sealed battery.

Eye Contact 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. Do not rub affected area. Seek immediate medical

attention/advice.

Skin Contact Wash off immediately with soap and plenty of water for at least 15 minutes. Get

medical attention if irritation develops and persists.

Inhalation Remove to fresh air. Get medical attention immediately if symptoms occur.

Ingestion Rinse mouth immediately and drink plenty of water. Never give anything by mouth

to an unconscious person. Do NOT induce vomiting. Call a physician.

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).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Burning sensation. **Effects**

Indication of any immediate medical attention and special treatment needed



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Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable extinguishing media

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

Specific Hazards Arising from the Chemical

No information available.

Uniform Fire Code Irritant: Solid

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required. Evacuate personnel to safe areas.

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

Environmental Precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage

if safe to do so.

Methods and material 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.

(III)

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7. HANDLING AND STORAGE

Precautions for safe handling

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.

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.

Incompatible Products Strong acids. Strong oxidizing agents. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Supplier Trade Secret	TWA: 0.2 mg/m ³ Mn	(vacated) Ceiling: 5 mg/m ³	IDLH: 500 mg/m ³ Mn
		Ceiling: 5 mg/m ³ Mn	TWA: 1 mg/m³ Mn
			STEL: 3 mg/m³ Mn
Supplier Trade Secret	TWA: 2 mg/m ³ respirable	TWA: 15 mg/m³ total dust	IDLH: 1250 mg/m ³
	fraction all forms except graphite	synthetic	TWA: 2.5 mg/m ³ respirable
	fibers	TWA: 5 mg/m ³ respirable	dust
		fraction synthetic	
		(vacated) TWA: 2.5 mg/m ³	
		respirable dust natural	
		(vacated) TWA: 10 mg/m³ total	
		dust synthetic	
		(vacated) TWA: 5 mg/m ³	
		respirable fraction synthetic	
		TWA: 15 mppcf natural	
Supplier Trade Secret	TWA: 0.2 mg/m ³ fume TWA: 1	TWA: 0.1 mg/m³ fume	IDLH: 100 mg/m ³ dust, fume
	mg/m³ Cu dust and mist	TWA: 1 mg/m ³ dust and mist	and mist
		(vacated) TWA: 0.1 mg/m³ Cu	TWA: 1 mg/m ³ dust and mist
		dust, fume, mist	TWA: 0.1 mg/m ³ fume
Supplier Trade Secret	TWA: 1 mg/m³ respirable	TWA: 15 mg/m ³ total dust	TWA: 10 mg/m³ total dust
	fraction	TWA: 5 mg/m ³ respirable	TWA: 5 mg/m³ respirable dust
		fraction	
		(vacated) TWA: 15 mg/m³ total	
		dust	
		(vacated) TWA: 5 mg/m ³	
		respirable fraction (vacated)	
		TWA: 5 mg/m³ Al Aluminum	
Supplier Trade Secret	TWA: 2.5 mg/m ³ F	TWA: 2.5 mg/m ³ F	
		TWA: 2.5 mg/m³ dust	
		(vacated) TWA: 2.5 mg/m ³	

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



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Appropriate engineering controls

Engineering Measures Showers

Eyewash stations Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tight sealing safety goggles.

Skin and Body Protection Wear protective gloves and protective clothing. Long sleeved clothing. 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. Avoid contact with skin, eyes or clothing. Wear suitable

None known

gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State Solid containing liquid, Solid

Appearance Blue **Odor** Odorless

Color No information available Odor Threshold No information available

Property
pHValuesRemarksMethodNo data availableNone knownMelting / freezing pointNo data availableNone knownBoiling point / boiling rangeNo data availableNone knownFlash PointNo data availableNone knownEvaporation RateNo data availableNone known

Evaporation RateFlammability (solid, gas)
No data available
No data available

Flammability Limit in Air

Upper flammability limit

Lower flammability limit

No data available
No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone knownSpecific GravityNo data availableNone knownWater SolubilityInsolubleNone knownSolubility in other solventsNo data availableNone known

Water Solubility Solubility in other solvents No data available None known Partition coefficient: n-octanol/waterNo data available None known **Autoignition temperature** No data available None known **Decomposition temperature** No data available None known Kinematic viscosity No data available None known Dynamic viscosity No data available None known

Explosive properties

Oxidizing Properties

No data available

No data available

Other Information

Softening PointNo data availableVOC Content (%)No data availableParticle SizeNo data available

Particle Size Distribution

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong acids. Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products

Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Product does not present an acute toxicity hazard based on known or supplied information.

In case of rupture:.

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of

respiratory tract.

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.

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.

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.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Supplier Trade Secret	> 10000 mg/kg (Rat)	-	-



Information on toxicological effects

Symptoms Erythema (skin redness). May cause redness and tearing of the eyes. May cause

blindness. Burning.

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

Sensitization No information available.

Mutagenic Effects No information available.

Carcinogenicity Contains no ingredient listed as a carcinogen.

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 Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from

chronic or repeated exposure. (STOT RE).

Chronic Toxicity Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause

adverse effects on the bone marrow and blood-forming system. May cause adverse liver

effects.

Target Organ Effects Respiratory system. Eyes. Skin. Blood. Central Nervous System (CNS). Central Vascular

System (CVS). Kidney. Liver. Lungs.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 3,795.00 mg/kg ATEmix (dermal) 2,463.00 mg/kg (ATE)

ATEmix (inhalation-dust/mist)

541.00 mg/l

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12. ECOLOGICAL INFORMATION

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)
Supplier Trade Secret	96h EC50: 0.031 - 0.054	96h LC50: 0.0068 - 0.0156		48h EC50: = 0.03 mg/L
	mg/L (Pseudokirchneriella	mg/L (Pimephales promelas)		
	subcapitata) 72h EC50:	96h LC50: = 0.112 mg/L		
	0.0426 - 0.0535 mg/L	(Poecilia reticulata) 96h		
	(Pseudokirchneriella	LC50: = 0.3 mg/L (Cyprinus		
	subcapitata)	carpio) 96h LC50: = 0.8		
		mg/L (Cyprinus carpio) 96h		
		LC50: = 1.25 mg/L (Lepomis		
		macrochirus) 96h LC50: =		
		0.052 mg/L (Oncorhynchus		
		mykiss) 96h LC50: = 0.2		
		mg/L (Pimephales promelas)		
		96h LC50: < 0.3 mg/L		
		(Pimephales promelas)		

Persistence and Degradability

No information available.

Bioaccumulation

No information available

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

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.

California Hazardous Waste Codes 141

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

Chemical Name	California Hazardous Waste
Supplier Trade Secret	Toxic
Supplier Trade Secret	Ignitable powder

14. TRANSPORT INFORMATION



Note:

The transportation of primary lithium cells and batteries is regulated by the International Civil Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code and the US Department of Transportation. The batteries must meet the following criteria for shipment: 1. Air shipments must meet the requirements listed in Special Provision A45 of the International Air Transport Association Dangerous Goods Regulations. 2. Meet the requirements for the US Department of Transportation listed in 49 CFR 173.185. 3. The transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to the Federal Register December 15, 2004 (Hazardous Materials; Prohibited on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; Final Rule)

Lithium batteries shipped as "Lithium batteries", "Lithium batteries packed with equipment", or "Lithium batteries contained in equipment" may not be classified as "Dangerous Goods" when shipped in accordance with "special provision A45 of IATA-DGR" or "special provision 188 of IMO-IMDG Code"

DOT NOT REGULATED

Proper Shipping Name NON REGULATED Hazard Class N/A

Hazard Class N/A Emergency Response Guide 147

Number

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated NON REGULATED

Hazard Class N/A

IMDG/IMO Not regulated

Hazard Class N/A EmS-No. F-A, S-I

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

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



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Revision Date 29-Jan-2015 1203032 - Li-io Battery

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Supplier Trade Secret -		10 - 30	1.0
Supplier Trade Secret -		7 - 13	1.0
Supplier Trade Secret -		3 - 7	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

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)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Supplier Trade Secret		X	Х	

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)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Supplier Trade Secret	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Supplier Trade Secret			

US State Regulations

<u>California Proposition 65</u>
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Supplier Trade Secret			Х	Х	X
Supplier Trade Secret	Х	Х	Х		
Supplier Trade Secret	Х	Х	Х	Х	Х
Supplier Trade Secret		Х	Х		
Supplier Trade Secret	Х	Х	Х		
Supplier Trade Secret		Х		Х	

International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits



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Supplier Trade Secret (10 - 30)	Mexico: TWA 0.2 mg/m ³
Supplier Trade Secret (10 - 30)	Mexico: TWA= 2 mg/m ³
Supplier Trade Secret (7 - 13)	Mexico: TWA= 1 mg/m³ Mexico: TWA= 0.2 mg/m³ Mexico: STEL= 2 mg/m³
Supplier Trade Secret (3 - 7)	Mexico: TWA 10 mg/m ³

Mexico - Occupational Exposure Limits - Carcinogens

Canada

WHMIS Hazard Class

Non-controlled

16. OTHER INFORMATION

NFPA Health Hazards 2 Flammability 0 Instability 0 Physical and Chemical Hazards - HMIS Health Hazards 0 Flammability 0 Physical Hazard 0 Personal Protection

Prepared By Product Stewardship

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet