SAFETY DATA SHEET

Issuing Date No data available **Revision Date** 20-Jan-2015 **Revision Number** 1

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

Product identifier

Product Name **TIANQIU Carbon Zinc battery R03/AAA (No lead added)**

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Carbon Zinc Battery

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name GUANGZHOU TIANQIU ENTERPRISE CO., LTD.
Supplier Address 9/F TianQiu Business Building No.16-30, He Yi Rd., San Yuan Li Ave., GuangZhou China
GUANGZHOU
GUANDONG
510410
CN
Supplier Phone Number Phone:8620-36322277
Fax:8620-3623339
Contact Phone13825131170
Supplier Email qd@gztianqiu.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.

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Danger**

Hazard Statements
Harmful if swallowed
Harmful if inhaled
Causes severe skin burns and eye damage
Suspected of causing cancer
May cause damage to organs through prolonged or repeated exposure



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 No data available **Physical State** Solid **Odor** Odorless

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
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
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 (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
Immediately call a POISON CENTER or doctor/physician

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT 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

Unknown Toxicity
17.48% of the mixture consists of ingredient(s) of unknown toxicity

Other information

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
Zinc	7440-66-6	15 - 40	*
Manganese dioxide	1313-13-9	10 - 30	*
Graphite	7782-42-5	3 - 7	*
Zinc chloride	7646-85-7	3 - 7	*
Iron	7439-89-6	1 - 5	*
Carbon black	1333-86-4	1 - 5	*
PVC (Chloroethylene, polymer)	9002-86-2	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. 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 while removing all contaminated clothes and shoes. Seek immediate medical attention/advice.

Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.
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.
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).

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects	Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

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
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

Uniform Fire Code	Corrosive: Other--Solid Toxic: Solid Oxidizer: Class 1--Solid

Hazardous Combustion Products
Carbon oxides.

Physical/Chemical Reaction Properties	No data available.

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 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. Avoid generation of dust. Do not breathe dust.

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. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

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.

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. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Do not breathe dust. Avoid generation of dust.

Conditions for safe storage, including any incompatibilities

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

Incompatible Products Acids. Bases. Oxidizing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH

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
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
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
Zinc chloride 7646-85-7	STEL: 2 mg/m^3 fume TWA: 1 mg/m^3 fume	TWA: 1 mg/m^3 fume (vacated) TWA: 1 mg/m^3 fume (vacated) STEL: 2 mg/m^3 fume	IDLH: 50 mg/m^3 fume TWA: 1 mg/m^3 fume STEL: 2 mg/m^3 fume
Carbon black 1333-86-4	TWA: 3 mg/m^3 inhalable fraction	TWA: 3.5 mg/m^3 (vacated) TWA: 3.5 mg/m^3	IDLH: 1750 mg/m^3 TWA: 3.5 mg/m^3 TWA: 0.1 mg/m^3 Carbon black in presence of Polycyclic aromatic hydrocarbons PAH
PVC (Chloroethylene, polymer) 9002-86-2	TWA: 1 mg/m^3 respirable fraction	-	

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

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection If there is a risk of contact:. 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. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. Do not breathe dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Solid		
Appearance	No data available	**Odor**	Odorless
Color	No information available	**Odor Threshold**	No information available

Property	Values	Remarks Method
pH	No data available	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	Negligible	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No 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	No data available	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No 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
Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials
Acids. Bases. Oxidizing agent.

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. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract. Harmful by inhalation.
Eye Contact	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.
Skin Contact	Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Manganese dioxide 1313-13-9	= 9000 mg/kg (Rat)	-	-
Graphite 7782-42-5	> 10000 mg/kg (Rat)	-	-
Zinc chloride 7646-85-7	= 350 mg/kg (Rat)	-	-
Iron 7439-89-6	= 984 mg/kg (Rat)	-	-
Carbon black 1333-86-4	> 15400 mg/kg (Rat)	> 3 g/kg (Rabbit)	-

Information on toxicological effects

Symptoms Erythema (skin redness). Burning. May cause blindness. Coughing and/ or wheezing.

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 The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Carbon black 1333-86-4	A3	Group 2B		X
PVC (Chloroethylene, polymer) 9002-86-2		Group 3		

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Group 3 - Not Classifiable as to Carcinogenicity in Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

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 Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Contains a known or suspected carcinogen. Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse effects on the bone marrow and blood-forming system. Carbon black has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B) by inhalation.

Target Organ Effects	Respiratory system. Eyes. Skin. Gastrointestinal tract (GI). Blood. Central Nervous System (CNS). Central Vascular System (CVS). Kidney. Lymphatic System. Cardiovascular system. Liver. Lungs. Pancreas.
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)
1,190.00 mg/kg
ATEmix (inhalation-gas)
14,873.00 ppm (4 hr)
ATEmix (inhalation-dust/mist)
4.96 mg/l
ATEmix (inhalation-vapor)
36.36 ATEmix

12. ECOLOGICAL INFORMATION

This product contains a chemical which, although not listed, meets the IMDG criteria for being a severe marine pollutant

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)
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
Iron 7439-89-6		96h LC50: = 13.6 mg/L (Morone saxatilis)		
Carbon black 1333-86-4				24h EC50: > 5600 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Chemical Name	Log Pow
Manganese dioxide 1313-13-9	<0

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
Zinc 7440-66-6	Ignitable powder Toxic
Zinc chloride 7646-85-7	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT NOT REGULATED
- **Proper Shipping Name** NON REGULATED
- **Hazard Class** N/A
- **Marine Pollutant** This product contains a chemical which, although not listed, meets the IMDG criteria for being a severe marine pollutant

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

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

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Zinc - 7440-66-6	7440-66-6	15 - 40	1.0
Manganese dioxide - 1313-13-9	1313-13-9	10 - 30	1.0
Zinc chloride - 7646-85-7	7646-85-7	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
Zinc 7440-66-6		X	X	
Zinc chloride 7646-85-7	1000 lb	X		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)

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
Zinc chloride 7646-85-7	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Carbon black - 1333-86-4	Carcinogen

U.S. State Right-to-Know Regulations

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Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Zinc 7440-66-6	X	X	X	X	
Manganese dioxide 1313-13-9			X	X	X
Graphite 7782-42-5	X	X	X		
Zinc chloride 7646-85-7	X	X	X	X	
Carbon black 1333-86-4	X	X	X		X
PVC (Chloroethylene, polymer) 9002-86-2	X				

International Regulations

Mexico
National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Manganese dioxide 1313-13-9 (10 - 30)		Mexico: TWA= 0.2 mg/m^3
Graphite 7782-42-5 (3 - 7)		Mexico: TWA= 2 mg/m^3
Zinc chloride 7646-85-7 (3 - 7)		Mexico: TWA 1 mg/m^3 Mexico: STEL 2 mg/m^3
Carbon black 1333-86-4 (1 - 5)		Mexico: TWA 3.5 mg/m^3 Mexico: STEL 7 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** X

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision Date 20-Jan-2015
Revision Note No information available

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

SAFETY DATA SHEET

Issuing Date 05-Sep-2017 **Revision Date** 04-Sep-2017 **Revision Number** 1

NGHS / English

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1. IDENTIFICATION

Product identifier

Product Name R02P,R6P,R14P,R20P,6F22

Other means of identification

Product Code(s) 1416207

Recommended use of the chemical and restrictions on use

Recommended Use Carbon Zinc Battery

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification ChangZhou Anyida Power Technology Co., Ltd

Address ChangZhou Xinbei District TianShan Road No. 60
Changzhou
Jiangsu
213000
CN

Telephone Phone:0519-83270441

E-mail j10732@163.com

Emergency telephone number

Company Emergency Phone Number 0519-83270441

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

This is a battery. In case of rupture: the above hazards exist.

Appearance No information available **Physical state** Solid **Odor** No information available

GHS Label elements, including precautionary statements

Danger

Hazard statements
Harmful if swallowed
Harmful if inhaled
Causes severe skin burns and eye damage



Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
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 (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
Immediately call a POISON CENTER or doctor/physician
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up

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

Other information
Very toxic to aquatic life with long lasting effects.

Unknown acute toxicity 91.53 % of the mixture consists of ingredient(s) of unknown toxicity
52.22 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

91.53 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
68.38 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
68.38 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
68.38 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS-No	Percent	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Zinc	7440-66-6	36.82	-	-
Manganese dioxide	1313-13-9	23.15	-	-
Zinc chloride	7646-85-7	10.94	-	-
Ammonium chloride	12125-02-9	1.89	-	-
Iron	7439-89-6	1.25	-	-
PVC (Chloroethylene, polymer)	9002-86-2	1.11	-	-
Copper	7440-50-8	1.05	-	-
Zinc oxide	1314-13-2	0.27	-	-

4. FIRST AID MEASURES

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.

Inhalation Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.

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. Get immediate medical advice/attention.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.

Ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

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. Avoid breathing dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

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 The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

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. Avoid generation of dust. Do not breathe dust.

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

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.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable

respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid generation of dust.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Protect from moisture. Store locked up. Store away from other materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Zinc 7440-66-6	STEL: 10 mg/m³ respirable fraction TWA: 2 mg/m³ respirable fraction	TWA: 5 mg/m³ fume TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction	IDLH: 500 mg/m³ Ceiling: 15 mg/m³ dust TWA: 5 mg/m³ dust and fume STEL: 10 mg/m³ fume
Manganese dioxide 1313-13-9	TWA: 0.02 mg/m³ Mn respirable particulate matter TWA: 0.1 mg/m³ Mn inhalable particulate matter	(vacated) Ceiling: 5 mg/m³ Ceiling: 5 mg/m³ Mn	IDLH: 500 mg/m³ Mn TWA: 1 mg/m³ Mn STEL: 3 mg/m³ Mn
Zinc chloride 7646-85-7	STEL: 2 mg/m³ fume TWA: 1 mg/m³ fume	TWA: 1 mg/m³ fume (vacated) TWA: 1 mg/m³ fume (vacated) STEL: 2 mg/m³ fume	IDLH: 50 mg/m³ fume TWA: 1 mg/m³ fume STEL: 2 mg/m³ fume
Ammonium chloride 12125-02-9	STEL: 20 mg/m³ fume TWA: 10 mg/m³ fume	(vacated) TWA: 10 mg/m³ fume (vacated) STEL: 20 mg/m³ fume	TWA: 10 mg/m³ fume STEL: 20 mg/m³ fume
PVC (Chloroethylene, polymer) 9002-86-2	TWA: 1 mg/m³ respirable particulate matter	-	
Copper 7440-50-8	TWA: 0.2 mg/m³ fume TWA: 1 mg/m³ Cu dust and mist	TWA: 0.1 mg/m³ fume TWA: 1 mg/m³ dust and mist (vacated) TWA: 0.1 mg/m³ Cu dust, fume, mist	IDLH: 100 mg/m³ dust, fume and mist IDLH: 100 mg/m³ Cu dust and mist TWA: 1 mg/m³ dust and mist TWA: 0.1 mg/m³ fume TWA: 1 mg/m³ Cu dust and mist
Zinc oxide 1314-13-2	STEL: 10 mg/m³ respirable particulate matter TWA: 2 mg/m³ respirable particulate matter	TWA: 5 mg/m³ fume TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 5 mg/m³ fume (vacated) TWA: 10 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction (vacated) STEL: 10 mg/m³ fume	IDLH: 500 mg/m³ Ceiling: 15 mg/m³ dust TWA: 5 mg/m³ dust and fume STEL: 10 mg/m³ fume

Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec
Manganese dioxide 1313-13-9	TWA: 0.2 mg/m³	TWA: 0.2 mg/m³	TWA: 0.02 mg/m³ TWA: 0.1 mg/m³	TWA: 0.2 mg/m³
Zinc chloride 7646-85-7	TWA: 1 mg/m³ STEL: 2 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³	TWA: 1 mg/m³ STEL: 2 mg/m³	TWA: 1 mg/m³
Ammonium chloride	TWA: 10 mg/m³	TWA: 10 mg/m³	TWA: 10 mg/m³	TWA: 10 mg/m³

12125-02-9	STEL: 20 mg/m³	STEL: 20 mg/m³	STEL: 20 mg/m³	STEL: 20 mg/m³
PVC (Chloroethylene, polymer) 9002-86-2		TWA: 1 mg/m³	TWA: 1 mg/m³	
Copper 7440-50-8	TWA: 0.2 mg/m³ TWA: 1 mg/m³	TWA: 1 mg/m³ TWA: 0.2 mg/m³	TWA: 0.2 mg/m³ TWA: 1 mg/m³	TWA: 0.2 mg/m³ TWA: 1 mg/m³
Zinc oxide 1314-13-2	TWA: 2 mg/m³ STEL: 10 mg/m³	TWA: 2 mg/m³ STEL: 10 mg/m³	TWA: 2 mg/m³ STEL: 10 mg/m³	TWA: 10 mg/m³ TWA: 5 mg/m³ STEL: 10 mg/m³

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

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.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Solid
Appearance	No information available
Odor	No information available
Color	No information available
Odor Threshold	No information available

Property	**Values**	**Remarks Method**
pH	No data available	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known

Vapor density	No data available	None known
Relative density	No data available	None known
Water Solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	No 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

Other Information

Explosive properties	No information available
Oxidizing properties	No information available
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials Acids. Bases. Oxidizing agent.

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. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. Harmful by inhalation.

Eye contact Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Information on toxicological effects

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Numerical measures of toxicity

Acute Toxicity

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

ATEmix (oral) 811.00 mg/kg
ATEmix (inhalation-gas) 6,146.00 mg/L
ATEmix (inhalation-dust/mist) 2.05 mg/L
ATEmix (inhalation-vapor) 15.00 mg/L

Unknown acute toxicity 91.53 % of the mixture consists of ingredient(s) of unknown toxicity

52.22 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
91.53 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
68.38 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
68.38 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
68.38 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Manganese dioxide	= 9000 mg/kg (Rat)	-	-
Zinc chloride	= 1100 mg/kg (Rat)	-	-
Ammonium chloride	= 1650 mg/kg (Rat)	-	-
Iron	= 984 mg/kg (Rat)	-	-
Zinc oxide	> 5000 mg/kg (Rat)	-	-

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

Skin corrosion/irritation Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Risk of serious damage to eyes. Causes burns.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
PVC (Chloroethylene, polymer) 9002-86-2	-	Group 3	-	-

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 No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Marine Pollutant This product contains a chemical which is listed as a severe marine pollutant according to DOT

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)
Zinc	96h EC50: 0.11 - 0.271 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.09 - 0.125 mg/L (Pseudokirchneriella subcapitata)	96h LC50: = 3.5 mg/L (Lepomis macrochirus) 96h LC50: = 7.8 mg/L (Cyprinus carpio) 96h LC50: = 0.24 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.59 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.41 mg/L (Oncorhynchus mykiss) 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: 2.16 - 3.05 mg/L (Pimephales promelas)	-	48h EC50: 0.139 - 0.908 mg/L
Ammonium chloride	-	96h LC50: = 209 mg/L (Cyprinus carpio) 24h LC50: = 725 mg/L (Lepomis macrochirus)	-	24h LC50: = 202 mg/L
Iron	-	96h LC50: = 13.6 mg/L (Morone saxatilis)	-	-
Copper	96h EC50: 0.031 - 0.054 mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.0426 - 0.0535 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 0.0068 - 0.0156 mg/L (Pimephales promelas) 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) 96h LC50: = 0.112 mg/L (Poecilia reticulata) 96h LC50: = 0.3 mg/L	-	48h EC50: = 0.03 mg/L

		(Cyprinus carpio) 96h LC50: = 0.8 mg/L (Cyprinus carpio)		

Persistence and Degradability No information available.

Bioaccumulation

Chemical name	Log Pow
Manganese dioxide	<0

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

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
Zinc 7440-66-6	Ignitable powder Toxic
Zinc chloride 7646-85-7	Toxic Corrosive
Copper 7440-50-8	Toxic
Zinc oxide 1314-13-2	Toxic

14. TRANSPORT INFORMATION

DOT NOT REGULATED
- **Proper Shipping Name** NON-REGULATED
- **Hazard Class** N/A
- **Marine Pollutant** This product contains a chemical which is listed as a severe marine pollutant according to DOT

TDG Not regulated
- **Marine Pollutant** This product contains a chemical which is listed as a severe marine pollutant according to TDG.

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 This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

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

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

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

Chemical name	CAS-No	Percent	SARA 313 - Threshold Values %
Zinc - 7440-66-6	7440-66-6	36.82	1.0
Manganese dioxide - 1313-13-9	1313-13-9	23.15	1.0
Zinc chloride - 7646-85-7	7646-85-7	10.94	1.0
Ammonium chloride - 12125-02-9	12125-02-9	1.89	1.0
Copper - 7440-50-8	7440-50-8	1.05	1.0
Zinc oxide - 1314-13-2	1314-13-2	0.27	1.0

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
Zinc 7440-66-6		X	X	
Zinc chloride 7646-85-7	1000 lb	X		X
Ammonium chloride 12125-02-9	5000 lb			X
Copper 7440-50-8		X	X	
Zinc oxide 1314-13-2		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)

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
Zinc chloride 7646-85-7	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ
Ammonium chloride 12125-02-9	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Copper 7440-50-8	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Zinc 7440-66-6	X	X	X	X	
Manganese dioxide 1313-13-9	X		X	X	X
Zinc chloride 7646-85-7	X	X	X	X	
Ammonium chloride 12125-02-9	X	X	X	X	
PVC (Chloroethylene, polymer)	X				

9002-86-2					
Copper 7440-50-8	X	X	X	X	X
Zinc oxide 1314-13-2	X	X	X	X	

16. OTHER INFORMATION

NFPA	**Health hazards** 1	**Flammability** 0	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 0	**Flammability** 0	**Physical hazards** 0	**Personal Protection** X

Prepared By

Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date 05-Sep-2017

Revision Date 04-Sep-2017

Revision Note No information available

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

Article Information Sheet

Product name: Carbon Zinc Battery **Printing date:** 2021.12.30

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	Carbon Zinc-Manganese Dioxide
Model	R03 (AAA)
Issue Date	2021-12-30

2. COMPANY INFORMATION

Company name(China)	Guangdong Liwang New Energy Co.,Ltd.
Address:	No.10, Liantang Jiao Road Two,Tangxia Town,Dongguan City,Guangdong Province,P.R.China
E-mail:	qa1@liwangbattery.com
Telephone:	+86-13902600527

3. ARTICLE INFORMATION

Description	Carbon Zinc-Manganese Dioxide Battery
Use	carbon zinc battery
Brand	----
Image	----

Fiche d'information Article

Nom du produit: pile au carbone-zinc **Date d'impression:** 2021.12.30

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	Carbone Zinc-Dioxyde de Manganèse
Modèle	R03 (AAA)
Date d'émission	2021-12-30

2. INFORMATIONS SUR LA SOCIÉTÉ

Nom de l'entreprise (Chine)	Guangdong Liwang New Energy Co.,Ltd.
Adresse:	No.10, Liantang Jiao Road Two,Tangxia Town,Dongguan City,Guangdong Province,P.R.China
Email:	qa1@liwangbattery.com
Téléphone:	+86-13902600527

3. ARTICLE D'INFORMATION

La description	Carbone Zinc-Dioxyde de Manganèse
Utilisation	pile au carbone-zinc
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(%)
Manganese dioxide	1313-13-9	37
Zinc	7440-66-6	33
Graphite	7782-42-5	10
Water	7732-18-5	14.2
Ammonium chloride	12125-02-9	0.6
Iron	7439-89-6	2
Polypropylene	9003-07-0	1.5
Zinc chloride	7646-85-7	1.2
Slimes and Sludges, papermaking, secondary	68188-15-8	0.5

5. HEALTH AND SAFETY

Ingestion: Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Inhalation: Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

Skin contact: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required. May cause an allergic skin reaction.

4. ARTICLE CONSTRUCTION

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

Nom chimique	N ° CAS.	Concentration(%)
Dioxyde de manganèse	1313-13-9	37
Zinc	7440-66-6	33
Graphite	7782-42-5	10
L'eau	7732-18-5	14.2
Chlorure d'ammonium	12125-02-9	0.6
Fer	7439-89-6	2
Polypropylène	9003-07-0	2
Chlorure de zinc	7646-85-7	1.2
Slimes and Sludges, papermaking, secondary	68188-15-8	0.5

5. SANTÉ ET SÉCURITÉ

Ingestion: Ne pas faire vomir. Se rincer la bouche et boire beaucoup d'eau. Ne portez rien à la bouche d'une personne inconsciente. Appeler un centre de contrôle médecin ou de poison immédiatement.

Inhalation: À l'air frais. Si la respiration est arrêtée, pratiquer la respiration artificielle. Consulter un médecin immédiatement. Ne pas utiliser le bouche-à-bouche si la victime a ingéré ou inhalé la substance; pratiquer la respiration artificielle à l'aide d'un masque de poche muni d'une valve à une voie ou d'un autre appareil médical approprié. Si la respiration est difficile, (du personnel qualifié devrait) donner de l'oxygène. œdème pulmonaire retardé peut se produire. Consulter un médecin si des symptômes apparaissent.

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

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:	Rincer immédiatement et abondamment avec de l'eau, y compris sous les paupières, pendant au moins 15 minutes. Gardez l'œil ouvert pendant le rinçage. Ne pas frotter les zones touchées. lentilles de contact Retirer, si elle est présente et facile à faire. Continuer à rincer. Consulter un / des conseils médicaux immédiats.
Auto-protection du secouriste:	Veiller à ce que le personnel médical sont au courant de la matière (s) impliqués, prendre des précautions pour se protéger et prévenir la propagation de la contamination. Éviter tout contact avec la peau, les yeux ou les vêtements. Éviter tout contact direct avec la peau. Utilisez barrière pour donner la respiration artificielle bouche-à-bouche. Utiliser un équipement de protection individuel requis. Porter des vêtements de protection individuelle (voir la section 8).

6. RISQUE D'INCENDIE & POMPIERS

Risque d'incendie	Les piles peuvent se rompre ou fuir si elle est impliquée dans un incendie.
Moyens d'extinction	Utilisez tous les moyens d'extinction appropriés pour la région environnante.

fire-fighters	batteries produce toxic and corrosive lithium hydroxide fumes.

7. HANDLING AND STORAGE

Storage	Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life. In locations that handle large quantities of lithium batteries, such as warehouses, lithium batteries should be isolated from unnecessary combustibles.
Handling	Avoid mechanical and electrical abuse. Do not short circuit or install incorrectly. Batteries may rupture or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions.
Spills of Large Quantities Batteries (unpackaged)	Notify spill personnel of large spills. Irritating and flammable vapors may be released from leaking or ruptured batteries. Spread batteries apart to stop shorting. Eliminate all ignition sources. Evacuate area and allow vapors to dissipate. Clean-up personnel should wear appropriate PPE to avoid eye and skin contact and inhalation of vapors or fumes. Increase ventilation. Carefully collect batteries and place in appropriate container for disposal. Remove any spilled liquid with absorbent material and contain for disposal.

8. DISPOSAL CONSIDERATIONS

Dispose of used (or excess) batteries in compliance with federal, state/provincial and local regulations. Do not accumulate large quantities of used batteries for disposal as accumulations could cause batteries to

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

7. MANIPULATION ET STOCKAGE

Espace de rangement	Conserver dans un endroit frais et bien ventilé. Les températures élevées peuvent entraîner dans la vie de la batterie raccourcie. Dans les endroits qui traitent de grandes quantités de Les piles au lithium, tels que les entrepôts, les batteries au lithium doivent être isolés à partir de combustibles inutiles.
Manipulation	Éviter les abus mécaniques et électriques. Ne pas court-circuiter ou installer correctement. Les piles peuvent se rompre ou de ventilation si elles sont démontées, écrasées, rechargées ou exposé à une forte températures. Installez les piles conformément aux instructions du fabricant.

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
1313-13-9	Listed	Listed	Listed	Listed	Listed	Listed
7440-66-6	Listed	Listed	Not listed	Listed	Listed	Listed
7782-42-5	Not listed	Listed	Listed	Listed	Listed	Not listed
7732-18-5	Listed	Listed	Listed	Listed	Listed	Listed
12125-02-9	Not listed	Listed	Listed	Listed	Listed	Not listed

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

8. CONSIDERATIONS RELATIVES À L'ÉLIMINATION

Jetez les piles usagées (ou excédent) conformément aux règlements fédéraux, provinciaux / provinciaux et locaux. Ne pas accumuler de grandes quantités de piles usagées pour l'élimination comme accumulations pourraient provoquer un court-circuit. Ne pas incinérer. Dans les pays, comme le Canada et l'Union européenne, où il existe des règlements pour la collecte et le recyclage des batteries, les consommateurs devraient disposer de leurs piles usagées dans le réseau de collecte dans les dépôts municipaux et les détaillants. Ils ne doivent pas jeter les piles avec les ordures ménagères.

9. Informations de transport

POINT NON RÉGLEMENTÉ
Nom d'expédition NON RÉGLEMENTÉ
Classe de danger N / A
TMD Non réglementé
MEX Non réglementé
OACI Non réglementé

7439-89-6	Not listed	Listed	Listed	Listed	Listed	Not listed
9003-07-0	Listed	Not listed	Listed	Listed	Listed	Listed
7646-85-7	Listed	Listed	Listed	Listed	Listed	Listed
68188-15-8	Listed	Listed	Listed	Listed	Listed	Listed

11. OTHER INFORMATION

TSCA: Toxic Substances Control Act, The American chemical inventory.

DSL Domestic Substances List

EINECS: European Inventory of Existing Commercial chemical Substances

ENCS Japanese Existing and New Chemical Substances

ECL: Existing Chemicals List, the Korean chemical inventory.

IECSC: Inventory of existing chemical substances in China.

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

IATA Non réglementé
Nom d'expédition NON RÉGLEMENTÉ
Classe de danger N / A
IMDG / IMO Non réglementé
Classe de danger N / A
Polluant marin Le produit est un polluant marin selon les critères fixés par IMDG / IMO
DÉBARRASSER Non réglementé
ADR Non réglementé
ADN Non réglementé

10. INFORMATIONS RÉGLEMENTAIRES

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

N ° CAS.	Etats-Unis TSCA	UE Einecs	Japon ENCS	Corée ECL	Chine IECSC	Canada DSL
1313-13-9	Listed	Listed	Listed	Listed	Listed	Listed
7440-66-6	Listed	Listed	Non listé	Listed	Listed	Listed
7782-42-5	Non listé	Listed	Listed	Listed	Listed	Non listé
7732-18-5	Listed	Listed	Listed	Listed	Listed	Listed
12125-02-9	Non listé	Listed	Listed	Listed	Listed	Non listé
7439-89-6	Non listé	Listed	Listed	Listed	Listed	Non listé
9003-07-0	Listed	Non listé	Listed	Listed	Listed	Listed
7646-85-7	Listed	Listed	Listed	Listed	Listed	Listed
68188-15-8	Listed	Listed	Listed	Listed	Listed	Listed

11. LES AUTRES INFORMATIONS

TSCA: Toxic Substances Control Act, l'inventaire chimique américain.

DSL Liste intérieure

Einecs: Inventaire européen des substances chimiques existantes commerciales

ENCS Existantes et nouvelles substances chimiques japonaises

ECL: Liste des produits chimiques existants, l'inventaire chimique coréenne.

IECSC: Inventaire des substances chimiques existantes en Chine.

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

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

SAFETY DATA SHEET

Issuing Date 31-Jan-2019 **Revision Date** 31-Jan-2019 **Revision Number** 2

NGHS / English

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

Product identifier

Product Name R32 air conditioner

Other means of identification

Product Code(s) 1500576

Recommended use of the chemical and restrictions on use

Recommended Use Appliance containing Compressed Gas (not Freon)

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification GD Midea Air-conditioning Equipment Co., Ltd

Address Lingang Road, Beijiao, Shunde
Foshan
Guangdong
528311
CN

Telephone Phone:13037111672

E-mail zhuangyan.fan@midea.com

Emergency telephone number

Company Emergency Phone Number 13037111672

2. HAZARDS IDENTIFICATION

Classification

Flammable gases	Category 1
Gases under pressure	Liquefied Gas

Appearance No information available **Physical state** Gas **Odor** No information available

GHS Label elements, including precautionary statements

Danger

Hazard statements
Extremely flammable gas
Contains gas under pressure; may explode if heated



Precautionary Statements - Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Precautionary Statements - Response

Skin
Eliminate all ignition sources if safe to do so
Fire
Leaking gas fire: Do not extinguish, unless leak can be stopped safely

Precautionary Statements - Storage
Store in well-ventilated place
Protect from sunlight. Store in a well-ventilated place

Other information
Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity
100 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Chemical name	CAS No.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Methylene fluoride	75-10-5	100	-	-

4. FIRST AID MEASURES

First aid measures

General advice In case of rupture. Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Inhalation Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If not breathing, give artificial respiration.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Seek immediate medical attention/advice.

Skin contact In case of contact with liquefied gas, thaw frosted parts with lukewarm water.

Ingestion Not an expected route of exposure. Call a physician immediately.

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.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians A patient adversely affected by exposure to this product should not be given adrenaline (epinephrine) or similar heart stimulant since these would increase the risk of cardiac arrhythmias.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2).

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

Unsuitable extinguishing media DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

Specific hazards arising from the chemical Ruptured cylinders may rocket. Some may burn, but not ignite readily.

Hazardous Combustion Products Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact Yes.

Sensitivity to Static Discharge no.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Stop leak if you can do it without risk.

Other Information Ventilate the area.

Methods and material for containment and cleaning up

Methods for containment If possible, turn leaking containers so that gas escapes rather than liquid.

Methods for cleaning up Do not direct water at spill or source of leak.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Do not breathe vapor or mist. Do not smoke. Use with local exhaust ventilation. Do not puncture or incinerate cans. Do not stick pin or any other sharp object into opening on top of can. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight. Keep away from open flames, hot surfaces and sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

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.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Gas
Appearance	No information available
Odor	No information available
Color	No information available
Odor Threshold	No information available

Property	**Values**	**Remarks Method**
pH	No data available	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water Solubility	No information available	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	0	
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

Other Information

Explosive properties	No information available
Oxidizing properties	No information available
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to avoid Excessive heat.

Incompatible materials None known based on information supplied.

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 In high concentration the gas may cause a suffocation. Victim may not be aware of asphyxiation. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal. May cause drowsiness or dizziness. (based on components).

Eye contact Specific test data for the substance or mixture is not available. Contact with product may cause frostbite.

Skin contact Specific test data for the substance or mixture is not available. Contact with product may cause frostbite.

Ingestion Specific test data for the substance or mixture is not available. Not an expected route of exposure.

Information on toxicological effects

Symptoms No information available.

Numerical measures of toxicity

Acute Toxicity

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity
100 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Methylene fluoride	-	-	> 520000 ppm (Rat) 4 h = 1890 g/m^3 (Rat) 4 h

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and Degradability No information available.

Bioaccumulation There is no data for this product.

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D001

California Waste Codes 331

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

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

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

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

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
Methylene fluoride 75-10-5		X		

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Methylene fluoride 75-10-5			X		

16. OTHER INFORMATION

NFPA	**Health hazards** 1	**Flammability** 0	**Instability** 1	**Physical and Chemical Properties** -
HMIS	**Health hazards** 1	**Flammability** 0	**Physical hazards** 1	**Personal Protection** X

Prepared By

Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date 31-Jan-2019

Revision Date 31-Jan-2019

Revision Note No information available

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