SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifier	**ACP-001**
Product Name	**Alcohol Cleansing Pad**
Product Use	**Topical Skin Preparation**
Manufacturer	**GFA Production Xiamen Co., LTD** **No 20 Huli Industrial Park, Mei Xi Rd, Tong An, Xiamen, Fujian, China**
Telephone	**86. 592. 7269515-8003**
E-mail Address	**www.gfaproduction.com**
Emergency Telephone	**86. 592. 7269515-8003**
FAX Number	**86. 592. 7269528**
Issue Date:	**01-21-2017**

SECTION 2: HAZARDS IDENTIFICATION

OSHA regulatory: **This material is considered hazardous by the 2012 OSHA hazard communication standard (29CFR 1910.1200).**

Classification: **Flammable solid (category 2)**

Sybmol and signal word:

Warning!

Hazard statement: **Flammable solid**

Precautionary statement(s):

Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Ground/Bond container and receiving equipment
Use explosion proof electrical/ventilating/lighting equipment
Wear protective gloves/eye protection/face protection
In case of fire, use alcohol resistant foam, dry chemical carbon dioxide or sand for extinction.

Precautionary Statement:

Prevention	**Keep away from heat, sparks, open flames or hot surfaces. No smoking. Ground bond container and receiving equipment. Use explosion proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Use only in well ventilated area. Wear protective gloves, clothing and eye and face protection. Avoid breathing mist or vapor. Wash Hands thoroughly after handling.**
Response	**If on skin: Take off contaminated clothing. Rinse skin with water. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a Poison Center. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses and continue rinsing. If eye irritation persists get medical attention.**
Storage	**Store in well ventilated area. Keep container tightly closed. Keep cool.**
Disposal	**Dispose of contents/container in accordance with local, state, federal regulations.**

Hazards not otherwise Classified (HNOC): **None known.**

Supplemental Information: **None.**

Route of Entry:

Skin Contact: **May cause minor irritation, redness, inflammation or dryness.**
Skin Absorption: **No adverse conditions expected.**
Eye Contact: **May cause severe eye irritation.**
Inhalation: **May cause irritation of the upper respiratory tract.**
Ingestion: **May cause irritation of the digestive tract.**

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Chemical Name	Common Name and Synonyms	CAS Number	%
Isopropyl Alcohol		67-63-0	70.0
Water		7732-18-5	30.0

SECTION 4: FIRST AID MEASURES

Skin Contact: **Remove contaminated clothing. Immediately flush skin with soap and plenty of water.**

Eye Contact: **Flush eyes with clear running water for a minimum of 10 minutes; if irritation persists, seek medical attention.**

Inhalation: **Get medical attention.**

Ingestion: **If swallowed, rinse mouth with water. Get medical attention.**

Note to physician: **May cause reproductive and fetal effects. Prolonged exposure may cause liver, kidney, and heart damage.**

SECTION 5: FIRE-FIGHTING MEASURES

Flammable properties:	**Slight fire hazard when exposed to heat or flame. Container can build up pressure if exposed to heat and/or fire.**
Extinguishing media:	**Use dry powder, alcohol foam, or carbon dioxide when fighting a fire involving this material. Move away from fire.**
Unsuitable extinguishing media:	**None:**
Hazardous combustion products:	**Carbon oxides**
Protection of firefighters:	**Keep upwind of fire. Wear a self contained breathing apparatus. Cool container with water spray.**

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, Protective equipment and Emergency procedures:	**Wear appropriate personal protective equipment.**
Methods and materials for containment and clean up:	**Absorb spill with vermiculite or other inert material, then place in a sealed container for chemical waste.** **Large Spills: Flush with plenty of water. Prevent entry into waterways, sewer, basements or confined areas. Dike for later disposal.** **Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.**
Environmental Precautions:	**Avoid discharge into drains and water sources.**

SECTION 7: HANDLING AND STORAGE

Handling Procedures and Equipment:	**Keep this and other chemicals out of the reach of children.**
Storage Temperature:	**Do not store or mix with strong acids or oxidizers. Store at room temperature.**

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

Components	ACGIH-TLVs	OSHA-PELs
Isopropyl Alcohol (CAS:67-63-0)	200mg/m 3 TWA 400mg/m 3	OSHA Permissible Exposure Limit

Aerosol Biological Limit Values: No biological Exposure limits noted for the ingredients.

Ventilation and Engineering Controls: Ensure adequate ventilation.

Personal Protective Equipment: None required under normal conditions
Hand Protection: None required under normal conditions.
Eye and Face Protection: Eye protection, as necessary to prevent excessive contact.
Skin Protection: None required under normal conditions.

General Hygiene Considerations: Practice safe work habits.
Other Protective Equipment: Eye wash stations should be nearby and ready to use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Wet paper
Physical State: Wet paper
Form: Wet paper
Color: Clear.
Odor: Mild alcoholic.
pH: No information available.
Boiling Point: No information available.
Melting Point: No information available.
Flash Point: No information available.
Explosive Properties: No information available.
Oxidizing Properties: No information available.
Specific Gravity: 0.90
Water Solubility: Soluble.
Partition Coefficient: No information available.
Viscosity: No information available.
Vapor Pressure (mm Hg): Heat of combustion
Vapor Density (Air=1): Air=1
Evaporation Rate: >1
% Volatile: 100

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	**The product is stable and non-reactive under normal conditions of use.**
Chemical Stability:	**Stable at normal conditions.**
Possibility of Hazardous Reactions:	**Hazardous polymerization does not occur.**
Conditions to Avoid:	**Extreme heat and sources of ignition.**
Materials to Avoid	**Strong oxidants and strong acids.**
Hazardous Decomposition Products:	**Carbon monoxide, carbon dioxide.**
Hazardous Polymerization:	**Will not occur.**

SECTION 11: TOXICOLOGICAL INFORMATION

Symptoms of Overexposure by Route of Exposure:
The health hazard information provided is for handling this product in an occupational setting.

Effects of Acute and Chronic Exposure:

Acute: The primary health effect that may be experienced in an occupational setting is mild irritation of contaminated skin. Accidental ingestion may be harmful. Although unlikely, irritation can irritate the respiratory system. Eye contact will cause irritation.
Chronic: NE

Target Organs: **Acute: Occupational exposure: Eyes.**
Chronic: Occupational exposure: Skin.

Inhalation:
No information

Skin Contact:
No information

Eye Contact:
No information

Ingestion:
No information

Irritancy of the Product:
This product may cause mild to moderate irritation on damaged skin.

Skin Sensitization:
Not expected.

Respiratory Sensitization:
Not likely due to form of product.

LD50/=5040 mg/kg:

Isopropyl Alcohol

- **Oral (rodent, rat): LD50**
- **Inhalation: (rodent, rat): 5040 mg/kg**

Carcinogenicity: Isopropyl Alcohol (CAS 67-63-0) is classified as a carcinogens of Group 3 by IARC

Reproductive Toxicity: No information

Mutagenic/Embryo Toxicity: No information

Teratogenicity: Not available.
Reproductive Toxicity: Not available.

SECTION 12: ECOLOGICAL INFORMATION

No specific information is currently available on the effect of this product on plants or animals in the environment. The product may be harmful to contaminated terrestrial and aquatic plant life in large quantities. The following aquatic toxicity data currently available for components of this product:

Ecotoxicity: This material is not expected toxic to aquatic life

Persistence/Degradability: No information

Bioaccumulation/Accumulation: No information

Mobility in environment: No information

Environmental Exposure Controls: Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

No component of this product is known to have ozone depletion potential.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: **Collect or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with local, state and federal regulations.**

SECTION 14: TRANSPORT INFORMATION

Regulations	US DOT	IATA DRG	IMDG Code
UN No.	Not Regulated	Not Regulated	Not Regulated
Hazard Class	Not Applicable (Special Provision 47 in§ 172.102) Contain less than 10 ml of a Class 3 (flammable liquid) material in Packing Group II, no free liquid in.	Not Applicable (Special Provision 47 in§ 172.102) Contain less than 10 ml of a Class 3 (flammable liquid) material in Packing Group II, no free liquid in.	Not Applicable (Special Provision 47 in§ 172.102) Contain less than 10 ml of a Class 3 (flammable liquid) material in Packing Group II, no free liquid in.
Shipping Name	Solid containing flammable liquid	Solid containing flammable liquid	Solid containing flammable liquid
Packing Group	II	II	II
Packing Method	IB6,IP2	Y441,445,448	P002,PP9,IBC06,B2,T3,BK2,TP33

SECTION 15: REGULATORY INFORMATION

Component	CAS No	TSCA	DSL	Sec 302	Sec 304	CERC LARQ	Sect 313	RCRA CODE	CAA 112
Isopropyl Alcohol	Yes	Yes	No	No	No	No	Yes	No	No
Water	Yes	Yes	No	No	No	No	No	No	No

SECTION 16: ADDITIONAL INFORMATION

Revision: 0

Issue Date: 21 Jan 2017

Prepared by: TUV SUD Products Testizng (Shanghai) Co., Gaungzhou Branch

Checked By: TUV SUD Products Testizng (Shanghai) Co., Gaungzhou Branch

Other information: N/A

Disclaimer: This SDS conforms to the requirements of 29CFR 1910.1200 and ANSI Z400. 1/Z 129.1-2010. This SDS is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but cannot guarantee its accuracy for all individuals and/or situations. It is the users obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in the data sheet shall be construed as a permission recommendation for the use of any product in a manner that might infringe existing patents. No warrantee is made, either expressed or implied

ORIGINAL

SUBJECT	**Material Safety Data Sheet**
TEST LOCATION	**TÜV SÜD China** TÜV SÜD Products Testizng (Shanghai) Co.,Ltd. Guangzhou Branch 4F, Communication Building, 163 Pingyun Rd, Huangpu West Ave. Guangzhou 510656 P. R. China
CLIENT NAME	**GFA PRODUCTION XIAMEN CO., LTD.**
CLIENT ADDRESS	NO.20 HULI INDUSTRIAL PARK,MEI XI ROAD,TONG AN,XIAMEN,FUJIAN,CHINA
PREPARATION PERIOD	22-Oct-2015~06-Nov-2015
SUMMARY	MSDS conforms to the requirements of Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Regulation (EC) No 453/2010) and Classification, Labelling and Packaging of Substances and Mixtures (Regulation (EC) No 1272/2008)

Prepared By: Kola Liang
(Kola Liang)
Assistant CS Representative

Authorized By:
(Jone Liu)
Senior Test Engineer

Safety Data Sheet

Antiseptic Towelettes

Issue Date: 6 November 2015

Section 1 - Chemical Product and Company Identification

Product Name	Antiseptic Towelettes		
Synonyms	Not applicable	**CAS No.**	Not applicable
Molecular formula	Not applicable	**Molecular mass**	Not applicable
Manufacturer/Supplier	GFA PRODUCTION XIAMEN CO., LTD.		
Address	NO.20 HULI INDUSTRIAL PARK,MEI XI ROAD,TONG AN,XIAMEN,FUJIAN,CHINA		

Section 2 - Hazards Identification

Emergency overview	Wet paper. Not a hazardous substance or mixture.
OSHA regulatory	This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Potential health effects	Likely Routes of Exposure: Skin, eye, inhalation and ingestion. Skin Contact: No adverse health effects expected. Eye Contact: No adverse health effects expected. Inhalation: No adverse health effects expected. Ingestion: Large quantities swallowed may cause irritation to the gastrointestinal tract. See Section 11 for more information.
Potential environmental effects	This material is not expected to be toxic to aquatic life. See Section 12 for more information.

Section 3 - Composition/Information on Ingredient

Component	Range % by Wt.	CAS No.
Benzalkonium chloride	0.13	8001-54-5
Water	99.87	7732-18-5

Section 4 - First Aid Measures

Skin contact	Not expected to require first aid measures. Immediately flush skin with plenty of water.
Eye contact	Not expected to require first aid measures. Immediately flush eyes with water. Get medical attention if irritation develops.
Inhalation	Not expected to require first aid measures. Get medical attention.
Ingestion	Not expected to require first aid measures. If swallowed, rinse thoroughly. Get medical attention immediately.
Note to Physicians	No information found.

Section 5 - Fire Fighting Measures

Flammable properties	Not considered to be a fire hazard.
Extinguishing media	Use fire extinguishing methods suitable to surrounding conditions.
Unsuitable extinguishing media	None.
Hazardous combustion products	Carbon oxides.
Protection of firefighters	No information found.

Section 6 - Accidental Release Measures

Personal precautions	Use personal protection recommended in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
Environmental precautions	Contain and recover liquid when possible. Avoid runoff into storm sewers and ditches which lead to waterways.
Methods for containment	Sweep up and containerize for reclamation or disposal.
Methods for clean-up	Place in suitable container or tanks, recycle or ship to the waste plant.
Other information	None.

Section 7 - Handling and Storage

Handling	Keep container tightly closed. Wash thoroughly after handling.
Storage	Stored in a cool, dry, ventilated area.

Section 8 - Exposure Controls, Personal Protection

Exposure guidelines	None established.
Engineering controls	No engineering controls required.
Eye/face protection	Generally protection.
Skin protection	Generally protection.
Respiratory protection	Generally protection.
General hygiene considerations	Generally protection.

Section 9 - Physical and Chemical Properties

Appearance and odor	Wet paper.	**pH**	No information found.
Freezing point (℃)	No information found.	**Boiling point (℃)**	No information found.
Density(water=1)	No information found.	**Relative vapour density (air=1)**	No information found.
Vapour pressure (kPa)	No information found.	**Heat of combustion (kJ/mol)**	No information found.
Critical temperature (℃)	No information found.	**Critical pressure (MPa)**	No information found.
Octanol/water partition coefficient as log Pow	No information found.	**Flash point (℃)**	Not applicable.
Auto-ignition temperature(℃)	No information found.	**Solubility**	No information found.
Upper explosive limits %(V/V)	No information found.	**Lower explosive limits %(V/V)**	No information found.
Other properties	No information found.	**End uses**	To help prevent infection.

Section 10 - Stability and Reactivity

Chemical stability	Stable under ordinary conditions of use and storage.
Conditions to avoid	Heat, flames, ignition sources and incompatibles.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.
Possibility of hazardous reactions	Will not occur.

Section 11 - Toxicological Information

Acute toxicity	Benzalkonium chloride (CAS: 8001-54-5): Oral, mouse: LD50 = 150 mg/kg.
Inhalation	No information.
Eye irritation	No information.
Skin irritation	No information.
Sensitisation	No information.
Repeated dose toxicity	No information.
Carcinogenicity	All ingredients are not listed by IARC.
Mutagenicity	No information.
Reproductive effects	No information.
Delevopment effects	No information.

Section 12 - Ecological Information

Ecotoxicity	This material is not expected toxic to aquatic life. Benzalkonium chloride (CAS: 8001-54-5): Lepomis macrochirus LC50 = 0.31 mg/kg (96h).
Persistence/ Degradability	No information.
Bioaccumulation/ Accumulation	No information.
Mobility in environment	No information.

Section 13 - Disposal Considerations

Disposal measures	Not regulated.
Notes	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Section 14 - Transport Information

Regulations	**US DOT**	**IATA DGR**	**IMDG Code**
UN No.	Not regulated as a hazardous material.	Not regulated as a hazardous material.	Not regulated as a hazardous material.
Hazard Class	Not regulated.	Not regulated.	Not regulated.
Shipping Name	Not regulated.	Not regulated.	Not regulated.
Packing Group	Not regulated.	Not regulated.	Not regulated.
Packing method	Not regulated.	Not regulated.	Not regulated.

Section 15 - Regulatory Information

Component	**CAS No.**	**TSCA**	**DSL**	**Section 302 (EHS)**	**Section 304 EHS RQ**	**CERC LARQ**	**Section 313**	**RCRA CODE**	**CAA 112(r) TQ**
Benzalkonium chloride	8001-54-5	Yes	Yes	No	No	No	No	No	No
Water	7732-18-5	Yes	Yes	No	No	No	No	No	No

Section 16 - Additional Information

Revision	0
Issue date	November 6, 2015
Prepared by	TÜV SÜD Products Testizng (Shanghai) Co.,Ltd. Guangzhou Branch
Checked by	TÜV SÜD Products Testizng (Shanghai) Co.,Ltd. Guangzhou Branch
Other information	-

Disclaimer: This MSDS conforms to the requirements of 29CFR 1910.1200 and ANSI Z400.1/Z 129.1-2010. This MSDS is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to complywith all applicable laws and regulations. No statement made in this data sheet shall be construed as a permissionor recommendation for the use of any product in a manner that might infringe existing patents. No warranty ismade, either express or implied.

This report replaces the original report 721622569-7-A

-END OF THE TEST REPORT-

ORIGINAL

SUBJECT	**Material Safety Data Sheet**
TEST LOCATION	**TÜV SÜD China** TÜV SÜD Products Testizng (Shanghai) Co.,Ltd. Guangzhou Branch 4F, Communication Building, 163 Pingyun Rd, Huangpu West Ave. Guangzhou 510656 P. R. China
CLIENT NAME	**GFA PRODUCTION XIAMEN CO., LTD.**
CLIENT ADDRESS	NO.20 HULI INDUSTRIAL PARK,MEI XI ROAD,TONG AN,XIAMEN,FUJIAN,CHINA
PREPARATION PERIOD	22-Oct-2015~06-Nov-2015
SUMMARY	MSDS conforms to the requirements of Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Regulation (EC) No 453/2010) and Classification, Labelling and Packaging of Substances and Mixtures (Regulation (EC) No 1272/2008)

Prepared By: _____ **Authorized By:** _____

(Kola Liang)
Assistant CS Representative

(Jone Liu)
Senior Test Engineer

Safety Data Sheet

Triple Antibiotic Ointment

Issue Date: 6 November 2015

Section 1 - Chemical Product and Company Identification

Product Name	Triple Antibiotic Ointment		
Synonyms	Not applicable	**CAS No.**	Not applicable
Molecular formula	Not applicable	**Molecular mass**	Not applicable
Manufacturer/Supplier	GFA PRODUCTION XIAMEN CO., LTD.		
Address	NO.20 HULI INDUSTRIAL PARK,MEI XI ROAD,TONG AN,XIAMEN,FUJIAN,CHINA		

Section 2 - Hazards Identification

Emergency overview	Offwhite gel. Not a hazardous substance or mixture.
OSHA regulatory	This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Potential health effects	Likely Routes of Exposure: Skin, eye, inhalation and ingestion. Skin Contact: No adverse health effects expected. Eye Contact: No adverse health effects expected. Inhalation: No adverse health effects expected. Ingestion: Large quantities swallowed may cause irritation to the gastrointestinal tract. See Section 11 for more information.
Potential environmental effects	This material is not expected to be toxic to aquatic life. See Section 12 for more information.

Section 3 - Composition/Information on Ingredient

Component	Range % by Wt.	CAS No.
Vaseline	96.41	8009-03-8
Mineral oil	2.00	8042-47-5
Bacitracin Zinc	1.00	1405-87-4
Neomycin Sulfate	0.51	1404-04-2
Polymyxin B sulfate	0.08	1405-20-5

Section 4 - First Aid Measures

Skin contact	Not expected to require first aid measures. Immediately flush skin with plenty of water.
Eye contact	Not expected to require first aid measures. Immediately flush eyes with water. Get medical attention if irritation develops.
Inhalation	Not expected to require first aid measures. Get medical attention.
Ingestion	Not expected to require first aid measures. If swallowed, rinse thoroughly. Get medical attention immediately.
Note to Physicians	No information found.

Section 5 - Fire Fighting Measures

Flammable properties	Not considered to be a fire hazard.
Extinguishing media	Use fire extinguishing methods suitable to surrounding conditions.
Unsuitable extinguishing media	None.
Hazardous combustion products	Carbon oxides, nitrogen oxides (NOx), Sulphur oxides.
Protection of firefighters	No information found.

Section 6 - Accidental Release Measures

Personal precautions	Use personal protection recommended in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
Environmental precautions	Contain and recover liquid when possible. Avoid runoff into storm sewers and ditches which lead to waterways.
Methods for containment	In case of a small amount of release, absorb spill with inert material (e.g. vermiculite, sand or earth), as well as flush with plenty of water and dilute into the wastewater system. In case of great amount of release, collect spill with causeway or trench.
Methods for clean-up	Removal of ignition sources. A vapor suppressing foam may be used to reduce vapors. Place in suitable container or tanks, recycle or ship to the waste plant.
Other information	None.

Section 7 - Handling and Storage

Handling	Keep container tightly closed. Wash thoroughly after handling.
Storage	Stored in a cool, dry, ventilated area.

Section 8 - Exposure Controls, Personal Protection

Exposure guidelines	Petroleum Jelly (CAS: 8009-03-8): -Occupational Exposure Limits (OSHA): 5 mg/m3 (TWA); -ACGIH Threshold Limit Values: 5 mg/m3 (TWA).
Engineering controls	Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces. Provide emergency eyewash and shower equipment.
Eye/face protection	Use tight-fitting goggles, face shield or safety glasses with side shields if eye contact might occur.
Skin protection	Wear general protective clothing.
Respiratory protection	Suitable respiratory protective device recommended.
General hygiene considerations	Wash thoroughly after handing. Have eye-wash facilities immediately available.

Section 9 - Physical and Chemical Properties

Appearance and odor	Offwhite gel.	**pH**	No information found.
Freezing point (℃)	No information found.	**Boiling point (℃)**	No information found.
Density(water=1)	No information found.	**Relative vapour density (air=1)**	No information found.
Vapour pressure (kPa)	No information found.	**Heat of combustion (kJ/mol)**	No information found.
Critical temperature (℃)	No information found.	**Critical pressure (MPa)**	No information found.
Octanol/water partition coefficient as log Pow	No information found.	**Flash point (℃)**	No information found.
Auto-ignition temperature(℃)	No information found.	**Solubility**	No information found.
Upper explosive limits %(V/V)	No information found.	**Lower explosive limits %(V/V)**	No information found.
Other properties	No information found.	**End uses**	To help prevent infection.

Section 10 - Stability and Reactivity

Chemical stability	Stable under ordinary conditions of use and storage.
Conditions to avoid	Heat, flames, ignition sources and incompatibles.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides, nitrogen oxides (NOx), Sulphur oxides.
Possibility of hazardous reactions	Will not occur.

Section 11 - Toxicological Information

Acute toxicity	Bacitracin Zine (CAS: 1405-87-4): oral mouse LD50 > 3787.5 mg/kg. Polymyxin B sulfate (CAS: 1405-20-5): oral mouse LD50 = 790 mg/kg.
Inhalation	No information.
Eye irritation	No information.
Skin irritation	No information.
Sensitisation	No information.
Repeated dose toxicity	No information.
Carcinogenicity	All ingredients are not listed by IARC.
Mutagenicity	No information.
Reproductive effects	No information.
Delevopment effects	No information.

Section 12 - Ecological Information

Ecotoxicity	This material is not expected toxic to aquatic life.
Persistence/ Degradability	No information.
Bioaccumulation/ Accumulation	No information.
Mobility in environment	No information.

Section 13 - Disposal Considerations

Disposal measures	Not regulated.
Notes	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Section 14 - Transport Information

Regulations	**US DOT**	**IATA DGR**	**IMDG Code**
UN No.	Not regulated as a hazardous material.	Not regulated as a hazardous material.	Not regulated as a hazardous material.
Hazard Class	Not regulated.	Not regulated.	Not regulated.
Shipping Name	Not regulated.	Not regulated.	Not regulated.
Packing Group	Not regulated.	Not regulated.	Not regulated.
Packing method	Not regulated.	Not regulated.	Not regulated.

Section 15 - Regulatory Information

Component	**CAS No.**	**TSCA**	**DSL**	**Section 302 (EHS)**	**Section 304 EHS RQ**	**CERC LARQ**	**Section 313**	**RCRA CODE**	**CAA 112(r) TQ**
Vaseline	8009-03-8	Yes	Yes	No	No	No	No	No	No
Mineral oil	8042-47-5	Yes	Yes	No	No	No	No	No	No
Bacitracin Zinc	1405-87-4	Yes	Yes	No	No	No	No	No	No
Neomycin Sulfate	1404-04-2	Yes	Yes	No	No	No	No	No	No
Polymyxin B sulfate	1405-20-5	Yes	Yes	No	No	No	No	No	No

Section 16 - Additional Information

Revision	0
Issue date	November 6, 2015
Prepared by	TÜV SÜD Products Testizng (Shanghai) Co.,Ltd. Guangzhou Branch
Checked by	TÜV SÜD Products Testizng (Shanghai) Co.,Ltd. Guangzhou Branch
Other information	-

Disclaimer: This MSDS conforms to the requirements of 29CFR 1910.1200 and ANSI Z400.1/Z 129.1-2010. This MSDS is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to complywith all applicable laws and regulations. No statement made in this data sheet shall be construed as a permissionor recommendation for the use of any product in a manner that might infringe existing patents. No warranty ismade, either express or implied.

This report replaces the original report 721622569-6-A

-END OF THE TEST REPORT-

Tamp
Unit Do

Compare active ingredient to:
Genuine Bayer®
Registered Trademark of Bayer Consumer

nued)

ing: This product contains an
severe stomach bleeding. The

ers or bleeding problems
anticoagulant) or steroid drug
ning prescription or nonprescription
ofen, naproxen, or others)
l drinks every day while using this

ger time than directed

n allergic reaction to any other
ucer
art surgery
ription drugs for gout, diabetes or

e if
ning applies to you
tomach problems such as heartburn
ressure, heart disease, liver
ease
ic

(continued on opposite panel)

ormation

250 Tablets
(125 x 2)

MEDI-FIRST®

Aspirin 5 Grain (325mg)

Pain Reliever/Fever Reducer (NSAID)

Pull to Open

Easy To Swallow
Film Coated Tablets

Compare active ingredient to:
Genuine Bayer®
Registered Trademark of Bayer Consumer

Tamper Evident
Unit Dose Packets

Drug Facts (continued)

Ask a doctor or pharmacist before use if you are
- under a doctor's care for any serious condition
- taking any other drug

When using this product
- take with food or milk if stomach upset occurs

Stop use and ask a doctor if
- you experience any of the following signs of stomach bleeding:
  - feel faint
  - vomit blood
  - have bloody or black stools
  - have stomach pain that does not get better
- pain gets worse or lasts more than 10 days
- fever gets worse or lasts more than 3 days
- you have difficulty swallowing
- if ringing in the ears or loss of hearing occurs
- redness or swelling is present in the painful area
- any new symptoms appear

If pregnant or breast-feeding, ask a health professional before use. It is especially important not to use aspirin during the last 3 months of pregnancy unless definitely directed to do so by a doctor because it may cause problems in the unborn child or complications during delivery.

Keep out of reach of children. In case of overdose, get medical help or contact a Poison Control Center right away.

Drug Facts (continued)

Directions
- **do not take more than directed**
- **the smallest effective dose should be used**
- do not take longer than 10 days, unless directed doctor (see Warnings)
- drink a full glass of water with each dose

Adults and children: (12 years and older)	Take 1 or 2 tablets with water hours as needed. Do not take than 12 tablets in 24 hours, o directed by a doctor.
Children under 12 years:	Do not give to children under of age.

Other information
- read all product information before using
- store at room temperature 15°-30°C (59°-86°F)
- avoid excessive heat and humidity
- tamper evident sealed packets
- do not use any opened or torn packets

Inactive ingredients
corn starch, croscarmellose sodium, hypromellose, microcrystalline cellulose, mineral oil, titanium diox

Questions or comments?
1-800-634-7680

Retain carton for complete product information

Easy To Swallow
Film Coated Tablets

Tamper Evident
Unit Dose Packets

Compare active ingredient to:
Tylenol®
Registered Trademark of McNeil Consumer

Purpose

..... Pain reliever/fever reducer

ated with

■ common cold ■ toothache ■ menstrual cramps

er damage may occur if you take:
aily amount

uct

n or nonprescription). If you are not sure whether a drug

ete product information

MEDI-FIRST®

Non-Aspirin

100 Tablets (50 x 2)

Pain Reliever/Fever Reducer
Acetaminophen 325mg

Pull to Open

Easy To Swallow
Film Coated Tablets

Compare active ingredient to:
Tylenol®
Registered Trademark of McNeil Consumer

Tamper Evident
Unit Dose Packets

Drug Facts (continued)

Stop using and ask a doctor if

- symptoms do not improve
- pain or fever persists or gets worse
- new symptoms occur
- redness or swelling is present

Keep out of reach of children. In case of accidental overdose, get medical help or contact a Poison Control Center rig
away. Prompt medical attention is critical for adults as well as for children even if you do not notice any signs or sympto

If pregnant or breast-feeding, ask a health professional before use.

Directions

- **do not use more than directed**

Adults and children: (12 years and older)	Take 2 tablets every 4 to 6 hours as needed. Do not take more than 12 tablets in 24 hours.
Children under 12 years:	Do not give to children under 12 years of age.

Other information

- store at room temperature 59º-86ºF (15º-30ºC)
- tamper-evident sealed packets
- do not use any opened or torn packets

Inactive ingredients

corn starch, hypromellose, maltodextrin*, microcrystalline cellulose*, polyethylene glycol, povidone, pregelatinized starc
sodium starch glycolate, stearic acid, titanium dioxide*.

** may contain*

Questions or comments? 1-800-634-7680

Retain carton for complete product information

Tamper Evident
Unit Dose Packets

Compare active ingredient to:
Extra Strength Tylenol®
Registered Trademark of McNeil Consumer

100
Tablets
(50 x 2)

MEDI-FIRST®

Extra Strength Non-Aspirin

Pain Reliever/Fever Reduce

Pull to Open

Acetaminophen 500mg

Compare active ingredient to:
Extra Strength Tylenol®
Registered Trademark of McNeil Consumer
Tamper Evident Unit Dose Packets

Purpose
..... Pain reliever/fever reducer

ated with
■ common cold ■ toothache ■ menstrual cramps

er damage may occur if you take:
ily amount

uct

n or nonprescription). If you are not sure whether a drug

ete product information

Drug Facts (continued)

Stop using and ask a doctor if
- symptoms do not improve
- pain or fever persists or gets worse
- new symptoms occur
- redness or swelling is present

Keep out of reach of children. In case of accidental overdose, get medical help or contact a Poison Control Center rig
away. Prompt medical attention is critical for adults as well as for children even if you do not notice any signs or sympto

If pregnant or breast-feeding, ask a health professional before use.

Directions

- **do not use more than directed**

Adults and children: (12 years and older)	Take 2 tablets every 4 to 6 hours as needed. Do not take more than 8 tablets in 24 hours.
Children under 12 years:	Do not give this adult strength product to children under 12 years of age; this will provide more than the recommended dose (overdose) and may cause liver damage.

Other information

- store at room temperature 59º-86ºF (15º-30ºC)
- tamper-evident sealed packets
- do not use any opened or torn packets

Inactive ingredients

corn starch, hypromellose, maltodextrin*, microcrystalline cellulose*, polyethylene glycol, povidone*, pregelatinized starch*, sodium starch glycolate*, stearic acid, titanium dioxide*.

** may contain*

Questions or comments? 1-800-634-7680

Retain carton for complete product information

Easy To Swallow Film Coated Tablets

Tamper Evident Unit Dose Packets

Compare active ingredient to: Advil®
Registered Trademark of Wyeth-Consumer

Drug Facts (continued)

- have 3 or more alcoholic drinks every day while using this product
- take more or for a longer time than directed

Do not use

- if you have ever had an allergic reaction to any other pain reliever/fever reducer
- right before or after heart surgery

Ask a doctor before use if

- stomach bleeding warning applies to you
- you have a history of stomach problems such as heartburn
- you have high blood pressure, heart disease, liver cirrhosis, or kidney disease
- you are taking a diuretic
- you have problems or serious side effects from taking pain relievers or fever reducers
- you have asthma

Ask a doctor or pharmacist before use if you are

- taking aspirin for heart attack or stroke, because ibuprofen may decrease this benefit of aspirin
- taking any other drug
- under a doctor's care for any serious condition

When using this product

- the risk of heart attack or stroke may increase if you use more than directed or longer than directed
- take with food or milk if stomach upset occurs

(continued on opposite panel)

ete product information

100 Tablets (50 x 2)

MEDI-FIRST®

Ibuprofen 200mg

Pain Reliever/Fever Reducer (NSAID)

Pull to Open

Easy To Swallow Film Coated Tablets

Compare active ingredient to: Genuine Advil®
Registered Trademark of Pfizer Consumer Healthcare

Tamper Evident Unit Dose Packets

Drug Facts (continued)

Stop use and ask a doctor if

- you experience any of the following signs of stomach bleeding:
  - feel faint
  - vomit blood
  - have bloody or black stools
  - have stomach pain that does not get better
- pain gets worse or lasts for more than 10 days
- fever gets worse or lasts for more than 3 days
- redness or swelling is present in the painful area
- any new or unexpected symptoms occur

If pregnant or breast-feeding, ask a health professional before use. It is especially important not to use ibuprofen during the last 3 months of pregnancy unless specifically directed to do so by a doctor because it may cause problems in the unborn child or complications during delivery.

Keep out of reach of children. In case of overdose, get medical help or contact a Poison Control Center right away.

Directions

- **do not use more than directed**
- **the smallest effective dose should be used**
- do not take longer than 10 days, unless directed by a doctor (see Warnings)

Drug Facts (continued)

Adults and children: (12 years and older)	Take 1 tablet every 4 to 6 hours wi symptoms persist. If pain or fever d not respond to 1 tablet, 2 tablets m be used. Do not exceed 6 tablets i hours, unless directed by a doctor.
Children under 12 years:	Do not give to children under 12 y of age.

Other information

- read all product information before using
- store at 68-77°F (20-25°C)
- avoid excessive heat 104°F (above 40°C)
- tamper evident sealed packets
- do not use any opened or torn packets

Inactive ingredients

carnauba wax*, cellulose colloidal silicon dioxide*, corn starch*, croscarmellose sod hypromellose*, iron oxide red*, lactose*, magnesium stea microcrystalline cellulose, polydextrose*, polyethylene gly polyvinyl alcohol*, povidone*, pregelatinized starch*, silica sodium lauryl sulfate*, sodium starch glycolate*, stearic ac talc*, titanium dioxide, triacetate*, triacetin*

*may contain

Questions or comments? 1-800-634-7680

Retain carton for complete product information

GLOW STICK

Safety Data Sheet

According to OSHA Hazard Communication Standard 29 CFR 1910.1200

SECTION 1: Identification

1.1. Identification

Product form	:	Mixture
Trade name	:	Ready America Emergency Lightsticks,Ready America Lightsticks, 8 Hour Lightsticks, 12 Hour Lightsticks, Mayday Lightsticks
Product description	:	12 Hour Emergency Lightstick, 8 Hour Emergency Lightsticks 2 Pack, 8 Hour Special Value 3 Pack, 12 Hour Mayday 6” Lightstick, Glowstick, Light Stick, Lightstick in Assorted Colors Green, Orange

1.2. Recommended use and restrictions on use

Main use category	:	Used for Emergency Lighting during Disasters, Blackouts, all occassions
Restrictions on use	:	No restrictions, no sparks or flames

1.3. Supplier

Supplier	:	Xiamen Long Afterglow Co.,Ltd.
Address	:	No.1043,Tong Ji Zhong Road,Tong An Area,Xiamen,Fujian Province,China
Phone	:	+86-592-3675699
FAX	:	+86-592-3675698
E-mail	:	elaine@glo-novelty.com
Web	:	www.glo-novelty.com
Importer	:	Ready America, Inc.
Address	:	1399 Specialty Drive, Vista CA 92081
Phone	:	1 800 959 4053
E-mail	:	customerservice@readyamerica.com
Web	:	www.readyamerica.com

1.4. Emergency telephone number

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

No labelling applicable

Hazard pictograms (GHS-US)	:	None
Signal word (GHS-US)	:	None
Hazard statements (GHS-US)	:	Not applicable
Precautionary statements (GHS-US)	:	Not applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Dimethyl phthalate	(CAS-No.) 131-11-3	58.5
Butyl benzoate	(CAS-No.) 136-60-7	28.5
Water	(CAS-No.) 7732-18-5	6
Bis[2,3,5-trichloro-6-[(pentyloxy)carbonyl]phenyl] oxalate	(CAS-No.) 75203-51-9	4.7
Hydrogen peroxide	(CAS-No.) 7722-84-1	2.2
Anthracene, 9,10-bis(phenylethynyl)-	(CAS-No.) 10075-85-1	0.1

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show directions for use or safety data sheet if possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing;
Give oxygen or artificial respiration if necessary;
If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash skin with plenty of water and take off contaminated clothing;
If skin irritation or rash occurs: Get medical advice/attention;
Wash contaminated clothing before reuse

First-aid measures after eye contact : Rinse cautiously with water for several minutes while holding the eyelids wide open;
Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

First-aid measures after ingestion : If swallowed, rinse mouth;
Do not induce vomiting;
Give nothing or a little water to drink;
Never give anything by mouth to an unconscious person;
If you feel unwell, seek medical advice;

4.2. Most important symptoms and effects (acute and delayed)

No information available.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use carbon dioxide, dry extinguishing media, water spray, water.

Unsuitable extinguishing media : None

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Combustion produces toxic or irritating gases and fumes.

5.3. Special protective equipment and precautions for fire-fighters

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

Other information : Evacuate personnel to a safe area. Move containers from fire area if it can be done without personal risk. Cool tanks/drums with water spray/remove them into safety. Stay upwind. Avoid breathing vapour or dusts. Provide storage and work areas with suitable fire extinguishers. Collect contaminated firefighting water separately, it must not enter drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and inhalation of vapors

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Stop leak if safe to do so. Evacuate personnel to a safe area;Ensure adequate ventilation, especially in confined areas;No flames, no sparks. Eliminate all sources of ignition.

6.2. Environmental precautions

Although the product is not classified as dangerous to the environment, it is advised that in the event of an accidental release the product should be prevented from reaching the sewage system or any water course, and from penetrating the ground/soil. Dispose of spilled material in accordance with the relevant local regulations. See Section 13 for disposal considerations.

6.3. Methods and material for containment and cleaning up

For containment : Isolate the spillage. Ensure adequate ventilation. Collect mechanically. Fill into labeled, suitable sealed containers for disposal in accordance with local authority regulations

Methods for cleaning up : For large amounts: Transfer product into suitable containers.

For residues: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with regulations

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety practice

Ensure adequate ventilation, especially in confined areas

Observe personal protective measures listed in section 8.

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

Avoid contact with skin, eyes or clothing

Wash contaminated clothing before reuse

Keep away from heat, sparks, flame and other sources of ignition

Avoid breathing vapors or mists

Any deposit of dust which cannot be avoided must be removed regularly.

Hygiene measures : Do not eat, drink or smoke when using this product.

Always wash hands after handling the product.

Remove contaminated clothing and protective equipment before entering eating areas.

Avoid formation of dust, inhalation and ingestion.

Avoid contact with eyes, skin and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep containers tightly closed in a dry, cool and well-ventilated place

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep locked up and out of reach of children

Keep away from food, drink and animal feeding stuffs

Always keep in containers of the same material as the original one

Store away from incompatible substances (reducing agents, nitrite salts and potassium chlorate).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Dimethyl phthalate (131-11-3)		
ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³
IDLH	US IDLH (mg/m³)	2000 mg/m³
NIOSH	NIOSH REL (TWA) (mg/m³)	5 mg/m³

Butyl benzoate (136-60-7)
Not applicable

Bis[2,3,5-trichloro-6-[(pentyloxy)carbonyl]phenyl] oxalate (75203-51-9)
Not applicable

Hydrogen peroxide (7722-84-1)		
ACGIH	ACGIH TWA (ppm)	1 ppm
OSHA	OSHA PEL (TWA) (mg/m³)	1.4 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	1 ppm
IDLH	US IDLH (ppm)	75 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	1.4 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	1 ppm

Water (7732-18-5)
Not applicable

Anthracene, 9,10-bis(phenylethynyl)- (10075-85-1)
Not applicable

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Remove all sources of ignition.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear appropriate chemical resistant gloves.

Eye protection:

Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin and body protection:

Wear appropriate chemical resistant clothing.

Respiratory protection:

The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.

50 mg/m3

Any air-purifying full-facepiece respirator equipped with an N95, R95, or P95 filter. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

125 mg/m3

Any supplied-air respirator operated in a continuous-flow mode.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

250 mg/m3

Any air-purifying, full-facepiece respirator equipped with an N100, R100, or P100 filter.

Any self-contained breathing apparatus with a full facepiece.

Any supplied-air respirator with a full facepiece.

2000 mg/m3

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode.

Emergency or planned entry into unknown concentrations or IDLH conditions

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Any supplied-air respirator with a full facepiece that is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-pressure mode.

Escape

Any air-purifying, full-facepiece respirator equipped with an N100, R100, or P100 filter.

Any appropriate escape-type, self-contained breathing apparatus.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	No data available
Odour	:	No data available
Odour threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Boiling point	:	No data available
Flash point	:	>200ºF (93.3ºC) Closed Cup
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	The product is not classified as flammable
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	No data available
Solubility	:	No data available
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	Not explosive based on experience and structural considerations
Oxidising properties	:	Not oxidizing based on experience and structural considerations

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Will not polymerize.

10.4. Conditions to avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

10.5. Incompatible materials

Acids, bases, oxidizing materials.

10.6. Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO_2) and other toxic vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Dimethyl phthalate (131-11-3)	
LD50 oral rat	6800 mg/kg

Butyl benzoate (136-60-7)	
LD50 oral rat	735 mg/kg

Hydrogen peroxide (7722-84-1)	
LD50 oral rat	801 mg/kg
LD50 dermal rat	4060 mg/kg
LD50 dermal rabbit	2000 mg/kg
LC50 inhalation rat (mg/l)	2 g/m³ (Exposure time: 4 h)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Dimethyl phthalate (131-11-3)	
LC50 fish	49.5 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

Dimethyl phthalate (131-11-3)	
LC50 fish	39 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
LC50 fish	37 - 69 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 fish	121 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
LC50 fish	100 - 220 mg/l (Exposure time: 96 h - Species: Leuciscus idus [static])
LC50 fish	56 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia	33 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Algae	20.6 - 45.8 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)
EC50 Algae	28.4 - 71 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)
EC50 Algae	142 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)
EC50 Algae	26.1 mg/l (Exposure time: 96 h - Species: Skeletonema costatum)
EC50 Algae	204 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)

Hydrogen peroxide (7722-84-1)	
LC50 fish	16.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
LC50 fish	18 - 56 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 fish	10 - 32 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia	18 - 32 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Daphnia	7.7 mg/l (Exposure time: 24 h - Species: Daphnia magna [Static])
EC50 Algae	2.5 mg/l (Exposure time: 72 h)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Dimethyl phthalate (131-11-3)	
BCF fish 1	4.7 - 57
Log Pow	2.12

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

Dimethyl phthalate (131-11-3)	
1990 Hazardous Air Pollutant (Clean Air Act)	Yes

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Dimethyl phthalate (131-11-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb

Butyl benzoate (136-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Hydrogen peroxide (7722-84-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Section 302 EPCRA Reportable Quantity (RQ)	1000 lb concentration >52%
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb (concentration >52%)

Water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Anthracene, 9,10-bis(phenylethynyl)- (10075-85-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Dimethyl phthalate (131-11-3)
Listed on the Canadian DSL (Domestic Substances List)

Butyl benzoate (136-60-7)
Listed on the Canadian DSL (Domestic Substances List)

Hydrogen peroxide (7722-84-1)
Listed on the Canadian DSL (Domestic Substances List)

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)

Anthracene, 9,10-bis(phenylethynyl)- (10075-85-1)
Listed on the Canadian NDSL (Non-Domestic Substances List)

EU-Regulations

Dimethyl phthalate (131-11-3)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Butyl benzoate (136-60-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Bis[2,3,5-trichloro-6-[(pentyloxy)carbonyl]phenyl] oxalate (75203-51-9)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Hydrogen peroxide (7722-84-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Water (7732-18-5)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Anthracene, 9,10-bis(phenylethynyl)- (10075-85-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Dimethyl phthalate (131-11-3)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on Turkish inventory of chemical Listed on the TCSI (Taiwan Chemical Substance Inventory)

Butyl benzoate (136-60-7)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on Turkish inventory of chemical Listed on the TCSI (Taiwan Chemical Substance Inventory)

Bis[2,3,5-trichloro-6-[(pentyloxy)carbonyl]phenyl] oxalate (75203-51-9)
Listed on the Korean ECL (Existing Chemicals List)

Hydrogen peroxide (7722-84-1)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Japanese Poisonous and Deleterious Substances Control Law Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on Turkish inventory of chemical Listed on the TCSI (Taiwan Chemical Substance Inventory)

Water (7732-18-5)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Anthracene, 9,10-bis(phenylethynyl)- (10075-85-1)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on the Korean ECL (Existing Chemicals List) Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

No additional information available

SECTION 16: Other information

Issue date	:	02-Feb-2018
Revision date	:	02-Feb-2018

Full text of H-phrases

None

Key or legend to abbreviations and acronyms used in the safety data sheet

ADR	:	European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMDG	:	International Maritime Dangerous Goods
IATA	:	International Air Transport Association
ADN	:	European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterway
RID	:	Regulations Concerning the International Carriage of Dangerous Godds by Rail
PBT	:	Persistent, Bioaccumulative and Toxic
vPvB	:	Very Persistent and Very Bioaccumulative
DNEL	:	Derived No Effect Level
PNEC	:	Predicted No Effect Concentration
LC50	:	Lethal Concentration 50
LD50	:	Lethal Dose 50
EC50	:	Effective Concentration 50
TWA	:	Time Weighted Average
STEL	:	Short Term Exposure Limit

Key literature references and sources for data

ECHA: http://echa.europa.eu/

IFA GESTIS: http://gestis-en.itrust.de/nxt/gateway.dll?f=templates$fn=default.htm$vid=gestiseng:sdbeng

HSDB: http://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm

ICSC: http://www.ilo.org/dyn/icsc/showcard.home

eChemPortal: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

NITE-CHRIP: http://www.nite.go.jp/en/chem/chrip/chrip_search/srhInput

SDS US (GHS HazCom 2012)

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

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
TÜV SÜD Group

Engineer: _____ **Technical Report checked:** _____

Kevin Zhang **Ben Shao**

Safety Data Sheets (SDSs)

Client	Henan Troily New Energy Technology Co., Ltd.
Add. of Client	Industrial Cluster District of Yudong, Xinxiang City, Henan Province 453000 P.R.China
Description	NI-MH battery
Model /Type	AA100mAh 1.2V
Manufacturer	Henan Troily New Energy Technology Co., Ltd.
Add. of Manufacturer	Industrial Cluster District of Yudong, Xinxiang City, Henan Province 453000 P.R.China
Nominal Voltage	1.2V, 100mAh
Date of Receipt	2016-06-07

Laboratory	Shenzhen ZRLK Testing Technology Co., Ltd.	
Address	6F, Fuxinfa Industrial Park, Liuxiandong, Xili Street, Nanshan District, Shenzhen, China	
Approved Signatory	Williau. liu	
Inspected by	Bella.Wang	
Censored by	Frank. feng	

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

Product Identifier

Product name: NI-MH battery

Model: AA100mAh 1.2V

Other means of identification

Synonyms:none

Recommended use of the chemical and restrictions on use

Recommended Use:Used in portabl electronic equipments;

Uses advidsed against: none

Details of the supplier of the safety data sheet:

Supplier Name: Henan Troily New Energy Technology Co., Ltd.

Address: Industrial Cluster District of Yudong, Xinxiang City, Henan Province 453000 P.R.China

Telephone number of the supplier: 0086-0373-7722669

Fax: 0086-0373-7722669

Postcode: 453000

E-mail address: xxcldy@126.com

Emergency telephone number

Company Emergency Phone Number: 0086-0373-7722669

2. HAZARDS IDENTIFICATION

Classification

No harm at the normal use. If contact the Electrolyte in the NI-MH battery, reference as follows:

Classification of the substance or mixture

Classification according to GHS

Acute Toxicity, Oral(Hazard category 4)

Acute toxicity, inhalation (Hazard category 4)

Acute Toxicity, Dermal(Hazard category 3)

Aquatic Acute 1

Aquatic Chronic 1

Skin, irritate(Cagegory 1B)

Eye Irritate (Hazard category 1)

GHS Label elements, including precautionary statements:

GHS09 **GHS08** **GHS06** **GHS07** **GHS02**

Signal word: Danger

Hazard statement(s):

H350 May cause cancer

H341 Suspected of causing genetic defects

H361 Suspected of damaging fertility or the unborn child

H330 Fatal if inhaled

H372 Causes damage to organs.

H410 Very toxic to aquatic life with long lasting effects

H400 Very toxic to aquatic life

H302:Harmful if swallowed;

H351 Suspected of causing cancer.

H332 Harmful if inhaled

H314:Causes severe skin burns and eye damage;

H220 Extremely flammable gas

precautionary statements:

Prevention:

P201 Obtain Special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P260 Do not breathe dust/furne/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P284 [In case of inadequate ventilation] wear respiratory protection.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

- if this is not the intended use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P210 Keep away from heat, hot surfaces,sparks, open flames and other ignition sources. No smoking.

Response:

P308+P313 IF exposed or concerned: Get medical advice/attention.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 Immediately call a POISON CENTER/doctor.

P314 Get medical advice/attention if you feel unwell.

P391 Collect spillage.

P312 Call a Poison center or doctor/physician if you feel unwell.

P330 Rinse mouth

P301+P330+P331-IF SWALLOWED: rise mouth. Do NOT induce vomiting

P302+P350-IF ON SKIN: Gently wash with plenty of soap and water

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P377 Leaking gas fire:Do not extinguish, unless leak can be stopped safety;

P381 In case of leakage, eliminate all ignition sources.

Storage:

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403 Store in a well-ventilated place.

Disposal

P501: Dispose of contents/container in accordance with local/national regulations

Hazards not otherwise classified (HNOC)

Not Applicable

Other information

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterixation: Mixtures

Description:

Product: Consisting of the following components.

Common Chemical Name	Concentration (%)	CAS Number	EC No.
Iron	60.46	7439-89-6	231-096-4
Polypropylene	1.88	9003-07-0	----
Cobalt(II) oxide	1.0	1307-96-6	215-154-6
Nickel hydroxide	9.93	12054-48-7	235-008-5
Lanthanum	11.16	7439-91-0	----
Potassium hydroxide	12.06	1310-58-3	215-181-3
Sodium hydroxide	2.51	1310-73-2	215-185-5
Lithium hydroxide monohydrate	1.0	1310-66-3	----

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

4. FIRST-AID MEASURES

First aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Remove contaminated clothing and shoes. Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed

Swallowing Do not induce vomiting. Get medical attention.

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

CO2, dry chemical powder, water spray.

Unsuitable Extinguishing Media:No information available.

Specific Hazards Arising from the Chemical

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide(CO)

Carbon dioxide

Other irritating and toxic gases.

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. For example: Wear self-contained respiratory protective device. Wear suitable protective clothing and eye/face protection.

Special hazards arising from the substance or mixture:

Battery may burst and release hazardus decomposition products when exposed to a fire situation. NiMH batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperature(>150℃), When damaged or abused(e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Refer to section 8 for personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Evacuate personnel to safe areas.

Environmental precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

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 Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other Non combustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.
Wash thoroughly after handling. Use this material with adequate ventilation.
The product is not explosive.

Conditions for safe storage, including any incompatibilities

If the NI-MH battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the NI-MH battery periodically.
3 months: -10℃~+40℃, 45 to 85%RH
And recommended at 0℃~+35℃ for long period storage.
The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more.
Do not storage NI-MH battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.
Keep out of reach of children.
Do not expose NI-MH battery to heat or fire. Avoid storage in direct sunlight.
Do not store together with oxidizing and acidic materials**.**
Keep ignition sources away- Do not smoke.
Store in cool, dry and well-ventilated place.

Incompatible Products None known.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Ingredients with limit values that require monitoring at the workplace:	
7439-89-6 iron	
TLV (USA)	0.02mg/m^3
MAK (Germany)	0.1mg/m^3

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 Measures Showers
Eyewash stations
Ventilation systems

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection:

Tightly sealed goggles

Body protection:

Protective work clothing.

Skin protection:

Protective gloves

Material of gloves:

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

Penetration time of glove material:

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

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Form: cylindrical
	Color: green
	Odour: Odourless
	Odor Threshold: No information available
Change in condition:	
pH, with indication of the concentration	Not determined.
Melting point/freezing point	Not determined.
Initial boiling point and Boiling range:	Not determined.
Flash Point	Not determined.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.

Upper/lower flammability or explosive limits	Not determined.
Vapor Pressure:	Not determined.
Vapor Density:	Not determined.
relative density:	Not determined.
Solubility in Water:	Not determined.
Solubility in other solvents	Not determined.
n-octanol/water partition coefficient	Not determined.
Auto-ignition temperature	Product is not self-igniting.
Decomposition temperature	Not determined.
Odout threshold	Not determined.
Evaporation rate	Not determined.
Viscosity	Not determined.
Other Information	No further relevant information available.

10. STABILITY AND REACTIVITY

Reactivity: Stable under recommended storage and handling conditions (see section 7, Handling and storage).

Chemical stability: Stable under normal conditions of use, storage and transport.

Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

Possibility of Hazardous Reactions: None under normal processing.

Hazardous Polymerization: Hazardous polymerization does not occur.

Conditions to avoid: Strong heating, fire, Incompatible materials.

Incompatible materials: Strong oxidizing agents. Strong acids.Base metals.

Hazardous Decomposition Products: Carbon oxides, Other irritating and toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute toxiciy: No data available.

LD/LC50 values relevant for classification:
Not available.

Skin corrosion/irritation: No irritant effect.

Serious eye damage/irritation: Cause serious eye irritation.

Respiratory or skin sensitization: No sensitizing effects known.

Specific target organ system toxicity: No information available.

CMR effects(carcinogenity, mutagenicity and toxicity for reproduction): No information available.

12. Ecological Information

Toxicity:

Acquatic toxicity:
Avoid release to the environment. - if this is not the intended use.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation: Must not be disposed together with household garbage.

Do not allow product to reach sewage system

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

Land transport

ADR/RID class: Not regulated.

UN-Number:UN3496

Maritime transport

IMDG Class: Class 9.

UN Number: UN3496.

Marine pollutant: No

Environmental hazards: Not applicable.

Special precautions for user: Not applicable.

Transport/Additional information: Not restricted goods according to the above specifications.

This report applies to by sea, by air and by land;

NI-MH battery complies with SP A199 the UN Recommendations on the Transport of Dangerous Goods; IATA Dangerous Goods regulations, and applicable U.S. DOT regulations for the safe transport of NI-MH battery.

The NI-MH battery according to SP A199 of the 2016 IATA Dangerous Goods regulations 57th Edition may be transported. And applicable U.S. DOT regulations for the safe transport of NI-MH battery.

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

The NI-MH battery having the potential of a dangerous evolution of heat must be prepared for transport so as to prevent: (a) a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or, in the case of equipment, by disconnection of the battery and protection of exposed terminals); and

(b) unintentional activation.

The words “Not Restricted” and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued.

The package must be handled with care and that a flammability hazard exists if the package is damaged;

15. REGULATORY INFORMATION

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

EU Regulation:

Authorisations: No information available.

Restrictions on use: No information available.

Regulatory information

CAS No.	EU (EINECS)	**US (TSCA)**	**Japan (ENCS)**	**Canada (DSL/ NDSL)**	**Austrlia (AICS)**	**Korea (ECL)**	**China (IECSC)**
7439-89-6	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
9003-07-0	Listed	Listed	Listed	DSL	Listed	Listed	Listed
1307-96-6	Listed	Listed	Listed	DSL	Listed	Listed	Listed
12054-48-7	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
7439-91-0	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
1310-58-3	Listed	Listed	Listed	DSL	Listed	Listed	Listed
1310-73-2	Listed	Not listed	Not listed	Not listed	Not listed	Not listed	Listed
1310-66-3	Listed	Listed	Not listed	NDSL	Not listed	Not listed	Not listed

Chemical safety assessment A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

R20/22: Harmful by inhalation and if swallowed.

R36: Irritating to eyes.

H302: Harmful if swallowed.

H332: Harmful if inhaled.

**********End of SDS**********

PRODUCT SAFETY DATA SHEET

PRODUCT NAME: Eveready / Energizer Battery

Type No.: **Volts:**

TRADE NAMES: ENERGIZER, ENERGIZER e², INDUSTRIAL ZMA, HERCULES, EVEREADY, WONDER

Approximate Weight:

CHEMICAL SYSTEM: Alkaline Manganese Dioxide-Zinc

Designed for Recharge: No

SECTION 1 - MANUFACTURER INFORMATION

Energizer Battery Manufacturing, Inc.
25225 Detroit Rd.
Westlake, OH 44145

Telephone Number for Information:
800-383-7323 (USA / CANADA)

Date Prepared: January 2015

SECTION 2 – HAZARDS IDENTIFICATION

Under normal conditions of use, the battery is hermetically sealed.

Ingestion: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.
Inhalation: Contents of an open battery can cause respiratory irritation.
Skin Contact: Contents of an open battery can cause skin irritation and/or chemical burns.
Eye Contact: Contents of an open battery can cause severe irritation and chemical burns.

SECTION 3 - INGREDIENTS

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

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Graphite (CAS# 7782-42-5)	15 mg/m^3 TWA (total dust) 5 mg/m^3 TWA (respirable fraction)	2 mg/m^3 TWA (respirable fraction)	2-6
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m^3 Ceiling (as Mn)	0.2 mg/m^3 TWA (as Mn)	30-45
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m^3 Ceiling	4-8
Zinc (CAS# 7440-66-6)	15 mg/m^3 TWA PNOR* (total dust) 5 mg/m^3 TWA PNOR* (respirable fraction)	10 mg/m^3 TWA PNOC** (inhalable particulate) 3 mg/m^3 TWA PNOC** (respirable particulate)	12-25
Non-Hazardous Components Steel (iron CAS# 7439-89-6) Water, Paper, Plastic and Other	 None established None established	 None established None established	 18-22 Balance

* PNOR: Particulates not otherwise regulated
**PNOC: Particulates not otherwise classified

SECTION 4 – FIRST AID MEASURES

Ingestion: Do not induce vomiting or give food or drink. Seek medical attention immediately. CALL NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (202-625-3333) collect day or night.
Inhalation: Provide fresh air and seek medical attention.
Skin Contact: Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.
Eye Contact: Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.
Fire fighters should wear self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

To cleanup leaking batteries:

Ventilation Requirements: Room ventilation may be required in areas where there are open or leaking batteries.

Eye Protection: Wear safety glasses with side shields if handling an open or leaking battery.
Gloves: Use neoprene or natural rubber gloves if handling an open or leaking battery.
Battery materials should be collected in a leak-proof container.

SECTION 7 - HANDLING AND STORAGE

Storage: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your Energizer Battery Manufacturing, Inc. representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

If soldering or welding to the battery is required, consult your Energizer Battery Manufacturing, Inc. representative for proper precautions to prevent seal damage or short circuit.

Charging: This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

Labeling: If the Eveready / Energizer Battery label or package warnings are not visible, it is important to provide a package and/or device label stating:

> **WARNING:** do not install backwards, charge, put in fire, or mix with other battery types. May explode or leak causing injury.
> **Replace all batteries at the same time.**
>
> Where accidental ingestion of small batteries is possible, the label should include:
>
> Keep away from small children. If swallowed, promptly see doctor; have doctor phone (202) 625-3333 collect.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Requirements: Not necessary under normal conditions.

Respiratory Protection: Not necessary under normal conditions.

Eye Protection: Not necessary under normal conditions.

Gloves: Not necessary under normal conditions.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point @ 760 mm Hg (°C)	Not applicable for an Article
Vapor Pressure (mm Hg @ 25°C)	Not applicable for an Article
Vapor Density (Air = 1)	Not applicable for an Article
Density (g/cm^3)	2.0 – 3.0
Percent Volatile by Volume (%)	Not applicable for an Article
Evaporation Rate (Butyl Acetate = 1)	Not applicable for an Article
Physical State	Solid
Solubility in Water (% by weight)	Not applicable for an Article
pH	Not applicable for an Article
Appearance and Odor	Solid object / no odor

SECTION 10 – STABILITY AND REACTIVITY

Alkaline batteries do not meet any of the criteria established in 40 CFR 261.2 for reactivity.

SECTION 11 – TOXICOLOGICAL INFORMATION

Alkaline batteries are not hazardous waste. Under normal conditions of use, alkaline batteries are non-toxic.

SECTION 12 – ECOLOGICAL INFORMATION

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles.

SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state and local regulations. Appropriate disposal technologies include incineration and land filling.

SECTION 14 – TRANSPORT INFORMATION

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

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

Regulatory Body	Special Provisions
ADR	Not regulated
IMDG	Not regulated
UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	Not regulated

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

SECTION 15 - REGULATORY INFORMATION

Batteries marketed by Energizer Battery Manufacturing, Inc. are not classified as dangerous goods by the US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

SARA/TITLE III - As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.

SECTION 16 - OTHER INFORMATION

None.

Energizer has prepared copyrighted Product Safety Datasheets to provide information on the different Eveready/Energizer battery systems. As defined in OSHA Hazard Communication Standard, Section 1910.1200 (c), Eveready/Energizer batteries are manufactured articles, which do not result in exposure to a hazardous chemical under normal conditions of use. The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, ENERGIZER BATTERY MANUFACTURING, INC., MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

SAFETY DATA SHEET

This Safety Data Sheet complies with the Canadian Controlled Product Regulations, the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910 (OSHA HCS), and the European Union Directives.

1. Product and Supplier Identification

1.1 Product: **Coghlan's #529, #940BP Waterproof Matches**

1.2 Other Means of Identification: None

1.3 Product Use: Waterproof matches

1.4 Restrictions on Use: None known

1.5 Producer: **Coghlan's Ltd.,**
121 Irene Street,
Winnipeg, Manitoba
Canada, R3T 4C7

Telephone: +1(204) 284-9550
Facsimile: +1(204) 475-4127

Supplier: **As above**

1.6 Emergencies: +1(877) 264-4526

2. Hazards Identification

2.1 Classification of product or mixture

Note to reader: The information provided in this Safety Data Sheet applies solely to the match head and not the fibre/wood portion onto which the match head is attached.

This product in an untested mixture and GHS classification is based on the classification of the ingredients and their concentrations. Proprietary ingredients, if any, do NOT exhibit any health effects not listed in this SDS.

GHS Classification:
Flammable Solid, Category 2
Acute Toxicity, Oral, Category 4
Acute Toxicity, Inhalation, Category 4
Eye Damage/Irritation, Category 2B
Reproductive Toxicity, Category 2*
Skin Sensitization, Category 1
Acute Aquatic Toxicity, Category 2
Chronic Aquatic Toxicity, Category 2

*Based on Table 3.7.1, concentration in mixture of boric acid is between 0.1% and 3%

2.2 GHS Label Elements, including precautionary statements

Pictogram:

Signal Word: Warning

GHS Hazard Statements:

H228: Flammable Solid
H302: Harmful if swallowed.
H317: May cause an allergic skin reaction.
H320: Causes eye irritation.
H332: Harmful if inhaled.
H361: Suspected of damaging fertility or the unborn child.
H401: Toxic to aquatic life.
H411: Toxic to aquatic life with long lasting effects.

GHS Precautionary Statements:

Prevention:

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261: Avoid breathing dust/fume/vapours.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of water/…
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321: Specific treatment (see Section 4 on this SDS)
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P337+P313: If eye irritation persists: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P370+P378: In case of fire use water as first choice. Sand, earth, dry chemical, foam or CO_2 may be used to extinguish.
P391: Collect spillage. Do not leave spilled matches in the environment.

Storage:	Store in a cool, dry, well-ventilated area away from sources of ignition, oxidizing agents, food stuffs, clothing, direct sunlight and children.
Disposal:	P501: Dispose of contents/container in accordance with local regulations, following product label directions.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: When striking matches, danger of skin burns may occur.

2.4 Additional Information

Primary Routes of Entry:

Skin Contact:	Yes
Skin Absorption:	No
Eye Contact:	Yes
Ingestion:	No
Inhalation:	Yes

Emergency Overview: When striking these matches, care must be taken to prevent injury by burns to skin and eyes. Striking matches will release gaseous compounds that are irritating to the respiratory tract.

Effects of Short-Term (Acute) Exposure:

Inhalation: Striking matches will release gaseous compounds that are irritating to the respiratory tract.

Skin Contact: These matches contain compounds which may cause skin sensitization. Irritation may occur causing a rash. Skin contact with a burning match will cause significant burns. Strike matches away from face to prevent sparks form touching skin or entering eyes. Skin rash may occur in persons predisposed to skin problems. Wash hands after handling matches to prevent residue from being ingested by touching mouth.

Eye Contact: Smoke or vapours from the burning matches may cause transient eye discomfort. Accidental entry of sparks into the eye may cause permanent eye damage.

Ingestion: Accidental ingestion is unlikely due to form of product. If matches are ingested, compounds in the striking material are toxic. Immediately contact a POISON CONTROL CENTER, doctor or nearest hospital for treatment advice.

Effects of Long-Term (Chronic) Exposure: No adverse health effects are indicated. Acute health effects are more serious.

Medical Conditions Aggravated By Exposure: None known

3. Composition

3.1 Mixture composition

Component	% (w/w)	Exposure Limits (ACGIH)*	LD_{50}	LC_{50}
Potassium Chlorate CAS No 3811-04-9 EINECS No 223-289-7	20 - 50	N/d	1870 mg/kg (oral/rat) >2000 mg/kg (dermal/rabbit)	>5.1 mg/l (inh, rat/ 4 hr)
Quartz Powder CAS No 14808-60-7 EINECS No 238-878-4	10 - 20	TLV-TWA: 0.025 mg/m^3	N/d	N/d
Sulphur CAS No 7704-34-9 EINECS No 231-722-6	5 - 10	N/d	>5000 mg/kg (oral/rat) >2000 mg/kg (dermal/rabbit)	5434 mg/l (inh, rat/ 4 hr)
Zinc Oxide CAS No 1314-13-2 EINECS No 215-222-5	5 - 10	TLV-TWA: 2.0 mg/m^3 TLV-STEL: 10 mg/m^3	7950 mg/kg (oral/mouse)	2500 mg/m3 (inh, mouse/ 4hr)
Red Phosphorus CAS No 7723-14-0 EINECS No 231-768-7	5 - 10	OSHA Table Z-1 Limits for air contaminants TWA: 0.10 mg/m^3	15,000 mg/kg (oral/ female rat) Dermal N/d	N/d
Gum Rosin CAS No 8050-09-7 EINECS No 232-475-7	1.0 – 5.0	N/d	2800 mg/kg (oral/rat) >2000 mg/kg (dermal/rabbit)	N/d
Boric Acid CAS No 10043-35-3 EINECS No 233-139-2	0.1 – 1.0	TLV-TWA: 2.0 mg/m^3 TLV:STEL: 6.0 mg/m^3	2660 mg/kg (oral/rat) Dermal N/d	N/d
Tin (IV) Oxide CAS No 18282-10-5 EINECS No 242-159-0	0.01 – 0.1	TLV-TWA: 2.0 mg/m^3	20,000 mg/kg (oral/rat) Dermal N/d	N/d
Other undisclosed ingredients and fillers	None	N/d	N/d	N/d
GHS CLASSIFICATION: FLAM SOLID, Cat 2, ACUTE TOX. ORAL, Cat 4; ACUTE TOX, INH, Cat 4; EYE DAMAGE, Cat 2B, SKIN SENS, Cat 1, REPORD TOX, Cat 2, ACUTE AQUATIC TOX, Cat 2; CHRONIC AQUATIC TOX, Cat 2.				

* ACGIH: American Conference of Governmental Industrial Hygienists. Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

ABBREVIATION KEY: N/p: not published, N/d: not determined, N/ap: not applicable, N/av: not available

4. First Aid Measures

4.1 Description of First Aid Measures

General advice: If ingested, immediately call a POISON CONTROL CENTER, doctor or nearest hospital for treatment advice. For burns, seek medical advice. Wash hands after handling. Do not eat drink or smoke until washing the hands.

In case of eye contact: Immediately flush eyes with plenty of water. If irritation occurs or persists, flush eyes with plenty of fresh water, holding eyelids open. Remove contact lenses if easy to do. Call a physician if an irritation persists.

In case of skin contact: Wash hands immediately with soap and water after handling. Do not eat, drink or smoke until hands are thoroughly washed. If irritation occurs or persists seek medical advice.

If inhalation: Inhalation is a route of entry. Move victim to fresh air. If breathing is labored, give artificial respiration. Seek medical attention if breathing is difficult or discomfort occurs.

If ingestion: This product is orally toxic if ingested. If ingested immediately call a POISON CONTROL CENTER, doctor or nearest hospital for treatment advice. Provided that patient is conscious, rinse mouth with water. Do NOT give anything to an unconscious person. Do not induce vomiting unless instructed to do so by a physician or the poison control center. If spontaneous vomiting occurs, have victim lean forward with head between knees to avoid aspirating vomitus, Rinse mouth and give 2 – 4 cups water, if conscious.

4.2 Most important symptoms and effects, both acute and delayed

Effects of Short-Term (Acute) Exposure:
Inhalation: Striking matches will release gaseous compounds that are irritating to the respiratory tract.

Skin Contact: These matches contain compounds which may cause skin sensitization. Irritation may occur causing a rash. Skin contact with a burning match will cause significant burns. Strike matches away from face to prevent sparks form touching skin or entering eyes. Skin rash may occur in persons predisposed to skin problems. Wash hands after handling matches.

Eye Contact: Smoke or vapours from the burning matches may cause transient eye discomfort. Accidental entry of sparks into the eye may cause permanent eye damage.

Ingestion: Accidental ingestion is unlikely due to form of product. If matches are ingested, compounds in the striking material are toxic. Immediately contact a POISON CONTROL CENTER, doctor or nearest hospital for treatment advice.

Effects of Long-Term (Chronic) Exposure: No adverse health effects are indicated. Acute health effects are more serious.

Medical Conditions Aggravated By Exposure: None known

4.3 Indication of any immediate medical attention and special treatment needed
In the case of accidental ingestion, it is important to get treatment immediately.

5. Fire Fighting Measures

5.1 Extinguishing Media

Suitable extinguishing media: Product is flammable. When ignited, blow out and immerse in water if safe to do without burning the skin. Cover with sand and then wet the sand. For larger quantities, use water or water spray or carbon dioxide.

5.2 Special hazards arising from mixture: None

Advice for firefighters: In any fire situation, firefighters should wear full protective clothing including self contained breathing apparatus. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

5.3 Further Information:

Sensitivity to Impact: Yes
Sensitivity to Static Discharge: Yes

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS) HAZARD INDEX:

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 0

PERSONAL PROTECTION: None

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

All spill responders involved in a cleanup of this product must follow good industrial hygiene practices. A small spill can be handled routinely. Wear suitable protective equipment and eye protection to prevent skin and eye contact. Extinguish all sources of ignition and remove matches if safe to do so.

Respiratory Protection: To avoid inhaling smoke/vapours, use self-contained breathing apparatus.

Skin protection: Wear suitable protective equipment to prevent skin contact.

Eye and Face Protection: Wear chemical goggles or full face protection.

Footwear: No specific recommendation.

Other: None

6.2 Environmental precautions

This product may cause damage to the aquatic environment. Ensure that spilled material does not enter sewers or natural waterways. If spill catches fire, the water used to extinguish the fire may contain a chemical that is toxic to aquatic life.

6.3 Methods and materials for containment and cleanup

Clean up spills immediately to protect human health and the environment. Scoop or sweep up material, keeping dust to a minimum and place in an appropriate container for disposal. If on soil, skim top layer of contaminated soil and place in an appropriate container for disposal. Once the spill has been remediated, arrange for disposal of the containers. Properly label containers to identify contents.

Remedial Measures: Do not use unprotected hands to collect spilled material. Ensure proper protective equipment is used to prevent contact with skin and eyes. Avoid the creation of dust.

Large Spills: Shovel spilled product into adequate compatible containers, skimming soil as well to ensure all released product and contaminated soil is recovered. Properly close and label all containers for disposal.

Small Spills: Scoop or sweep up spilled contents and place in appropriate containers for disposal.

6.4 Reference to other sections

For disposal, see Section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Handling Procedures: While handling matches, a residue on skin may be transferred to mouth by accident. Wash thoroughly and immediately after handling this product and before eating, drinking, smoking or using the toilet.

7.2 Conditions for safe storage, including incompatibilities

Storage: ***Keep out of reach of children and animals***. Keep container closed when not in use and store in a cool, dry, well-ventilated area away from heat, flame, sources of ignition, direct sunlight, foodstuffs and clothing. Protect from sparks, heat or flame. Empty containers may contain residues which are hazardous. Always keep matches in the container sold with them. Store away from incompatible materials such as strong oxidizers, strong acids or alkalis.

In bulk storage areas, post "NO SMOKING" signs. Have appropriate fire extinguishers located in an accessible place near storage area. Keep containers closed when not in use. Prevent static discharges and use proper grounding procedures. Do not stack pallets more than three high.

7.3 Specific end use(s)

No other uses except those mentioned in Section 1.2

8. Exposure Controls, Personal Protection

8.1 Control parameters

Components with workplace control parameters

Zinc Oxide, CAS No 1314-13-2	TLV-TWA:2.0 mg/m^3, TLV-STEL:10 mg/m^3
Boric Acid, CAS No 10043-35-3	TLV-TWA:2.0 mg/m^3, TLV:STEL: 6.0 mg/m^3
Quartz Powder, CAS No 14808-60-7	TLV-TWA:0.025 mg/m^3
Red Phosphorus, CAS No 7723-14-0	OSHA Table Z-1 Limits for air contaminants TWA: 0.10 mg/m^3
Tin (IV) Oxide, CAS No 18282-10-5	TLV-TWA: 2.0 mg/m^3

8.2 Exposure Controls

Engineering Controls: Avoid breathing dust, vapours or smoke from burning these matches.

Respiratory Protection: Not applicable for consumers provided package instructions are followed. In circumstances of high concentration of smoke, a NIOSH approved air purifying respirator with N, P or R95 or HE filter and an organic vapour cartridge may be permissible.

Skin protection: Not applicable for consumers following product directions. In bulk situations or when handling is prolonged use adequate skin protection.

Eye and Face Protection: Not applicable for consumers following product directions. Strike matches away from face.

Footwear: No specific recommendation.

Other: None

Control of environmental exposure

None

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Solid, red match head, woody matchstick
Odour:	None
Odour Threshold:	Not applicable
pH:	<4.7
Melting Point/Freezing Point:	Not determined
Initial Boiling Point:	Not determined
Flash Point:	Not applicable
Evaporation Rate:	Not available
Flammability:	Flammable
Upper Explosion Limit:	Not available
Lower Explosion Limit:	Not available
Vapour Pressure:	Not available
Vapour Density:	Not available
Relative Density:	1.3 gm/cc (water = 1)
Solubility:	Insoluble in water or alcohols
Partition Coefficient:	Not available
Autoignition Temperature:	≥160°C
Decomposition Temperature:	Not available
Viscosity:	Not available
Explosive Properties:	Not available
Oxidizing Properties:	Not available
Percent Volatiles:	Not available

9.2 Other safety information: None

10. Stability and Reactivity

10.1 Reactivity
May be reactive under conditions of heat.

10.2 Chemical Stability
Stable under recommended storage conditions. Storage should be in a dry, cool, well-ventilated area away from incompatible materials, sources of ignition and heat, out of direct sunlight.

10.3 Possibility of hazardous reactions
No known hazardous reactions

10.4 Conditions to avoid
Heat, sparks, flames, sources of ignition which may cause matches to light. During fire, irritating and possible toxic gases may be generated by thermal decomposition or combustion.

10.5 Incompatible materials
Strong oxidizing agents, strong acids and alkalis.

10.6 Hazardous decomposition products
Oxides of sulphur and carbon as well as unknown irritation gases may be generated by thermal decomposition or combustion.

11.Toxicological Information

11.1 Information on toxicological effects

Acute toxicity
Acute toxicity, oral. Category 4, H302: Harmful if swallowed.
Acute Toxicity, Inhalation, Category 4, H332: Harmful if inhaled

Skin corrosion/irritation
No GHS classification

Serious eye damage/eye irritation
No GHS classification

Respiratory or skin sensitization
Skin sensitization, Category 1, H317: May cause an allergic skin reaction.

Germ Cell Mutagenicity
No GHS classification

Carcinogenicity
No GHS classification

Reproductive toxicity
Reproductive toxicity, Category 2, H361: Suspected of damaging fertility or the unborn child. Boric acid, a component of this product has been classified in this category by ingestion. By nature of shape, this product is unlikely to be swallowed.

Specific Target Organ Toxicity – Single exposure
No GHS classification

Specific Target Organ Toxicity – Repeated exposure
No GHS classification

Aspiration Hazard
No GHS classification

Aquatic Toxicity
Acute Aquatic Toxicity, Category 2: H401: Toxic to aquatic life.
Chronic Aquatic Toxicity, Category 2: H411: Toxic to aquatic life with long lasting effects.

Additional information
None

12. Ecological Information

12.1 Toxicity

Aquatic, Acute Aquatic Toxicity, Category 2: H401: Toxic to aquatic life

Aquatic, Chronic Aquatic Toxicity, Category 2: H411: Toxic to aquatic life with long lasting effects

Data:

Potassium Chlorate:	*Toxicity to algae*, static test EC50: Nitzschia Closterium, 2.8 mg/l, 72 hour
Zinc Oxide:	*Toxicity to fish*, LC50: Oncorhynchus mykiss (Rainbow Trout), 1.1 mg/l, 96 hour *Toxicity to daphnia and other aquatic invertebrates*, EC50, Daphnia magna (water flea), 0.098 mg/l, 48 hour
Red Phosphorus:	*Toxicity to fish*, static test LC50, Danio rerio (Zebra Fish), 33.2 mg/l, 96 hour *Toxicity to daphnia and other aquatic invertebrates*, EC50, Daphnia magna (water flea), 10.5 mg/l, 48 hour *Toxicity to algae*, static test EC50: Desmodesmus subspicatus (Green Algae), 18.3 mg/l, 72 hour

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
Not conducted

12.6 Other adverse effects
No data available

13. Disposal Considerations

13.1 Waste treatment methods

Product:

Do not reuse empty containers. Dispose of product according to all applicable local, state (provincial), and federal regulations. Offer to a licensed disposal company, properly contained and labelled.

Contaminated Packaging:

As above

14. Transport Information

Transport of Dangerous Goods (TDG and CLR): UN 1944, Matches, Safety, Class 4.1, PG III

United States Department of Transport (49CFR): UN 1944, Matches, Safety, Class 4.1, PG III

International Air Transport Association (IATA): UN 1944, Matches, Safety, Class 4.1, PG III

International Maritime Organization (IMO): UN 1944, Matches, Safety, Class 4.1, PG III
EmS No F-A, S-I, Stowage Category A

15. Regulatory Information

CANADIAN FEDERAL REGULATIONS:

CEPA, DOMESTIC SUBSTANCES LIST: Listed

AMERICAN FEDERAL REGULATIONS:

CERCLA Hazardous Substance List (40 CFR 302.4) Not regulated

SARA 302 Extremely hazardous substance: Red Phosphorus
CAS No 7723-14-0, Rev Date 1991-07-01

SARA 311/312 Hazardous chemical: Acute Health Hazard, Chronic Health Hazard

SARA 313 (TRI reporting): SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Other State Regulations:

Massachusetts Right to Know Components:

Red Phosphorus, CAS No 7723-14-0	Rev Date 1991-07-01
Potassium Chlorate, CAS No 3811-04-9	Rev Date 1993-04-24
Sulphur, CAS No 7704-34-9	Rev Date 1993-04-24
Tin Oxide, CAS No 18282-10-5	Rev Date 2007-03-01
Zinc Oxide, CAS No 1314-13-2	Rev Date 2007-03-01

Pennsylvania Right to Know Components:

Boric Acid, CAS No 10043-35-3	Rev Date 2009-07-17
Gum Rosin, (Colophony), CAS No 8050-09-7	
Red Phosphorus, CAS No 7723-14-0	Rev Date 1991-07-01
Quartz, CAS No 14808-60-7	Rev Date 1989-08-11
Potassium Chlorate, CAS No 3811-04-9	Rev Date 1993-04-24
Sulphur, CAS No 7704-34-9	Rev Date 1993-04-24
Tin Oxide, CAS No 18282-10-5	Rev Date 2007-03-01
Zinc Oxide, CAS No 1314-13-2	Rev Date 2007-03-01

New Jersey Right to Know Components:

Boric Acid, CAS No 10043-35-3	Rev Date 2009-07-17
Gum Rosin (Colophony), CAS No 8050-09-7	
Red Phosphorus, CAS No 7723-14-0	Rev Date 1991-07-01
Quartz, CAS No 14808-60-7	Rev Date 1989-08-11
Potassium Chlorate, CAS No 3811-04-9	Rev Date 1993-04-24
Sulphur, CAS No 7704-34-9	Rev Date 1993-04-24
Tin Oxide, CAS No 18282-10-5	Rev Date 2007-03-01
Zinc Oxide, CAS No 1314-13-2	Rev Date 2007-03-01

California Prop 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

OTHER:

None

16. Other Information

Original Preparation Date: November 12, 2015

Prepared by: Technical Department, Coghlan's Ltd.

Disclaimer: This Safety Data Sheet (SDS) was prepared using information provided by CCINFO, ingredient supplier SDS and other relevant sources. This product has been classified using weight of evidence, expert judgment and previous testing as per Part 1.3 of the Fifth Edition of The Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The information in this SDS is offered for your consideration and guidance when exposed to this product. Coghlan's Ltd expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of Coghlan's Ltd.

Revisions: December 1, 2015: Review of Section 2 and inclusion of additional Response Statement