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\$YRLG EUHDWKLQJ GXVW IXPH JDV PLVW YDSRUV VSUD\
:DVK DIIHFWHG DUHD WKRURXJKO\ DIWHU KDQGOLQJ
&RQWDPDQDWHG ZRUN FORWKLQJ PXVW QRW EH DOORZHG RXW RI W
:HDU SURWHFWLYH JORYHV H\H SURWHFWLRQ IDFH SURWHFWLRQ

5HVSQRVH ,I LQKDOHG UHPRYH YLFWLP WR IUHVK DLU DQG NHHS FRPIRUWDEO
,I RQ VNLQ RU KDLU 7DNH RII LPPHGLDWHO\ I
,I LQ H\HV 5LQVH FDXWLRXVO\ ZLWK ZDWHU IRU VHYHUDO PLQXWHV
SUHVHQW DQG HDV\ WR GR &RQWLQXH ULQVLQJ

6WRUDJH 6WRUH LQ D ZHOO YHQWLODWHG SODFH .HHS FRQWDLQHU WLJKWO
6WRUH LQ D ZHOO YHQWLODWHG SODFH .HHS FRRO

Disposal Dispose of contents/container in accordance with local authority requirements.

Other information Not know.

Section 3. Ingredients

Substance: Mixture

CHEMICAL NAME	CAS NO.	EC NO.	Weight %
Isopropyl alcohol	67-63-0	200-661-7	70
Purified Water	7732-18-5	231-791-2	30

Section 4. First-Aid Measures

General Advice: Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Eye Contact: Flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention.

Skin Contact: Immediately flush skin with plenty of water while removing contaminated clothing and shoes. Do not reuse clothing or shoes until cleaned. If irritation develops or persists, get medical attention. Wash with soap and water. Do not apply oils or ointments unless ordered by the physician.

Ingestion: If swallowed, call a physician immediately. Rinse mouth and throat thoroughly with water. Do not induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if discomfort continues or if you feel unwell.

Protection of first responders: Ensure that healthcare workers understand the hazardous properties of the product and take self-protection measures to protect themselves and prevent the spread of contamination.

Most important symptoms and effects, both acute and delayed

Symptoms May include stinging, tearing, redness, swelling and blurred vision.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat asymptotically.

Section 5. Fire Fighting Measures

Suitable Extinguishing Media In case of fire, use Water spray, Carbon Dioxide (CO₂), Foam, Dry Chemical

Unsuitable Extinguishing Media None

Specific Hazards Arising From The Chemical

1. Can form explosive mixture with air.
2. Containers exposed to fire may leak their contents through the pressure relief valve, increasing the fire and/or the concentration of
3. Steam may move to the ignition source and flash back.
4. Liquid and vapor are flammable.
5. Hazardous flammable gases or vapors may be produced in the event of a fire.
6. Expansion or explosive decomposition may occur upon exposure to heat or flame.

Protective Equipment And Precautions For Firefighters

1. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.

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6XSSUHVW WKH UHVXOWLQJ JDV YDSRU PLVW ZLWK ZDWHU VSUD\
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7UDQVIRU LQWR VXLWDEOH FRQWDLQHUV IRU UHFRYHU\ RU GLVSRV

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'R RQ XVH ZLWK HOHFWURFDXWHU\ SURFHGXUHV
8VH DFFRUGLQJ WR SDFNDJH ODEHO LQVWUXFWLRQV
\$YRLG LQKDOLQJ YDSRU DQG FRQWDFW ZLWK H\HV

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:DVK WKRURXJKO\ ZLWK VRDS DQG ZDWHU DIWHU KDQGOLQJ DQG EH
:KHQ XVLQJ GR QRW VPRNH
6DIHW\ VKRZHU DQG H\H ZDVK VKRXOG EH DYDLODEOH

6HFWLRQ 3K\VLFDQ DQG &KHPLFDQ 3URSHUWLHV

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3K\VLFDQ 6WDWH 6ROLG 3UH 0RLVWHQH 7RZH OHWWH 1R IUHH OLTXLGV
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,QFRPSDWLEOLW\ 0DWULQV RYRGLYRQ DJHQWV
+D]DUGRXV 'HFRPSRVLV 1RQH
+D]DUGRXV 3RO\PHUL]DWLRQ RFFXU
&RQGLWRQV WR DYRLG+HDW IODPHV DQG VSDUNV \$YRLG WHPSHUDWXUHV H[FHHGLQJ IODPHV

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\$FXWH 7R[LFLW\ (\H &RQV\ 3URWHFWLRQ PD\ FDXVH WHPSRUDU\ PRGHUWH LUULWDWRQ
\$FXWH 7R[LFLW\ 6NLQ 3URWHFWLRQ PLOG LUULWDWRQ RQ SDWLHQWV ZLWK VHQVLWLYH VNL
\$FXWH 7R[LFLW\ ,QKODWRQ
\$FXWH 7R[LFLW\ ,QJHVWRQ KDUPIXO LI VZDOORZH
&DUFLQRJHQLFLW\ 1RQH NQRZQ
&KURQLF 7R[LFLW\ 1RQH NQRZQ

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6HULRXV H\H GDPDJH H\H GDPDJH H\H GDPDJH LUULWDWLRQ WR WKH H\H
5HVSLUDWRU\ RU VNLQ VNLQ H[SHFWHG QWR FDXVH VNLQ VHQVLWL]DWLRQ
6HQVLWL]DWLRQ 1R VHQVLWL]DWLRQ UHVSQRVHV ZHUH REVHUYHG
*HUP FHOO PXWDJHQLFLWV H[SHFWHG WR KDYH FKURQLF KHDOWK HIIHFWV
&DUFLQRJHQLFLW\ 7KLW SURGXFW GRHV QRW FRQWDLQ DQ\ FDUFLQRJHQV RU SRWHQW
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5HSURGXFWLYLW\ 7R[LFLW\ LVQVKHG SURGXFW QRW H[SHFWHG WR KDYH FKURQLF KHDOWK HIIHFWV
6727 VLQJOH H[SRVXUH DUFRWLF HIIHFWV

STOT-repeated exposure: 1RW FODVVILHG
&KURQLF 7R[LFLW\ 1R NQRZQ HIIHFW
6XE FKURQLF 7R[LFLW\ 1R NQRZQ HIIHFW
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3DUWLWLRQ FRHILFLHQWV SURSDQRO ZDWHU ORJ
0REOLW\ LQ VRLO 1R GDWD DYDLDEOH
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,,\$ 6SHFLDO 3URYLVLRQ \$
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OLTXLG LQ WKH SDFNH

6HFWLRQ 5HJXODWRU\ ,QIRUPDWLRQ

International Inventories

Chemical Name	EINECS	TSCA	DSL	IЕСS	NZIoC	PICCS	KECI	AICS	ENCS
Isopropyl Alcohol	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pure Water	✓	✓	✓	✓	✓	✓	✓	✓	✓

LEGEND

PICCS—Phillipines Inventory of Chemicals and Chemical Substances

KECL-Korean Existing and Evaluated Chemical Substances

AICS—Australian Inventory of Chemical Substances

ENCS—Japan Existing and New Chem

Remark:

" ✓ " Indicates that the substance is listed in the regulation

"×" Indicates that the substance is not listed in the regulation

Revision Date:

4/24/2024

---End of Document---



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

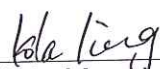
**PREPARATION
PERIOD**

22-Oct-2015~06-Nov-2015

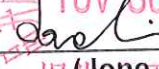
SUMMARY

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)
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.

Safety Data Sheet

Antiseptic Towelettes

Issue Date: 6 November 2015



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.

Safety Data Sheet

Antiseptic Towelettes

Issue Date: 6 November 2015



Section 9 - Physical and Chemical Properties

Appearance and odor	Wet paper.	pH	No information found.
Freezing point (°C)	No information found.	Boiling point (°C)	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 (°C)	No information found.	Critical pressure (MPa)	No information found.
Octanol/water partition coefficient as log Pow	No information found.	Flash point (°C)	Not applicable.
Auto-ignition temperature(°C)	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.

Safety Data Sheet

Antiseptic Towelettes

Issue Date: 6 November 2015



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	-

Safety Data Sheet

Antiseptic Towelettes

Issue Date: 6 November 2015



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 comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.

This report replaces the original report 721622569-7-A

-END OF THE TEST REPORT-



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

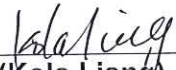
CLIENT NAME GFA PRODUCTION XIAMEN CO., LTD.

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)
Assistant CS
Representative

Authorized By:


(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.

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Triple Antibiotic Ointment

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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/m ³ (TWA); -ACGIH Threshold Limit Values: 5 mg/m ³ (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 handling. Have eye-wash facilities immediately available.

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Section 9 - Physical and Chemical Properties

Appearance and odor	Offwhite gel.	pH	No information found.
Freezing point (°C)	No information found.	Boiling point (°C)	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 (°C)	No information found.	Critical pressure (MPa)	No information found.
Octanol/water partition coefficient as log Pow	No information found.	Flash point (°C)	No information found.
Auto-ignition temperature(°C)	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.

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ORIGINAL



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

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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 comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.

This report replaces the original report 721622569-6-A

-END OF THE TEST REPORT-



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 : GLOW STICK
Product description : GLOW STICK, GLOW BRACELET, GLOW NECKLACE, GLOW CUP, GLOW WAND WITH ASST COLORS RED/GREEN/BLUE/YELLOW/PINK/ORANGE/PURPLE/WHITE/AQUA

1.2. Recommended use and restrictions on use

Main use category : Used in decoration.
Restrictions on use : No information available

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

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

This technical report may only be quoted in full. Any use for advertising purposes must be granted in writing. This report is the result of a single examination of the object in question and is not generally applicable evaluation of the quality of other products in regular production.

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

Technical Report No.: 64.165.18.00501.01

TÜV SÜD Group

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Engineer: Kevin Zhang

2018-02-02

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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.

GLOW STICK

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According to OSHA Hazard Communication Standard 29 CFR 1910.1200



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).

GLOW STICK

Safety Data Sheet

According to OSHA Hazard Communication Standard 29 CFR 1910.1200



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:

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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	: >200°F (93.3°C) 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

GLOW STICK

Safety Data Sheet

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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 (CO₂) 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/m ³ (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)
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)

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Dimethyl phthalate (131-11-3)	
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

GLOW STICK

Safety Data Sheet

According to OSHA Hazard Communication Standard 29 CFR 1910.1200



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
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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)

GLOW STICK

Safety Data Sheet

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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

GLOW STICK

Safety Data Sheet

According to OSHA Hazard Communication Standard 29 CFR 1910.1200



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 Goods 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](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: _____
Kevin Zhang



Technical Report checked: _____
Ben Shao

Safety Data Sheets (SDSs)

Client	HENAN TROILY NEW ENERGY TECHNOLOGY CO.,LTD.
Add. of Client	Industrial cluster of Yudong,Xinxiang City,Henan Province,P.R.China
Description	Rechargeable Nickel-Metal Hydride Battery
Model /Type	NI-MH 80MAH 3.6V
Manufacturer	HENAN TROILY NEW ENERGY TECHNOLOGY CO.,LTD.
Add. of Manufacturer	Industrial cluster of Yudong,Xinxiang City,Henan Province,P.R.China
Nominal Voltage	1.2V
Rating	80mAh
Date of Receipt	2023-2-14

Laboratory	Dongguan ZRLK Testing Technology Co., Ltd.
Address	Building D, No.2, Jinyuyuan Mansion, No.18, Industrial West Road, Songshan Lake High-tech Industrial Development Zone, Dongguan, Guangdong, China

Approved Signatory	Maggie.Gao
Inspected by	Ailis.Ma
Censored by	Lahm Peng

*Maggie Gao**Ailis Ma**Lahm Peng*



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

Product Identifier

Product name: Rechargeable Nickel-Metal Hydride Battery

Model: NI-MH 80MAH 3.6V

Other means of identification

Synonyms:none

Recommended use of the chemical and restrictions on use

Recommended Use:Used in portabl electronic equipments;

Uses advised against:

- a) Do not dismantle, open or shred secondary cells or batteries.
- b) Keep batteries out of the reach of children
Battery usage by children should be supervised. Especially keep small batteries out of reach of small children.
- c) Seek medical advice immediately if a cell or a battery has been swallowed.
- d) Do not expose cells or batteries to heat or fire. Avoid storage in direct sunlight.
- e) Do not short-circuit a cell or a battery. Do not store cells or batteries haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.
- f) Do not remove a cell or battery from its original packaging until required for use.
- g) Do not subject cells or batteries to mechanical shock.
- h) In the event of a cell leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.
- i) Do not use any charger other than that specifically provided for use with the equipment.
- j) Observe the plus (+) and minus (–) marks on the cell, battery and equipment and ensure correct use.
- k) Do not use any cell or battery which is not designed for use with the equipment.
- l) Do not mix cells of different manufacture, capacity, size or type within a device.
- m) Always purchase the battery recommended by the device manufacturer for the equipment.
- n) Keep cells and batteries clean and dry.
- o) Wipe the cell or battery terminals with a clean dry cloth if they become dirty.
- p) Secondary cells and batteries need to be charged before use. Always use the correct charger and refer to the manufacturer's instructions or equipment manual for proper charging instructions.
- q) Do not leave a battery on prolonged charge when not in use.
- r) After extended periods of storage, it may be necessary to charge and discharge the cells or batteries several times to obtain maximum performance.
- s) Retain the original product literature for future reference.
- t) Use the cell or battery only in the application for which it was intended.
- u) When possible, remove the battery from the equipment when not in use.
- v) Dispose of properly.

Details of the supplier of the safety data sheet:

Supplier Name: HENAN TROILY NEW ENERGY TECHNOLOGY CO.,LTD.

Address: Industrial cluster of Yudong,Xinxiang City,Henan Province,P.R.China

Telephone number of the supplier: +86-373-7722669

Postcode: 453000

E-mail address: 3396912077@qq.com

Emergency telephone number

Company Emergency Phone Number: +86-373-7722669

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Dermal	Category 3
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements

Danger

Hazard statements

Toxic in contact with skin

Causes serious eye irritation

Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure



Precautionary statements-Prevention

Obtain special instructions before use

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

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

Wash face, hands and any exposed skin thoroughly after handling

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

Do not eat, drink or smoke when using this product

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention

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

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of water and soap

Call a POISON CENTER or doctor if you feel unwell

Take off immediately all contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

harmful if swallowed. Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures**Description:**

Product: Consisting of the following components.

Common Chemical Name	Concentration (%)	CAS Number
Iron	35.89	7439-89-6
Nickel atom	22.02	7440-02-0
Nickel Hydroxide	13.1	12054-48-7
Lanthanum, compound with nickel (1:5)	9.8	12196-72-4
polypropylene	6.61	9003-07-0
polyvinyl chloride	5.5	9002-86-2
water	4.4	7732-18-5
Potassium hydroxide	2.2	1310-58-3
Cobalt oxide	0.44	1307-96-6
Lithium hydroxide monohydrate	0.04	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 hazardous decomposition products when exposed to a fire situation. Lithium ion batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high

temperature(>150°C), 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 Battery is subject to storage for such a long term as more than 3 months.

3 months: -10°C~+40°C, 45 to 85%RH

And recommended at 0°C~+35°C 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.

The voltage for a long time storage shall be 3.7V~4.2V range.

Do not storage Lithium-ion 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 Lithium ion 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:	
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 through 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: silver	
	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.
Odour 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 toxicity: 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:

No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

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.

Maritime transport

Non-hazardous for sea transport.

Air transport

The Rechargeable Nickel-Metal Hydride Battery according to SP A 199 of the 2022 IATA Dangerous Goods regulations 63rd Edition may be transported. and applicable U.S. DOT regulations for the safe transport of Rechargeable Nickel-Metal Hydride 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 Rechargeable Nickel-Metal Hydride Battery having the potential of a dangerous evolution of heat must be prepared for transport so as to prevent:

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 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)	Australia (AICS)	Korea (ECL)	China (IECSC)
12054-48-7	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
1310-58-3	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7732-18-5	Listed	Listed	Listed	DSL	Listed	Listed	Listed
1345-25-1	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
12196-72-4	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
1310-73-2	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
7782-42-5	Listed	Not 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.

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

ARTICLE INFORMATION SHEET/SAFETY DATA SHEET (AIS/SDS)**Alkaline Manganese Dioxide-Zinc Battery**

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

SECTION 1 - Identification

Product Name: Energizer	Document Number: 1022-Alk												
Chemical System: Alkaline Manganese Dioxide-Zinc	Date Prepared: January 2023												
Designed for Recharge: No	Valid Until: January 2026												
Prepared by: Energizer Energizer Brands, LLC 533 Maryville University Drive St. Louis, MO 63141 Email for Information: customersupport@energizer.com 1-800-383-7323	<table border="1"> <tr> <td>Description</td><td>Alkaline Manganese Dioxide-Zinc Battery</td></tr> <tr> <td>Use</td><td>Portable power source</td></tr> <tr> <td>Brand</td><td>ENERGIZER/EVERREADY</td></tr> <tr> <td>IEC Designation</td><td>cluded but not limited to: LR8D425, LR03, LR6, LR14, LR20, 6LR61, LR1, 4LR25Y, 6LF22</td></tr> <tr> <td>Sizes</td><td>cluded but not limited to: AAAA, AAA, AA, C, D, 9V, N, Lantern</td></tr> <tr> <td>Image</td><td>  </td></tr> </table>	Description	Alkaline Manganese Dioxide-Zinc Battery	Use	Portable power source	Brand	ENERGIZER/EVERREADY	IEC Designation	cluded but not limited to: LR8D425, LR03, LR6, LR14, LR20, 6LR61, LR1, 4LR25Y, 6LF22	Sizes	cluded but not limited to: AAAA, AAA, AA, C, D, 9V, N, Lantern	Image	
Description	Alkaline Manganese Dioxide-Zinc Battery												
Use	Portable power source												
Brand	ENERGIZER/EVERREADY												
IEC Designation	cluded but not limited to: LR8D425, LR03, LR6, LR14, LR20, 6LR61, LR1, 4LR25Y, 6LF22												
Sizes	cluded but not limited to: AAAA, AAA, AA, C, D, 9V, N, Lantern												
Image													

SECTION 2 – Hazards Identification

Not applicable to Batteries which are classified as Articles

Articles, such as batteries, are exempt from GHS SDS classification criteria. The GHS criteria are not designed or intended to be used to classify the physical, health and environmental hazards of an article.

Inhalation: Contents of an open battery can cause respiratory irritation.

Skin Contact: Contents of an open battery can cause skin irritation.

Eye Contact: Contents of an open battery can cause severe irritation.

SECTION 3 – Composition / Information

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

All Energizer Alkaline Manganese Dioxide-Zinc have zero added mercury.

MATERIAL OR INGREDIENT	CAS #	%/wt.
Graphite	7782-42-5	2-6
Manganese Dioxide	1313-13-9	30-45
Potassium Hydroxide	1310-58-3	4-8
Zinc	7440-66-6	12-25
Non-Hazardous Components Steel	65997-19-5	18-22
Water, Paper, Plastic and Other		Balance

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 (800-498-8666) day or night.

Skin and Eyes: In the event that a battery ruptures, flush exposed skin with flowing lukewarm water for a minimum of 15 minutes. Get immediate medical attention for eyes. Wash skin with soap and water.

SECTION 5 – Fire Hazard & Firefighting

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

Not applicable to Batteries which are classified as Articles

TO CONTAIN AND CLEAN UP LEAKS OR SPILLS: In the event of a battery rupture, prevent skin contact and collect all released material in a plastic lined metal container.

REPORTING PROCEDURE: Report all spills in accordance with Federal, State and Local reporting requirement.

SECTION 7 - HANDLING AND STORAGE

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

Mechanical Containment: Designers of any water or air-tight device should be aware of the normal evolution of hydrogen gas from alkaline batteries. This gas must be either absorbed or allowed to escape to avoid a potential safety issue.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy through heating, 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.

Soldering directly to a battery is not recommended. If welding to the battery is required, consult your Energizer sales 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: The label acts as an electrical insulation for the battery can. Damage to the label can increase the potential for a short circuit.

WARNING: Do not install backwards, charge, put in fire, or mix with other battery types as it may explode or leak causing injury.

Replace all batteries at the same time.

SECTION 8 – Exposure Controls

Not applicable to Batteries which are classified as Articles

In case of rupture or leakage use hand protection. Avoid contact with skin and eyes

SECTION 9 – TRANSPORT INFORMATION

Not applicable to Batteries which are classified as Articles

SECTION 10 – STABILITY AND REACTIVITY

STABLE OR UNSTABLE: Stable

INCOMPATIBILITY (MATERIALS TO AVOID): Not Applicable to articles.

HAZARDOUS DECOMPOSITION PRODUCTS: Not Applicable to articles.

DECOMPOSITION TEMPERATURE (0°F): Not Applicable to articles.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: Avoid electrical shorting, puncturing or deform

Article Information Sheet/Safety Data Sheet

SECTION 11 – TOXICOLOGICAL INFORMATION

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	None established	None established	18-22
iron CAS# 65997-19-5			
Water, Paper, Plastic and Other	None established	None established	Balance

SECTION 12 – Ecological Information

Dispose of properly when discharged. Use a recycling outlet if available. Those collecting batteries should follow state and federal regulations.

Partially discharged damaged batteries can overheat and cause fires in the presence of other combustible materials.

SECTION 13 – Disposal Considerations

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

Article Information Sheet/Safety Data Sheet

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.

For emergency information call ChemTel 1-800-526-4727 (North America) or 1-314-985-1511 (International).

SECTION 15 – REGULATORY INFORMATION

Applicable Battery Industry Standards

North America Standards	ANSI C18.3M Part 1	ANSI C18.3 M Part 2	ANSI C18.4
International Standards	IEC 60086-1	IEC 60086-2	IEC 60086-4

15.1 Battery

- 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.
- USA EPA Mercury Containing & Rechargeable Battery Management Act of 1996:** No mercury added
- EU Battery Directive 2006/66/EC Amended 2013/56/EU:** Energizer batteries are compliant with all aspects of the Directive

Article Information Sheet/Safety Data Sheet

15.2 General

1. **CPSIA 2008:** Exempt
2. **US CPSC FHSA (16 CFR 1500):** Not applicable since batteries are defined as articles
3. **USA EPA TSCA (40 CFR 707.20):** Not applicable since batteries are defined as articles
4. **USA EPA RCRA (40 CFR 261):** Classified as non-hazardous waste per ignitable, corrosive, reactive or toxicity testing
5. **California Prop 65:** No warning required
6. **DTSC Perchlorate labeling:** No warning required
7. **EU REACH SVHC:** No REACH listed substances of very high concern are present above 0.1% w/w.

15.3 Article Definitions

1. **OSHA Hazard Communication Standard, Section 1910.1200(c)**

SECTION 16 - OTHER INFORMATION

Energizer has prepared copyrighted Article Information Sheets to provide information on the different Eveready/Energizer/Rayovac battery systems. Batteries are articles as defined under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). 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 BRANDS, LLC MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

16.1 ACRONYM GLOSSARY




1. [ANSI](#): American National Standards Institute
2. [CPSC](#): Consumer Product Safety Commission
3. [CPSIA](#): Consumer Product Safety Improvement Act
4. [DTSC](#): Department of Toxic Substances Control
5. [EPA](#): Environmental Protection Agency
6. [FHSA](#): Federal Hazardous Substances Act
7. [GHS](#): Globally Harmonized System for Hazard Communication
8. [IEC](#): International Electrotechnical Commission
9. [OSHA](#): Occupational Safety and Health Administration
10. [RCRA](#): Resource Conservation and Recovery Act
11. [SDS](#): Safety Data Sheet
12. [SVHC](#): Substances of Very high Concern
13. [TSCA](#): Toxic Substances Control Act

**FICHE D'INFORMATIONS RELATIVES À L'ARTICLE/FICHE DE
DONNÉES DE SÉCURITÉ (FIA/FDS)**

Pile alcaline au dioxyde de manganèse-zinc

La présente fiche d'informations relatives à l'article (FIA) fournit des informations pertinentes sur les piles aux distributeurs, aux consommateurs, aux OEM et aux autres utilisateurs qui requièrent une FDS conforme au SGH. Les articles, tels que les piles, sont exemptés des critères de classification des FDS selon le SGH. Les critères du SGH ne sont pas destinés ou prévus en vue d'être utilisés pour classer les dangers physiques, sanitaires et environnementaux d'un article. Les piles grand public sont définies comme des dispositifs électrotechniques. La conception, la sécurité, la fabrication et la certification des piles Energizer et Rayovac grand public sont conformes aux normes de piles ANSI et IEC.

SECTION 1 : IDENTIFICATION

Nom du produit : Energizer	Numéro du document : 1022-Alk												
Système chimique : alcaline au dioxyde de manganèse-zinc	Date de préparation : janvier 2023												
Conçue pour être rechargée : Non	Date de validité : janvier 2026												
Préparée par : Energizer Pour plus d'informations, envoyer un e-mail à : customersupport@energizer.com Energizer Brands, LLC 533 Maryville University Drive St. Louis, MO 63141 1 800 383 7323	<table> <tr> <td>Description</td><td>Pile alcaline au dioxyde de manganèse-zinc</td></tr> <tr> <td>Utilisation</td><td>Source d'alimentation portable</td></tr> <tr> <td>Marque</td><td>ENERGIZER/EVEREADY</td></tr> <tr> <td>Désignation IEC</td><td>comprend, sans s'y limiter : LR8D425, LR03, LR6, LR14, LR20, 6LR61, LR1, 4LR25Y, 6LF22</td></tr> <tr> <td>Tailles</td><td>comprend, sans s'y limiter : AAAA, AAA, AA, C, D, 9 V, N, lanterne</td></tr> <tr> <td>Image</td><td></td></tr> </table>	Description	Pile alcaline au dioxyde de manganèse-zinc	Utilisation	Source d'alimentation portable	Marque	ENERGIZER/EVEREADY	Désignation IEC	comprend, sans s'y limiter : LR8D425, LR03, LR6, LR14, LR20, 6LR61, LR1, 4LR25Y, 6LF22	Tailles	comprend, sans s'y limiter : AAAA, AAA, AA, C, D, 9 V, N, lanterne	Image	
Description	Pile alcaline au dioxyde de manganèse-zinc												
Utilisation	Source d'alimentation portable												
Marque	ENERGIZER/EVEREADY												
Désignation IEC	comprend, sans s'y limiter : LR8D425, LR03, LR6, LR14, LR20, 6LR61, LR1, 4LR25Y, 6LF22												
Tailles	comprend, sans s'y limiter : AAAA, AAA, AA, C, D, 9 V, N, lanterne												
Image													

SECTION 2 : IDENTIFICATION DES DANGERS

Non applicable aux piles classées en tant qu'articles

Les articles, tels que les piles, sont exemptés des critères de classification des FDS selon le SGH. Les critères du SGH ne sont pas destinés ou prévus en vue d'être utilisés pour classer les dangers physiques, sanitaires et environnementaux d'un article.

Inhalation : le contenu d'une pile ouverte peut entraîner l'irritation des voies respiratoires.

Contact avec la peau : le contenu d'une pile ouverte peut entraîner l'irritation de la peau.

Contact avec les yeux : le contenu d'une pile ouverte peut entraîner une grave irritation.

SECTION 3 : COMPOSITION/INFORMATIONS

la pile ne doit pas être ouverte ni jetée au feu. L'exposition aux ingrédients qu'elle contient ou la combustion de ceux-ci peut être nocive.

Aucune pile alcaline au dioxyde de manganèse-zinc Energizer ne contient de mercure ajouté.

MATÉRIAU OU INGRÉDIENT	N° CAS	%/masse
Graphite	7782-42-5	2-6
Dioxyde de manganèse	1313-13-9	30-45
Hydroxyde de potassium	1310-58-3	4-8
Zinc	7440-66-6	12-25
Composants inoffensifs Acier	65997-19-5	18-22
Eau, papier, plastique et autre		Balance

SECTION 4 : MESURES DE PREMIERS SECOURS

Ingestion : ne forcez pas la personne à vomir et ne lui donnez rien à manger ou à boire. Appelez immédiatement un médecin. Pour obtenir des conseils et organiser un suivi, APPELEZ L'ASSISTANCE TÉLÉPHONIQUE NATIONALE CHARGÉE DE L'INGESTION DE PILES (800 498 8666) de jour comme de nuit.

Peau et yeux : En cas d'éclatement d'une pile, rincez la peau exposée à l'eau tiède pendant au moins 15 minutes. Demandez immédiatement des soins médicaux pour les yeux. Lavez la peau à l'eau et au savon.

SECTION 5 : RISQUE D'INCENDIE ET LUTTE CONTRE L'INCENDIE

En cas d'incendie, vous pouvez utiliser n'importe quelle classe d'agent extincteur sur ces piles ou sur leur emballage. Rafraîchissez l'extérieur des piles pour éviter leur éclatement si elles ont été exposées au feu.

Les pompiers doivent porter des appareils respiratoires autonomes.

SECTION 6 : MESURES EN CAS DE REJET ACCIDENTEL

Non applicable aux piles classées en tant qu'articles

POUR CONTENIR ET NETTOYER LES FUITES OU LES DÉVERSEMENTS : En cas d'éclatement d'une pile, évitez tout contact avec la peau et collectez tous les matériaux rejetés dans un récipient métallique doublé de plastique.

PROCÉDURE DE SIGNALEMENT : Signalez tous les déversements conformément aux exigences fédérales, nationales et locales en matière de signalement.

SECTION 7 : MANIPULATION ET ENTREPOSAGE

Entreposage : entreposez dans un endroit frais, bien aéré. Les températures élevées peuvent raccourcir la durée de vie de la pile.

Confinement mécanique : les concepteurs de dispositifs étanches à l'eau ou à l'air doivent être conscients de l'évolution normale de l'hydrogène gazeux des piles alcalines. Ce gaz doit être absorbé ou pouvoir s'échapper pour éviter tout problème de sécurité potentiel.

Manipulation : la mise en court-circuit accidentel de quelques secondes n'endommagera pas gravement la pile. Les courts-circuits prolongés déchargeront la pile sous l'effet de la chaleur et peuvent entraîner l'ouverture de l'évent de sécurité. Les sources de courts-circuits incluent des piles mises pêle-mêle dans des contenants, des bijoux métalliques, des tables métallisées et des ceintures en métal utilisées pour insérer les piles dans les dispositifs.

Il est déconseillé de souder une pièce directement à une pile. Pour souder une pièce à la pile, contactez votre représentant commercial Energizer pour connaître les précautions à prendre afin d'éviter d'endommager l'étanchéité ou de court-circuiter la pile.

Recharge : cette pile est fournie déjà chargée. Elle n'est pas conçue pour être rechargée. Sa recharge peut entraîner des fuites ou, dans certains cas, son éclatement en raison d'une pression élevée. Une recharge accidentelle peut survenir si la pile est installée à l'envers.

Étiquetage : l'étiquette sert d'isolation électrique à l'enveloppe de la pile. L'endommagement de l'étiquette peut accroître le risque de court-circuit.

AVERTISSEMENT : Ne l'installez pas à l'envers, ne la rechargez pas, ne la jetez pas au feu et ne la mélangez pas avec d'autres types de piles car elle peut exploser ou couler et entraîner des blessures.

Remplacez toutes les piles en même temps.

SECTION 8 : CONTRÔLES DE L'EXPOSITION

Non applicable aux piles classées en tant qu'articles

En cas d'éclatement ou de fuite, utilisez une protection pour les mains. Évitez tout contact avec la peau et les yeux

SECTION 9 : INFORMATIONS SUR LE TRANSPORT

Non applicable aux piles classées en tant qu'articles

SECTION 10 : STABILITÉ ET RÉACTIVITÉ

STABLE OU INSTABLE : Stable

INCOMPATIBILITÉ (MATÉRIAUX À ÉVITER) : Non applicable aux articles.

PRODUITS DE DÉCOMPOSITION DANGEREUX : Non applicable aux articles.

TEMPÉRATURE DE DÉCOMPOSITION (0 °F) : Non applicable aux articles.

POLYMÉRISATION DANGEREUSE : Ne se produira pas

CONDITIONS À ÉVITER : Évitez les courts-circuits électriques, les perforations et les déformations

SECTION 11 : INFORMATIONS TOXICOLOGIQUES

MATÉRIAU OU INGRÉDIENT	PEL (OSHA)	TLV (ACGIH)	%/masse
Graphite (N° CAS 7782-42-5)	15 mg/m ³ TWA (poussière totale) 5 mg/m ³ TWA (fraction respirable)	2 mg/m ³ TWA (fraction respirable)	2-6
Dioxyde de manganèse (N° CAS 1313-13-9)	Plafond de 5 mg/m ³ (sous forme de Mn)	0,2 mg/m ³ TWA (sous forme de Mn)	30-45
Hydroxyde de potassium (N° CAS 1310-58-3)	Aucun établi	Plafond de 2 mg/m ³	4-8
Zinc (N° CAS 7440-66-6)	15 mg/m ³ TWA PNOR* (poussière totale) 5 mg/m ³ TWA PNOR* (fraction respirable)	10 mg/m ³ TWA PNOC** (particules inhalables) 3 mg/m ³ TWA PNOC** (particules respirables)	12-25
Composants inoffensifs Acier fer n° CAS 65997-19-5 Eau, papier, plastique et autre	Aucun établi Aucun établi	Aucun établi Aucun établi	18-22 Balance

SECTION 12 : INFORMATIONS ÉCOLOGIQUES

Éliminez correctement la pile une fois déchargée. Utilisez un point de recyclage mis à votre disposition. Les personnes chargées de la collecte des piles doivent respecter les réglementations nationales et fédérales.

Les piles endommagées partiellement déchargées peuvent surchauffer et provoquer des incendies en présence d'autres matériaux combustibles.

SECTION 13 : INFORMATIONS CONCERNANT L'ÉLIMINATION

Jetez la pile conformément à toutes les réglementations fédérales, nationales et locales applicables. Les techniques d'élimination appropriées incluent l'incinération et l'enfouissement.

SECTION 14 : INFORMATIONS SUR LE TRANSPORT

En général, toutes les piles dans toutes les formes de transports (terrestres, aériens ou maritimes) doivent être emballées d'une manière sûre et responsable. Les exigences réglementaires des agences de réglementation stipulent que les piles doivent être emballées de façon à prévenir les courts-circuits et dans un « matériau extérieur résistant » empêchant un éventuel déversement du contenu. Tous les emballages créés pour les piles alcalines Energizer ont été conçus en conformité avec ces exigences réglementaires.

Les piles alcalines (parfois appelés « piles sèches ») ne sont pas considérées comme des marchandises dangereuses selon l'Accord européen relatif au transport international des marchandises dangereuses par route (ADR), le Code maritime international des marchandises dangereuses (IMDG), les Règlements des Nations unies concernant les matières dangereuses, les Règlements sur les marchandises dangereuses de l'Association du transport aérien international (IATA), les instructions techniques de l'Organisation de l'aviation civile internationale (OACI) et les Règlements des États-Unis sur les matières dangereuses (49 CFR). Ces piles ne sont pas soumises aux réglementations sur les marchandises dangereuses, à condition qu'elles respectent les exigences des dispositions particulières suivantes :

Organisme réglementaire	Dispositions particulières
ADR	Non réglementé
IMDG	Non réglementé
UN	Non réglementé
US DOT	49 CFR 172.102, disposition 130
IATA	A123
OACI	Non réglementé

Toutes les piles alcalines Energizer sont conditionnées de manière à éviter les courts-circuits ou le dégagement de quantités dangereuses de chaleur et respectent les dispositions particulières mentionnées ci-dessus. En outre, les règlements de l'IATA relatifs aux marchandises dangereuses et les instructions techniques de l'OACI requièrent la mention « non restreint » et le numéro de disposition particulière A123 sur la lettre de transport aérien si celle-ci est émise.

Pour obtenir des renseignements en cas d'urgence, appelez ChemTel au 1 800 526 4727 (Amérique du Nord) ou au 1 314 985 1511 (international).

SECTION 15 : INFORMATIONS RÉGLEMENTAIRES

Normes applicables de l'industrie des piles

Normes d'Amérique du Nord	ANSI C18.3M Part 1	ANSI C18.3 M Part 2	ANSI C18.4
Normes internationales	IEC 60086-1	IEC 60086-2	IEC 60086-4

15.1 Pile

- SARA/TITLE III** : en tant qu'article, cette pile et son contenu ne sont pas sujets aux exigences de l'Emergency Planning and Community Right-To-Know Act.
- USA EPA Mercury Containing and Rechargeable Battery Management Act de 1996** : pas de mercure ajouté
- Directive 2013/56/UE modifiant la directive européenne 2006/66/CE relative aux piles** : les piles Energizer sont conformes à tous les aspects de la directive

15.2 Généralités

1. **CPSIA 2008** : exempt
2. **US CPSC FHSA (16 CFR 1500)** : non applicable, car les piles sont définies en tant qu'articles
3. **USA EPA TSCA (40 CFR 707.20)** : non applicable, car les piles sont définies en tant qu'articles
4. **USA EPA RCRA (40 CFR 261)** : Considérées comme des déchets non dangereux conformément aux tests d'inflammabilité, de corrosion, réactifs ou de toxicité
5. **California Prop 65** : aucune mise en garde n'est requise
6. **Étiquetage DTSC Perchlorate** : aucune mise en garde n'est requise
7. **SVHC selon le règlement REACH de l'UE** : aucune substance extrêmement préoccupante répertoriée dans le règlement REACH n'est présente à plus de 0,1 % masse/masse.

15.3 Définitions d'article

1. **Section 1910.1200(c) de la norme sur la communication des dangers de l'OSHA**

SECTION 16 : AUTRES INFORMATIONS

Energizer a préparé ces fiches d'informations relatives aux articles (protégées par le droit d'auteur) afin de fournir des informations sur les différents systèmes de piles Eveready/Energizer/Rayovac. Les piles sont des articles tels que définis par le SGH et exemptés des critères de classification du SGH (section 1.3.2.1.1 du SGH). Les informations et recommandations énoncées ici sont données de bonne foi, à titre indicatif uniquement et sont jugées exactes à la date de leur préparation. Toutefois, ENERGIZER BRANDS, LLC NE DONNE AUCUNE GARANTIE, EXPLICITE OU IMPLICITE, QUANT À CES INFORMATIONS ET DÉCLINE TOUTE RESPONSABILITÉ LIÉE À LEUR CONSULTATION.

16.1 GLOSSAIRE DES ACRONYMES

1. **ANSI** : American National Standards Institute (Institut de normalisation américain)
2. **CPSC** : Consumer Product Safety Commission (Commission de sécurité des produits de grande consommation)
3. **CPSIA** : Consumer Product Safety Improvement Act (Loi sur l'amélioration de la sécurité des produits de consommation)
4. **DTSC** : Department of Toxic Substances Control (Ministère du contrôle des substances toxiques)
5. **EPA** : Environmental Protection Agency (Agence américaine de protection de l'environnement)
6. **FHSA** : Federal Hazardous Substances Act (Loi fédérale sur les substances dangereuses)
7. **SGH** : Système général harmonisé de communication des dangers
8. **IEC** : International Electrotechnical Commission (Commission électrotechnique internationale)
9. **OSHA** : Occupational Safety and Health Administration (Administration sur la sécurité du travail et de la santé humaine)
10. **RCRA** : Resource Conservation and Recovery Act (Loi sur la conservation et la remise en état des ressources)
11. **FDS** : Fiche de données de sécurité
12. **SVHC** : Substances of Very high Concern (Substances extrêmement préoccupantes)
13. **TSCA** : Toxic Substances Control Act (Loi relative au contrôle des substances toxiques)



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 CO₂ 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 from 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, REPROD 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 from 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.

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