

SAFETY DATA SHEET

HCS-2012 APPENDIX D TO §1910.1200

Version 1
Product Name ALKALINE BATTERY - LR03

Issue Date 10-Mar-2015
Revision date 10-Mar-2015

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

Product identifier

Product Name ALKALINE BATTERY - LR03
Chemical Name ALKALINE BATTERY

Other means of identification

Product Code LR03 1.5V 1000mAh

Recommended use of the chemical and restrictions on use

Recommended Use Power supply
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier SUZHOU XINLVZHOU ELECTRONICS CO., LTD
Address Yangcheng Lake West Road, No777, Xiangcheng District, SuZhou City, Jiangsu Province, China.
Postal Code -
Phone +86-512-68702665
FAX +86-512-68669435
E-mail qky006@lvzhoudianzi.com.cn

Emergency telephone number

+86-512-68702665

2. HAZARDS IDENTIFICATION

GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Symbols/Pictograms None
Signal word None
Hazard Statements None
Precautionary Statements
Prevention None
Response None
Storage None
Disposal None

Hazards not otherwise classified (HNOC)

No information available

Unknown acute toxicity

.?% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature Mixture

Chemical Name	CAS No	Weight-%
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Manganese dioxide	1313-13-9	15 - 40
Zinc	7440-66-6	15 - 40
Steel	12597-69-2	10 - 30
Zinc oxide	1314-13-2	3 - 7
Graphite	7782-42-5	1 - 5
Copper	7440-50-8	1 - 5
Acrylic resin	9003-01-4	0.1 - 1
Water	7732-18-5	0.1 - 1
Potassium hydroxide	1310-58-3	0.1 - 1
Polypropylene	9003-07-0	0.1 - 1
Calcium stearate	1592-23-0	0.1 - 1
Indium hydroxide (In(OH)3)	20661-21-6	0.1 - 1

4. FIRST AID MEASURES

Description of first aid measures

General advice	Remove contaminated clothing and shoes. If symptoms persist, call a physician.
Inhalation	Not an expected route of exposure. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Skin Contact	Wash hands thoroughly after handling. .
Eye contact	Not an expected route of exposure. .
Ingestion	Rinse mouth Get medical attention Never give anything by mouth to an unconscious person

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

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

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors

Protective equipment and precautions for firefighters

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Evacuate personnel to safe areas
- Ensure adequate ventilation, especially in confined areas
- Remove all sources of ignition
- Use personal protection recommended in Section 8

Methods and material for containment and cleaning up

- Prevent further leakage or spillage if safe to do so
- Pick up and transfer to properly labeled containers

Avoid release to the environment

7. HANDLING AND STORAGE

Precautions for safe handling

- Handle in accordance with good industrial hygiene and safety practice
- Ensure adequate ventilation, especially in confined areas
- Avoid creating dust
- Avoid contact with eyes
- Wash thoroughly after handling
- Use personal protection recommended in Section 8

Conditions for safe storage, including any incompatibilities

- Keep containers tightly closed in a dry, cool and well-ventilated place
- Keep away from heat

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Denmark	European Union
Manganese dioxide (CAS #: 1313-13-9)	TWA: 0.02 mg/m ³ Mn TWA: 0.1 mg/m ³ Mn	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn	TWA: 0.2 mg/m ³	-
Zinc oxide (CAS #: 1314-13-2)	STEL: 10 mg/m ³ respirable fraction TWA: 2 mg/m ³ respirable fraction	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume	TWA: 4 mg/m ³	-
Graphite (CAS #: 7782-42-5)	TWA: 2 mg/m ³ respirable fraction all forms except graphite fibers	-	-	TWA: 2.5 mg/m ³	-
Copper (CAS #: 7440-50-8)	TWA: 0.2 mg/m ³ fume TWA: 1 mg/m ³ Cu dust and mist	-	-	TWA: 1.0 mg/m ³ TWA: 0.1 mg/m ³	-
Potassium hydroxide (CAS #: 1310-58-3)	Ceiling: 2 mg/m ³	(vacated) Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	Ceiling: 2 mg/m ³	-
Calcium stearate (CAS #: 1592-23-0)	TWA: 10 mg/m ³ except stearates of toxic metals	-	-	-	-
Indium hydroxide (In(OH) ₃) (CAS #: 20661-21-6)	TWA: 0.1 mg/m ³ In	-	-	TWA: 0.1 mg/m ³	-

Chemical Name	Latvia	France	Finland	Germany	Italy
Manganese dioxide (CAS #: 1313-13-9)	TWA: 0.3 mg/m ³	-	TWA: 0.2 mg/m ³ TWA: 0.1 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.02 mg/m ³ Ceiling / Peak: 1.6 mg/m ³ Ceiling / Peak: 0.16 mg/m ³ TWA: 0.5 mg/m ³	-

Zinc (CAS #: 7440-66-6)		-	-	TWA: 0.1 mg/m ³ TWA: 2 mg/m ³ Ceiling / Peak: 0.4 mg/m ³ Ceiling / Peak: 4 mg/m ³	-
Zinc oxide (CAS #: 1314-13-2)	TWA: 0.5 mg/m ³	TWA: 5 mg/m ³ TWA: 10 mg/m ³	TWA: 2 mg/m ³ STEL: 10 mg/m ³	TWA: 1 mg/m ³ TWA: 0.1 mg/m ³ TWA: 2 mg/m ³ Ceiling / Peak: 1 mg/m ³ Ceiling / Peak: 0.4 mg/m ³ Ceiling / Peak: 4 mg/m ³	-
Potassium hydroxide (CAS #: 1310-58-3)	-	STEL: 2 mg/m ³	STEL: 2 mg/m ³ Ceiling: 2 mg/m ³	-	-

Chemical Name	Poland	Portugal	Spain	Switzerland	Netherlands
Manganese dioxide (CAS #: 1313-13-9)	TWA: 0.3 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.5 mg/m ³	-
Zinc oxide (CAS #: 1314-13-2)	STEL: 10 mg/m ³ TWA: 5 mg/m ³	STEL: 10 mg/m ³ TWA: 2 mg/m ³	STEL: 10 mg/m ³ TWA: 2 mg/m ³	STEL: 3 mg/m ³ TWA: 3 mg/m ³	-
Potassium hydroxide (CAS #: 1310-58-3)	STEL: 1 mg/m ³ TWA: 0.5 mg/m ³	Ceiling: 2 mg/m ³	STEL: 2 mg/m ³	TWA: 2 mg/m ³	-
Calcium stearate (CAS #: 1592-23-0)	-	TWA: 10 mg/m ³	TWA: 10 mg/m ³	-	-

Chemical Name	Norway	United Kingdom	Australia	Austria	Belgium
Manganese dioxide (CAS #: 1313-13-9)	TWA: 1 mg/m ³ TWA: 0.1 mg/m ³ STEL: 3 ppm STEL: 0.3 mg/m ³	TWA: 0.5 mg/m ³	1 mg/m ³	STEL 2 mg/m ³ TWA: 0.5 mg/m ³	-
Zinc oxide (CAS #: 1314-13-2)	TWA: 5 mg/m ³ STEL: 10 mg/m ³	-	10 mg/m ³ 5 mg/m ³ 10 mg/m ³ STEL	TWA: 5 mg/m ³	-
Graphite (CAS #: 7782-42-5)	-	-	3 mg/m ³	STEL 10 mg/m ³ TWA: 5 mg/m ³	-
Copper (CAS #: 7440-50-8)	-	-	1 mg/m ³ 0.2 mg/m ³	STEL 4 mg/m ³ STEL 0.4 mg/m ³ TWA: 1 mg/m ³ TWA: 0.1 mg/m ³	-
Potassium hydroxide (CAS #: 1310-58-3)	Ceiling: 2 mg/m ³	STEL: 2 mg/m ³	2 mg/m ³ Peak	TWA: 2 mg/m ³	-
Calcium stearate (CAS #: 1592-23-0)	-	-	10 mg/m ³	-	-
Indium hydroxide (In(OH)3) (CAS #: 20661-21-6)	-	-	0.1 mg/m ³	STEL 0.2 mg/m ³ TWA: 0.1 mg/m ³	-

Appropriate engineering controls

- Showers
- Eyewash stations
- Ventilation systems

Individual protection measures, such as personal protective equipment

- Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
- Hand Protection Wear protective gloves.
- Eye/face protection No special technical protective measures are necessary.
- Skin and body protection Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Solid
Color	metallic
Odor	Odorless
Odor Threshold	Not determined
pH	Not determined
Melting point/freezing point	Not determined
Boiling point / boiling range	Not determined
Flash point	Not applicable
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Flammability Limit in Air	Not determined
Vapor Pressure	Not applicable
Vapor density	Not determined
Density	Not determined
Relative density	Not determined
Bulk density	Not determined
Specific gravity	Not determined
Water solubility	Not determined
Partition coefficient (LogPow)	Not determined
Autoignition temperature	Not determined
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	Not an explosive
Oxidizing properties	Not determined

Other information

No 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

Possibility of Hazardous Reactions

None under normal processing

Conditions to avoid

Strong heating. Incompatible materials

Incompatible materials

Strong acids Strong bases Strong oxidizing agents

Hazardous Decomposition Products

None known based on information supplied

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system
Eye contact	Contact with eyes may cause irritation
Skin Contact	Substance may cause slight skin irritation Ingestion may cause irritation to mucous membranes

Information on toxicological effects**Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Manganese dioxide (CAS #: 1313-13-9)	= 9000 mg/kg (Rat)	-	-
Zinc oxide (CAS #: 1314-13-2)	> 5000 mg/kg (Rat)	-	-
Copper (CAS #: 7440-50-8)	> 2500 mg/kg bw(rat)	> 2000 mg/kg bw(rat)	=1.03 mg/L/4 h(rat)
Acrylic resin (CAS #: 9003-01-4)	10250 mg/kg (rat, carbomer 910) 4100 mg/kg (rat, carbomer 943)	3 g/kg (rat, carbomer 910)	1.71 mg/L (rat)
Potassium hydroxide (CAS #: 1310-58-3)	= 333 mg/kg (Rat)	-	-
Calcium stearate (CAS #: 1592-23-0)	> 10 g/kg (Rat)	-	-
Polypropylene (CAS #: 9003-07-0)	>5 g/kg	-	-

Skin corrosion/irritation

Non-irritating to the skin

Serious eye damage/eye irritation

No eye irritation

Sensitization

No information available

Germ cell mutagenicity

No information available

Carcinogenicity

No information available

Reproductive toxicity

No information available

STOT - single exposure

No information available

STOT - repeated exposure

No information available

Aspiration hazard

No information available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical Name	Algae/aquatic plants EC50	Fish LC50	Crustacea EC50
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Zinc (CAS #: 7440-66-6)	0.11 - 0.271 mg/L/96h Pseudokirchneriella subcapitata static 0.09 - 0.125 mg/L/72h Pseudokirchneriella subcapitata static	2.16 - 3.05 mg/L/96h Pimephales promelas flow-through 0.211 - 0.269 mg/L/96h Pimephales promelas semi-static 2.66: mg/L/96h Pimephales promelas static 30 mg/L/96h Cyprinus carpio 0.45 mg/L/96h Cyprinus carpio semi-static 7.8 mg/L/96h Cyprinus carpio static 3.5 mg/L/96h Lepomis macrochirus static 0.24 mg/L/96h Oncorhynchus mykiss flow-through 0.59 mg/L/96h Oncorhynchus mykiss semi-static 0.41 mg/L/96h Oncorhynchus mykiss static	0.139 - 0.908 mg/L/48h Daphnia magna Static
Zinc oxide (CAS #: 1314-13-2)	-	1.1 mg/l/96h	0.098 mg/l/48h Daphnia magna
Copper (CAS #: 7440-50-8)	0.031 - 0.054 mg/L/96h Pseudokirchneriella subcapitata static 0.0426 - 0.0535 mg/L/72h Pseudokirchneriella subcapitata static	-	-
Potassium hydroxide (CAS #: 1310-58-3)	-	80mg/L/96h Gambusia affinis static	-

Persistence and degradability

No information available

Bioaccumulative potential

Chemical Name	Partition coefficient (LogPow)
Manganese dioxide (CAS #: 1313-13-9)	<0

Mobility in soil

No information available

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations

Contaminated packaging Dispose of in accordance with federal, state and local regulations

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

Chemical Name	California Hazardous Waste Status
Zinc 7440-66-6	Ignitable powder Toxic
Zinc oxide 1314-13-2	Toxic
Copper 7440-50-8	Toxic
Potassium hydroxide 1310-58-3	Toxic Corrosive

Indium hydroxide (In(OH) ₃) 20661-21-6	Toxic
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14. TRANSPORT INFORMATION

The batteries are considered to be "Dry cell" batteries and are unregulated for purpose of transportation by the U.S. DOT, ICAO, IATA and IMDG. The only DOT requirement for shipping these batteries is special provision 130 which states : " Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (For example, by the effective insulation of exposed terminals). The only requirement for shipping these batteries by ICAO and IATA is Special Provision A123 which states: " An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared 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) is forbidden from transportation." The international Maritime Dangerous Goods Code (IMDG) regulate them for ocean transportation under Special Provision 304 which says : Batteries, dry , containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provision of this Code provided the batteries are securely packed and protected against short-circuits. Example of such batteries are : alkali-manganese, zinc carbon, nickel metal hydride and nickel-cadmium batteries. Such battery have been packed in inner packaging in such a manner as to effectively prevent short circuit and movement that could lead to short-circuit.

DOT / IMDG / IATA

UN/ID No.	Not regulated
Proper shipping name	Not regulated
Hazard Class	Not regulated
Packing Group	Not regulated
Special precautions	No information available
Marine pollutant	Not applicable
UN/ID No.	Not Regulated
UN/ID No.	Not Regulated
UN/ID No.	Not Regulated

15. REGULATORY INFORMATION

International Inventories

Component	AICS	DSL/NDL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	TSCA
Manganese dioxide 1313-13-9 (15 - 40)	X	X	X	X	X	X	X	X
Zinc 7440-66-6 (15 - 40)	X	X	X	-	X	X	X	X
Zinc oxide 1314-13-2 (3 - 7)	X	X	X	X	X	X	X	X
Graphite 7782-42-5 (1 - 5)	X	X	X	-	X	X	X	X
Copper 7440-50-8 (1 - 5)	X	X	X	-	X	X	X	X
Acrylic resin 9003-01-4 (0.1 - 1)	X	X	-	X	X	X	X	X
Water 7732-18-5 (0.1 - 1)	X	X	X	-	X	X	X	X
Potassium hydroxide 1310-58-3 (0.1 - 1)	X	X	X	X	X	X	X	X

Polypropylene 9003-07-0 (0.1 - 1)	X	X	-	X	X	X	X	X
Calcium stearate 1592-23-0 (0.1 - 1)	X	X	X	X	X	X	X	X
Indium hydroxide (In(OH)3) 20661-21-6 (0.1 - 1)	X	X	-	-	-	-	-	-

"-" Not Listed

"X" Listed

US Federal Regulations

SARA 313

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

Chemical Name	SARA 313 - Threshold Values %
Manganese dioxide - 1313-13-9	1.0
Zinc - 7440-66-6	1.0
Zinc oxide - 1314-13-2	1.0

SARA 311/312 Hazard Categories

Does not apply

CWA (Clean Water Act)

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

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc 7440-66-6	-	X	X	-
Zinc oxide 1314-13-2	-	X	-	-
Copper 7440-50-8	-	X	X	-
Potassium hydroxide 1310-58-3	1000 lb	-	-	X

CERCLA

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

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Zinc 7440-66-6	1000 lb	-	RQ 454 kg final RQ RQ 1000 lb final RQ
Potassium hydroxide 1310-58-3	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Manganese dioxide 1313-13-9	X	-	X
Zinc 7440-66-6	X	X	X

Zinc oxide 1314-13-2	X	X	X
Potassium hydroxide 1310-58-3	X	X	X

16. OTHER INFORMATION

Revision Note

Issue Date	10-Mar-2015
Revision date	10-Mar-2015
Revision Note	Not applicable

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

TWA - TWA (time-weighted average)

STEL - STEL (Short Term Exposure Limit)

Ceiling - Maximum limit value

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

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances


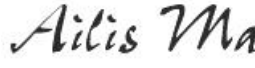

Disclaimer

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

----- End of Safety Data Sheet -----

Safety Data Sheets (SDSs)

Client	QUANZHOU SHUNTONG CRAFTS CO., LTD.
Add. of Client	B1 XUNMEI INDUSTRIAL ZONE FENGZE AREA QUANZHOU FUJIAN CHINA
Description	Touch-Up Pen
Model /Type	PMA520
Manufacturer	QUANZHOU SHUNTONG CRAFTS CO., LTD.
Add. of Manufacturer	B1 XUNMEI INDUSTRIAL ZONE FENGZE AREA QUANZHOU FUJIAN CHINA
Date of Receipt	2021-02-05
Version number	2.0

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	Barry Peng	
Inspected by	Ailis.Ma	
Censored by	Lahm Peng	



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

Product Identifier

Product name: Touch-Up Pen

Model: PMA520

Other means of identification

Synonyms:none

Recommended use of the chemical and restrictions on use

Recommended Use:Drawing

Uses advised against: No information available.

Details of the supplier of the safety data sheet:

Supplier: QUANZHOU SHUNTONG CRAFTS CO., LTD.

Address: B1 XUNMEI INDUSTRIAL ZONE FENGZE AREA QUANZHOU FUJIAN CHINA

Phone: 0086-0595-22887705

E-mail address: sunton@suntonpoly.com

Emergency telephone number

Company Emergency Phone Number: 0086-0595-22892797

2. HAZARDS IDENTIFICATION

GHS Classification

Not classified

Classification of the substance or mixture

Classification according to Regulation(EC) No 1272/2008 (CLP)

Not Applicable; all Chemical element without in scope of No.1272/2008;

Label elements

Symbols/Pictograms None

Signal word None

Hazard Statements None

Precautionary Statements

Prevention None.

Response None.

Storage None.

Disposal None.

Hazards not otherwise classified (HNOC): No information available

Unknown acute toxicity: No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterixation: Mixtures

Description:

Product: Consisting of the following components.

Common Chemical Name	Concentration (%)	CAS Number
Water	56.8	7732-18-5
Calcium carbonate	25.2	471-34-1
Gum arabic	15	9000-01-5
Carbon black	3	1333-86-4

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

4. FIRST-AID MEASURES

Description of first aid measures

General advice	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Rinse mouth. Get medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed: No information available.

Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

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

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical:

Thermal decomposition can lead to release of irritating and toxic gases and vapors

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.

Cool containers with flooding quantities of water until well after fire is out.

Evacuate personnel to safe areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid contact with skin, eyes or clothing.

Use personal protection recommended in Section 8. Wash thoroughly after handling.

Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so.

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13)

Pick up and transfer to properly labeled containers

7. HANDLING AND STORAGE

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition. Avoid contact with skin, eyes or clothing. When using do not eat, drink or smoke. Use personal protection recommended in Section 8. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition. Keep away from food, drink and animal feeding stuffs. Store in accordance with local regulations.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters



Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Denmark	European Union
Calcium carbonate (CAS #: 471-34-1)	-	-	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust	-	-
Gum arabic (CAS #: 9000-01-5)	TWA: 10 mg/m ³	-	IDLH: 5000 mg/m ³	TWA: 6 mg/m ³	-
Carbon black (CAS #: 1333-86-4)	TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ Cu dust and mist	-	-

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Showers. Eyewash stations. Remove all sources of ignition.

Individual protection measures, such as personal protective equipment

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hand Protection

Wear protective gloves.

Eye/face protection

Avoid contact with eyes.

Skin and body protection

No special technical protective measures are necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Paste

Color

Colorful

Odor

No information available

Odor Threshold

Not determined

pH

Not determined

Melting point/freezing point

Not determined

Boiling point / boiling range

Not determined

Flash point

Not applicable

Evaporation rate

Not determined

Flammability (solid, gas)	Not flammable
Flammability Limit in Air	Not applicable
Vapor Pressure	Not determined
Vapor density	Not applicable
Density	Not determined
Relative density	Not determined
Bulk density	Not determined
Specific gravity	Not determined
Partition coefficient (LogPow)	Pigment blue 15: 0.3 - 11 Phthalocyanine green: 0.51 - 74
Autoignition temperature	Not applicable
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	Not an explosive
Oxidizing properties	Not determined
Other information	No 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.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks Extremes of temperature and direct sunlight

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

Carbon oxides, nitrogen oxides, chlorides, metal oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No known effect based on information supplied
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Eye contact	Not an expected route of exposure. May cause eye irritation with susceptible persons
Skin Contact	May cause skin irritation in susceptible persons
Ingestion	Not an expected route of exposure May be harmful if swallowed

Information on toxicological effects

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Calcium carbonate (CAS #: 471-34-1)	> 2000 mg/kg bw(rat)	> 2000 mg/kg bw(rat)	-
Gum arabic (CAS #: 9000-01-5)	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	-
Carbon black (CAS #: 1333-86-4)	> 5000 mg/kg (Rat)	-	-

Skin corrosion/irritation

May cause skin irritation in susceptible persons

Serious eye damage/eye irritation

May cause eye irritation with susceptible persons

Sensitization

No information available.

Germ cell mutagenicity

No information available

Carcinogenicity

Chemical Name	ACGIH	IARC	NTP	OSHA
Calcium carbonate (CAS #: 471-34-1)	-	2B	-	-
Gum arabic (CAS #: 9000-01-5)	A3	Group 2B	-	-
Carbon black (CAS #: 1333-86-4)	A3	Group 2B	-	-

Reproductive toxicity No information available

STOT - single exposure No information available

STOT - repeated exposure No information available



Aspiration hazard No information available

12. Ecological Information

Ecotoxicity			
Chemical Name	Algae/aquatic plants EC50	Fish LC50	Crustacea EC50
Calcium carbonate (CAS #: 471-34-1)	-	> 100: 96 h Oncorhynchus mykiss LC50	> 100: 48 h Daphnia magna EC50
Gum arabic (CAS #: 9000-01-5)	-	1000mg/L/48h(Leuciscus idus)	1000mg/L/48h(Leuciscus idus)
Carbon black (CAS #: 1333-86-4)	-	100: 48 h Oryzias latipes mg/L LC50 static	-
Persistence and degradability			
No information available			
Bioaccumulative potential			
Mobility in soil			
No information available			
Other adverse effects			
No information available			

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations
Contaminated packaging	Dispose of in accordance with federal, state and local regulations
Chemical Name	
Calcium carbonate (CAS #: 471-34-1)	Toxic
Gum arabic (CAS #: 9000-01-5)	Toxic
Carbon black (CAS #: 1333-86-4)	Toxic

14. TRANSPORT INFORMATION



UN/ID No.	Not regulated
UN Proper shipping name	Not regulated
Hazard Class	Not regulated
Packing Group	Not regulated
Special precautions	No information available
Marine pollutant	Non-marine pollutant

15. REGULATORY INFORMATION

International Inventories								
Component	AICS	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	TSCA
Calcium carbonate (CAS #: 471-34-1)	X	X	X	Exempt	X	X	X	X
Gum arabic (CAS #: 9000-01-5)	X	X	X	X	X	X	X	X
Carbon black (CAS #: 1333-86-4)	X	X	X	X	X	X	X	X

"-" Not Listed

"X" Listed

US Federal Regulations

SARA 313

Not applicable

SARA 311/312 Hazard Categories

Not applicable

CWA (Clean Water Act)

Not applicable

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Calcium carbonate (CAS #: 471-34-1)	-	X	-	-
Gum arabic (CAS #: 9000-01-5)	-	X	-	-

CERCLA



Not applicable

US State Regulations

Not applicable

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Calcium carbonate (CAS #: 471-34-1)	X	X	-
Gum arabic (CAS #: 9000-01-5)	X	X	-
Carbon black (CAS #: 1333-86-4)	X	-	-

16. OTHER INFORMATION

Revision Note

Issue Date	15-Oct.-2016
Revision date	Not applicable
Revision Note	Not applicable

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

TWA - TWA (time-weighted average)

STEL - STEL (Short Term Exposure Limit)

Ceiling - Maximum limit value

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

Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

Disclaimer

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

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