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|-----------------|--|---------------------------|-----------------|------------------------------|
| Applied BioCode | TITLE: MSDS: BioCode Optical and Verification Kit | | | |
| | DOCUMENT NO: SPC-0470 | DOCUMENT CATEGORY: SDS | REVISION: 01 | EFFECTIVE DATE: 3/26/2019 |

Author: Christina Nguyen
Department: Manufacturing
Document Category: SDS
Document Status: Current
Effective Date: Mar 26, 2019

Revision History

| Revision | Details | Effective Date |
|----------|---------|----------------|
| 01 | | 3/26/2019 |

Reference

No records to display.



TITLE:
MSDS: BioCode Optical and Verification Kit

DOCUMENT NO:
SPC-0470

DOCUMENT CATEGORY:
SDS

REVISION:
01

EFFECTIVE DATE:
3/26/2019

1. PRODUCT AND COMPANY IDENTIFICACION

Product Name:
Product Number:

**BioCode Optical Calibration / Verification Kit
64-C0002**

Company:

Applied BioCode Inc.
10020 Pioneer Blvd. Ste.102
Santa Fe Springs CA 90670 USA

Telephone:

562-801-0050

Fax:

562-801-0060

2. COMPOSITION/INFORMATION ON INGREDIENTS

| CAS No. | Chemical Name | EC-No. EINECS | Concentration % |
|-------------|-----------------------------------|------------------|---------------------------|
| 7732-18-5 | DI Water | 231-791-2 | ~ 98.5 |
| 127087-87-0 | Tergitol NP-10 | 500-315-8 | <0.1 |
| 7647-14-5 | Sodium chloride | 231-598-3 | < 0.8 |
| 6132-04-3 | Sodium citrate tribasic dihydrate | 200-675-3 | <0.4 |
| 137-16-6 | N-Lauroylsarcosine sodium salt | 205-281-5 | < 0.1 |
| 2682-20-4 | ProClin 950 | 220-239-6 | ~0.1 |
| N/A | Antifoam B emulsion | N/A | 0.01 |
| 81-88-9 | Rhodamine B | 201-383-9 | 0-2600 X 10 ⁻⁹ |

3. HAZARDS IDENTIFICATION

HMIS Classification

| CAS # | 7647-14-5 | 6132-04-3 | 2682-20-4 | 127087-87-0 | 137-16-6 |
|------------------|-----------|-----------|-----------|-------------|----------|
| Health hazard | 1 | 0 | 3 | 2 | 4 |
| Flammability | 0 | 0 | 0 | 1 | 1 |
| Physical hazards | 0 | 0 | 0 | 0 | 0 |

| CAS # | Antifoam B emulsion | 7732-18-5 | 81-88-9 |
|------------------|---------------------|-----------|---------|
| Health hazard | 0 | 0 | 2 |
| Flammability | 0 | 0 | 0 |
| Physical hazards | 0 | 0 | 0 |

NFPA Rating

| CAS # | 7647-14-5 | 6132-04-3 | 2682-20-4 | 127087-87-0 | 137-16-6 |
|-------------------|-----------|-----------|-----------|-------------|----------|
| Health hazard | 1 | 0 | 3 | 0 | 4 |
| Fire | 0 | 0 | 0 | 1 | 1 |
| Reactivity hazard | 0 | 0 | 0 | 0 | 0 |

| CAS # | Antifoam B emulsion | 7732-18-5 | 81-88-9 |
|-------------------|---------------------|-----------|---------|
| Health hazard | 0 | 0 | 2 |
| Fire | 0 | 0 | 0 |
| Reactivity hazard | 0 | 0 | 0 |

The concentration of harmful component in detection buffer with antifoam was so low (< 0.1 %)

Potential Health Effects

| | | | | |
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Inhalation
Skin
Eyes
Ingestion

May be harmful if inhaled.
May be harmful if absorbed through skin.
May causes eye irritation.
May be harmful if swallowed.

4. FIRST AID MEASURES

General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Remove person/s from exposure or dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of eye contact

Flush eyes with water as precaution. If irritation develops, get medical aid.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires apply water from as far as possible.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate protective gloves and eye protection to prevent contact with skin and eyes. Avoid inhalation of vapor or mist.

Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Sodium chloride

Contains no substances with occupational exposure limit values.

Sodium citrate tribasic dihydrate

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Contains no substances with occupational exposure limit values.

N-Lauroylsarcosine sodium salt

Contains no substances with occupational exposure limit values.

Tergitol NP-10

No known OSHA hazards.

ProClin 950

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headacche, nausea, vomiting.

Antifoam B emulsion (10 % aqueous emulsion of Antifoam A concentrate)

Contains no substances with occupational exposure limit values.

Handle in accordance with good industrial hygiene and safety practice.

Rhodamine B

Handle in accordance with good industrial hygiene and safety practice.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN14387) respirator cartridge as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Impervious clothing, Flame retardant antistatic protective clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form

liquid Color

colorless

Safety data

| | |
|------------------------------|---------------|
| Melting point/freezing point | not available |
| Boiling point | not available |
| Flash point | not available |
| Ignition temperature | not available |
| Lower explosion limit | not available |
| Upper explosion limit | not available |
| Vapor pressure | not available |
| Density | not available |
| Water solubility | not available |

10. STABILITY AND REACTIVITY**Chemical stability**

Stable under recommended storage conditions.

Possibility of hazardous reactions

Not known under normal storage condition.

Conditions to avoid

Incompatible materials, excess heat

Materials to avoid

Avoid working in dirty environment which may cause solution to become turbid.

Hazardous decomposition products

Other decomposition products - no data available.

Hazardous decomposition products formed under fire conditions. – None known.

11. TOXICOLOGICAL INFORMATION**Acute toxicity:****Oral LD50:****CAS # 7647-14-5**

Oral, mouse: LD50=4gm/kg

Oral, rat: LD50=3000 mg/kg

CAS # 6132-04-3

IPR-Rat : LD50 = 1548 mg/kg

CAS # 127087-87-0

LD50Oral-rat-16,000 mg/kg

CAS # 2682-20-4

No data available

CAS # 137-16-6

No data available

Antifoam B emulsion

No data available

CAS # 81-88-9

Rhodamine B

LD50 Oral-Mouse-887 mg/Kg

LDLO Oral-Rat -500 mg/Kg

Inhalation LC50:

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CAS # 7647-14-5

Inhalation, rat: LC50=>42 gm/m3/1H

CAS # 6132-04-3

LC50: Not tested

May be harmful if inhaled.

CAS # 127087-87-0

No data available

CAS # 2682-20-4

No data available

CAS # 137-16-6

LC50 Inhalation-rat-4h- 0.05-0.5 mg/L

Antifoam B emulsion

No data available

CAS # 81-88-9

Rhodamine B

No data available

Skin corrosion/irritation:

CAS # 7647-14-5

Skin, rabbit: LD50 = > 10 gm/kg

CAS # 6132-04-3

No irritant effect.

CAS # 127087-87-0

LD50 Dermal-rabbit-4,490 mg/kg

CAS # 2682-20-4

No data available

CAS # 137-16-6

No data available

Antifoam B emulsion

No data available

CAS # 81-88-9

Rhodamine B

No skin irritation (Rabbit)

Serious eye damage/eye irritation:

CAS # 7647-14-5

Eyes-rabbit-Mild eye irritation-Draize Test

CAS # 6132-04-3

No relevant irritating effects.

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CAS # 127087-87-0
Severe corneal injury (0.5 mL; 5 % dilution)

CAS # 2682-20-4
No data available

CAS # 137-16-6
May cause eye irritation

Antifoam B emulsion
No data available

CAS # 81-88-9
Rhodamine B
Severe eye irritation (Rabbit)

Respiratory or skin sensitization:

CAS # 7647-14-5
May cause respiratory tract irritation

CAS # 6132-04-3
Inhalation of large amounts of dust may cause irritation to the respiratory tract.

CAS # 127087-87-0
No irritation

CAS # 2682-20-4
May cause allergic skin reaction

CAS # 137-16-6
No data available

Antifoam B emulsion
No data available

CAS # 81-88-9
Rhodamine B
No data available

Germ cell mutagenicity:

CAS # 7647-14-5
No data available


CAS # 6132-04-3
No data available

CAS # 127087-87-0
No data available

CAS # 2682-20-4
No data available

CAS # 137-16-6
No data available

Antifoam B emulsion
No data available

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CAS # 81-88-9
Rhodamine B

Ames test
S. typhimurium-Histidine reversion (Ames)

Hamster Ovary DNA damage

Carcinogenicity:

CAS # 7647-14-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

CAS # 6132-04-3: Not listed as a carcinogen by IARC, NTP or OSHA.

CAS # 127087-87-0

IARC: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product is present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product is present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

CAS # 2682-20-4

IARC: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product is present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product is present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

CAS # 137-16-6: No component of this product is present at levels greater than or equal to 0.1 % is identified as a carcinogen or potential carcinogen by IARC, ACGIH, NTP, or by OSHA.

CAS # 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65


Antifoam B emulsion

IARC: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product is present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product is present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

ACGIH No component of this product is present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH

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CAS # 81-88-9
Rhodamine B

Carcinogenicity

Carcinogenicity-Rat-Subcutaneous

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.

Blood: Lymphomas including Hodgkin's disease.

Tumorigenic: Tumors at site or application.

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: 3-Group 3: Not classifiable as to its carcinogenicity to humans (9-(2-Carboxyphenyl)-3,6-bis(diethylamino)xanthylium chloride)

NTP: No component of this product is present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product is present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

ACGIH No component of this product is present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH

Reproductive toxicity:

CAS # 7647-14-5
No data available

CAS # 6132-04-3
No data available

127087-87-0

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

2682-20-4

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

CAS # 137-16-6
No data available

Antifoam B emulsion
No data available

CAS # 81-88-9
Rhodamine B
No data available

Specific target organ toxicity - single exposure (Globally Harmonized System):

CAS # 7647-14-5
No data available

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CAS # 6132-04-3
No data available

CAS # 127087-87-0
No data available

CAS # 2682-20-4
No data available

CAS # 137-16-6
No data available

Antifoam B emulsion
No data available

CAS # 81-88-9
Rhodamine B
No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):

CAS # 7647-14-5
No data available

CAS # 6132-04-3
No data available

CAS # 127087-87-0
No data available

CAS # 2682-20-4
No data available

CAS # 137-16-6
No data available

Antifoam B emulsion
No data available

Aspiration hazard:
No data available

CAS # 81-88-9
Rhodamine B
No data available

Signs and Symptoms of Exposure:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

CAS # 7647-14-5
Toxicity to fish

LC50-Lepomis macrochirus (Bluegill)-1,294.6 mg/l-96 h
NOEC-Pimephales promelas (fathead minnow)-4,000 mg/l-7 d

Toxicity to daphnia and other aquatic invertebrates
NOEC-Daphnia- 1,500 mg/l – 7 d
LC50- Daphnia magna (Water flea)- 1,661 mg/l – 48 h

CAS # 6132-04-3

No further relevant information available.

CAS # 127087-87-0

No data available

CAS # 2682-20-4

No data available

CAS # 137-16-6

No data available

Antifoam B emulsion

No data available

CAS # 81-88-9

Rhodamine B

Toxicity to fish

LC 50- Cyprinodon variegates (sheepshead minnow)-83.9 mg/L-96 h

LC50-Lepomis macrochirus (Bluegill)-379 mg/L-96 h

LC50-Oncorhynchus mykiss (rainbow trout)-217 mg/L-96 h

Toxicity to daphnia and other aquatic invertebrates

EC50-Daphnia magna (water flea)-22.9 mg/L-48 h

Persistence and degradability

No data available (not including Rhodamine B)

CAS # 81-88-9

Rhodamine B

Biodegradability-0 %- not rapidly biodegradable(OECD Test Guideline 302)

Bioaccumulative potential

No data available (not including Rhodamine B)

CAS # 81-88-9

Rhodamine B

Bioaccumulation

Cyprinus carpio (Carp)-24d-0.1 mg/L

Bioconcentration factor (BCF): < 0.2

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

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No data available

13. DISPOSAL CONSIDERATION

Product

Contact a licensed professional waste disposal service to dispose of this material. 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.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION DOT (US)

UN number: NA

Proper shipping name: Not regulated as a hazardous material.

Reportable Quantity (RQ): NA

Marine pollutant: NA

Hazard Class: Non-Hazardous

IMDG

UN number: NOT LISTED, REF FS0002

Packing group: NA

EMS-No: NA

Marine pollutant: NA

IATA

UN number: NOT LISTED, REF FS0002

15. REGULATORY INFORMATION

OSHA Hazards – None of the chemicals in this product are considered highly hazardous.

16. OTHER INFORMATION

The above information is believed to be correct but does not claim to be all complete and shall be used only as a guide. The information in this document is based on our present knowledge and is applicable to the product with regard to appropriate safety precautions. Applied BioCode Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.