Applied BioCode	TITLE: MSDS: Standard BMB 4096-Plex			
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Revision History

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01	Cross Reference Document 44-B0301-xxxx MSDS Ed. 01A	9/9/2018

Reference

No records to display.

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Standard BMB 4096-Plex**

Product Number: **44-B0301-XXXX**
Bar Code number = XXXX

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

Telephone: 562-801-0050
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula (44-B0102): Typical 50,000 micro-polymer beads suspended in 2 ml of the following storage buffer. The amount of beads per tube may be specified as per custom order.

Common buffer name: 1 x Phosphate Buffered Saline with Tween 20 (PBST).

CAS No.	Chemical Name	EC-No. EINECS	Concentration
7647-14-5	Sodium chloride	231-598-3	0.8 %
7447-40-7	Potassium chloride	231-211-8	0.02 %
7558-79-4	Disodium hydrogen phosphate	231-448-7	0.144 %
7778-77-0	Potassium dihydrogen phosphate	231-449-2	0.024 %
9005-64-5	Tween-20	EC-607	0.05 %
2682-20-4 Active ingredient	ProClin-950* Active ingredient- 2-Methyl-4-isothiazolin-3-one	220-239-6	0.1 %
7732-18-5	Deionized water	231-791-2	>98 %

3. HAZARDS IDENTIFICATION

HMIS Classification

CAS #	Chemical Name	Health Hazard	Flammability	Physical Hazard
7647-14-5	Sodium chloride	1	0	0
7447-40-7	Potassium chloride	1	0	0
7558-79-4	Disodium hydrogen phosphate	0	0	0
CAS #	**Chemical Name**	**Health Hazard**	**Flammability**	**Physical Hazard**

7778-77-0	Potassium Dihydrogen phosphate	0	0	0
9005-64-5	Tween-20	0	0	0
2682-20-4 Active ingredient	ProClin-950* Active ingredient 2-Methyl-4-isothiazolin-3-one	3	0	0
7732-18-5	Deionized water	0	0	0
N/A	Standard BMB	N/A	N/A	N/A

NFPA Rating

CAS #	Chemical Name	Health Hazard	Fire	Reactivity Hazard
7647-14-5	Sodium chloride	1	0	0
7447-40-7	Potassium chloride	0	0	0
7558-79-4	Disodium hydrogen phosphate	0	0	0
7778-77-0	Potassium Dihydrogen phosphate	0	0	0
9005-64-5	Tween-20	0	0	0
2682-20-4 Active ingredient	ProClin-950* Active ingredient 2-Methyl-4-isothiazolin-3-one	3	0	0
7732-18-5	Deionized water	0	0	0
N/A	Standard BMB	N/A	N/A	N/A

Potential Health

Inhalation May be harmful if inhaled.
Skin May be harmful if adsorbed through skin.
Eyes May causes eye irritation.
Ingestion 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 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
Avoid 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. Hygroscopic.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters:
Sodium chloride
Contains no substances with occupational exposure limit values.

Potassium chloride
No OSHA Vacated PELs are listed for this chemical.

Disodium hydrogen phosphate
Safety shower and eye bath. Mechanical exhaust required.
No OSHA Vacated PELs are listed for this chemical.

Potassium dihydrogen phosphate
Use adequate ventilation to keep airborne concentrations low.
No OSHA Vacated PELs are listed for this chemical.

Tween-20
Contains no substances with occupational exposure limit value.

ProClin-950*
Face shields, full-face respirator (US), Gloves, Goggles, multipurpose combination respirator cartridge (US) type ABEK(EN14387) respirator filter**.**
No occupational exposure limits established**.**

Standard BMB
Standard BMB (micro-polymer beads) are highly cross-linked Bisphenol-A Novolac epoxy resin.
No occupational exposure limits established**.**

Personal protective equipment:
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, clear
Color	colorless

Safety data

pH	~ 7.58
Melting point/freezing point	~ 0 deg C
Boiling point	> 100 deg C
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	NA for Polymer beads suspended in buffer

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None identified under normal storage condition.

Conditions to avoid
Incompatible materials, excess heat

Materials to avoid
Not compatible with acidity exposures below pH 4.5 for extended periods. Bead may be functionally damaged.

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 # 7447-40-7	Oral, mouse: LD50= 1500 mg/kg
	Oral, rat: LD50=2600 mg/kg
CAS # 7558-79-4	Oral, mouse: LD50=N/A
	Oral, rat: LD50= 17 gm/kg
CAS # 7778-77-0	Oral, mouse: LD50=N/A
	Oral, rat: LD50=N/A
CAS # 9005-64-5	Oral, mouse: LD50=>33 gm/kg
	Oral, rat: LD50= 40,554 mg/kg
CAS # 2682-20-4	Oral, mouse: LD50=N/A
	Oral, rat: LD50= 3600 mg/kg

Inhalation LC50

CAS # 7647-14-5	Inhalation, rat: LC50=>42 gm/m3/1H
CAS # 7447-40-7	May cause respiratory tract irritation
CAS # 7558-79-4	May cause respiratory tract irritation
CAS # 7778-77-0	May cause respiratory tract irritation
CAS # 9005-64-5	May cause respiratory tract irritation
CAS # 2682-20-4	May be harmful after inhalation and irritate the respiratory tract

Skin corrosion/irritation

CAS # 7647-14-5	Skin, rabbit: LD50 = > 10 gm/kg
CAS # 7447-40-7	May cause skin irritation

CAS # 7558-79-4 May be harmful if absorbed through skin; may cause skin irritation.
CAS # 7778-77-0 May cause skin irritation. Low hazard for usual industrial handling.
CAS # 9005-64-5 Skin-Human-Mild skin irritation- 3d
CAS # 2682-20-4 ProClin 950* is a potential sensitizer by skin contact; prolonged or repeated exposure may cause rash occurs.

Serious eye damage/eye irritation

CAS # 7647-14-5 Eyes-rabbit-Mild eye irritation-Draize Test
CAS # 7447-40-7 Draize test, rabbit, eye: 500 mg/24H Mild
CAS # 7558-79-4 Draize test, rabbit, eye: 500 mg/24H Mild
CAS # 7778-77-0 May cause eye irritation
CAS # 9005-64-5 May cause eye irritation
CAS # 2682-20-4 Irritation of the skin. Danger of skin absorption. May lead to hypersensitivity.

Respiratory or skin sensitization

CAS # 7647-14-5 May cause respiratory tract irritation
CAS # 7447-40-7 May cause respiratory tract irritation
CAS # 7558-79-4 May cause respiratory tract irritation
CAS # 7778-77-0 May cause respiratory tract irritation
CAS # 9005-64-5 May cause respiratory tract irritation
CAS # 2682-20-4 May cause respiratory tract irritation

Germ cell mutagenicity

CAS # 7647-14-5 No data available
CAS # 7447-40-7 Unschedule DNA Synthesis: Oral, rat= 1500 ug/kg
Mutation in Mouse Lymphocyte= 2048 mg/L
DNA Damage in Hamster Ovary= 260 mmol/L
Cytogenetic Analysis in Hamster Lung= 12 gm/L
CAS # 7558-79-4 No data available
CAS # 7778-77-0 No data available
CAS # 9005-64-5 No data available
CAS # 2682-20-4 No data available

Carcinogenicity

CAS # 7647-14-5 Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65
CAS # 7447-40-7 Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65
CAS # 7558-79-4 Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65
CAS # 7778-77-0 Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65
CAS # 9005-64-5 Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65
CAS # 2682-20-4 No data available
CAS # 7732-18-5 Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65

Carcinogenicity - mouse - Oral

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

Reproductive toxicity

CAS # 7647-14-5 No data available
CAS # 7447-40-7 No data available
CAS # 7558-79-4 No data available
CAS # 7778-77-0 No data available
CAS # 9005-64-5 Adverse reproductive effects have occurred in experimental animal**s.**
CAS # 2682-20-4 No data available

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

CAS # 7647-14-5 No data available
CAS # 7447-40-7 Target Organs: Eyes**.**
Cause eye irritation. May cause chemical conjunctivitis.
CAS # 7558-79-4 No data available
CAS # 7778-77-0 No data available
CAS # 9005-64-5 **None known**
CAS # 2682-20-4 No data available

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

CAS # 7647-14-5 No data available
CAS # 7447-40-7 No data available
CAS # 7558-79-4 No data available
CAS # 7778-77-0 No data available
CAS # 9005-64-5 No data available
CAS # 2682-20-4 No data available

Aspiration hazard
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 # 7447-40-7 No data available
CAS # 7558-79-4 No data available
CAS # 7778-77-0 No data available
CAS # 9005-64-5 Toxicity to fish LC50-other fish-350 mg/l-24 h
CAS # 2682-20-4 Do not allow to enter waters, waste water or soi**l.** Highly toxic for aquatic organisms. Due to the small size of 2 mL vial and the low concentration of hazardous ingredient in this product, risks are estimated to be minor.

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available
PBT and vPvB assessment
No data available**Other adverse effects**
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)

DOT - Not regulated
UN number: NA
Proper shipping name: PBS, 1X / Tween 20, 0.5%
Reportable Quantity (RQ): NA
Marine pollutant: No data available
Poison Inhalation Hazard: NA

IMDG - Not regulated
UN number: NA
Packing group: NA
EMS-No: NA
Marine pollutant: No data available

IATA
UN number: Not regulated - Non-hazardous for transport.

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.

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