

<b>Applied BioCode</b>	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

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**Document Category:** SDS  
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## Revision History

Revision	Details	Effective Date
01	Initial Release	4/25/2019

## Reference

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No records to display.

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	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

## 1. PRODUCT AND COMPANY IDENTIFICACION

**Product Name:** P-Carboxyl BMB 4,096-Plex,

**Product Number:** 44-B0312-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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## 1. 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
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	P-Carboxyl BMB	N/A	N/A	N/A

NFPA Rating

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

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	P-Carboxyl 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.

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

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 %

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

7732-18-5	Deionized water	231-791-2	>98 %
N/A	P-Carboxyl BMB	N/A	~50 K in 1.5 mL Storage buffer

### 3. 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.

### 4. 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

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

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

Faceshields, full-face respirator(US), Gloves, Goggles, multipurpose combination respirator cartridge (US) type ABEK(EN14387) respirator filter.

No occupational exposure limits established.

#### P-Carboxyl BMB

P-Carboxyl BMB is highly cross-linked Bisphenol-A Novolac epoxy resin,

The P-Carboxyl BMB are suspended in 0.5 % Tween-20. The risk is minimum.

Handling with gloves, goggles and protective clothing.

No occupational exposure limits established.

### Personal protective equipment

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

## Respiratory protection

### 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 Carboxyl BMB suspended in storage buffer

## 10. STABILITY AND REACTIVITY

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

### 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

Carboxyl BMB is not compatible with acid. Barcode may be bleached out in acidic pH less than 4.5 under extended period.

### 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

P-Carboxyl BMB is highly cross-linked Bisphenol-A Novolac epoxy resin. Its toxicity should be much lower than SU-8. For reference only,

**SU-8 Acute oral toxicity: LD50-oral-rat, LD50>2000 mg/kg**

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

**Acute dermal toxicity: LD50-rabbit, LD50>2000 mg/Kg**  
**Acute inhalation toxicity: LC50-rat, LC50>5mg/L**

**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**



Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

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

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

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.

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

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 animals.

**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

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

### 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.

**Additional Information**

**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**

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

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 soil. 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.

**Contaminated packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION DOT (US)**

UN number:

Proper shipping name:

Reportable Quantity (RQ):

Marine pollutant:

Poison Inhalation Hazard:

**IMDG**

UN number:

Applied BioCode	TITLE: MSDS 44-B0312 P-Carboxyl BM 4096 Plex			
	DOCUMENT NO: SPC-0468	DOCUMENT CATEGORY: SDS	REVISION: 01	EFFECTIVE DATE: 4/25/2019

Packing group:  
EMS-No:  
Marine pollutant:  
**IATA**  
UN number: na

## 15. REGULATORY INFORMATION

### OSHA Hazards

## 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.

Current