Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

MATERIAL SAFETY DATA SHEET

(Benzalkonium chloride solution 80 %w/v)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: : Bkc -80

Product code : Not applicable

Use of the Substance / Mixture: : Inhibitor

Company: : East Coast Organics Private Limited,

237/2, Vellivoyal Chavadi,

Chennai – 600103 Tamilnadu - India

Telephone : 044 – 64606747 / 9789074250

Responsible/issuing person : Works Manager

E-mail address <u>info@eastcoastorganics.net</u>

ecopl@rediffmail.com

Emergency telephone number : 044- 64606747

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Danger

Form : Liquid Colour : Pale yellow

Odour : Mild

Hazard Summary : Causes burns. Flammable

OSHA Hazards : CORROSIVE TO SKIN, FLAMMABLE

Potential Health Effects

Primary Routes of Entry : Inhalation

Ingestion Eyes Skin

Inhalation : No information available.

Skin : Causes skin burns.

Eyes : Causes eye burns.

Ingestion : Harmful if swallowed.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Page No: 1 of 10

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

Chemical Name	CAS No.	Weight percent by volume
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	8001-54-5	80 %
DM Water	7732-18-5	20 %

SECTION 4. FIRST AID MEASURES

First aid procedures : Immediate medical attention is required.

Inhalation : Move to fresh air.

Call a physician immediately.

If breathing is irregular or stopped, administer artificial

respiration.

Skin contact : After contact with skin, wash immediately with plenty of

soap and water.

Call a physician immediately.

Take off all contaminated clothing immediately.

Eye contact : Immediately flush eye(s) with plenty of water.

Call a physician immediately.

Ingestion : Call a physician immediately.

Clean mouth with water and drink afterwards plenty of

water.

Do not induce vomiting without medical advice.

Never give anything by mouth to an unconscious person.

SECTION 5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point : 106°F (41°C)

Method: Setaflash closed Tester (ASTM D3278)

Ignition temperature 689 °F (365 °C)

Fire fighting

Suitable extinguishing media : Dry powder

Water spray

Foam

Further information : Use water spray to cool unopened containers.

Protective equipment and precautions for firefighters

Page No: 2 of 10

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

Specific hazards during fire

fighting

: Heating or fire can release toxic gas.

firefights

Special protective equipment for : In the event of fire, wear self-contained breathing

apparatus.

SECTION 6.ACCIDENTAL RELEASE MEASURES

Personal precautions : Use respirator when performing operations involving

potential exposure to vapour of the product.

: Do not flush into surface water or sanitary sewer system. Environmental precautions

Method for containment /

Method for cleaning up

: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth,

vermiculite) and place in container for disposal

according to local / national regulations

SECTION 7. HANDLING AND STORAGE

Handling

Handling : Avoid contact with skin and eyes.

Provide sufficient air exchange and/or exhaust in work

rooms.

Advice on protection against fire : Highly flammable.

and explosion

Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharges.

Storage

Requirements for storage areas

and containers

: Keep container tightly closed.

To maintain product quality, do not store in heat or

direct sunlight.

Keep in a dry, cool and well-ventilated place.

Further information on : Store containers in compliance with the most recent

NFPA

Storage conditions : Code (NFPA 30). Ground all containers prior to pouring

 $< 140^{\circ} F (< 60^{\circ} C)$ Storage temperature

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Page No: 3 of 10

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

Engineering measures :

Personal protective equipment

Eye protection : Tightly fitting safety goggles

Face-shield

Hand protection : Suitable material : Nitrile rubber

Break through time : > 480 min

Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain,

duration of contact).

Skin and body protection : Choose body protection according to the amount and

concentration of the dangerous substance at the work

place.

Rubber or plastic apron Rubber or plastic boots

Respiratory protection : In the case of vapour formation use a respirator with an

approved filter.

Hygiene measures : Avoid contact with skin, eyes and clothing.

Wash hands before breaks and immediately after

handling the

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : Liquid

Colour : Pale yellow

Odour : Mild

Safety data

Flash point : $106 \,^{\circ}\text{F} \, (41 \,^{\circ}\text{C})$

Method: Setaflash Closed Tester (ASTM D3278)

Ignition temperature : 689 °F (365 °C)

7.0 to 7.5

pH at 100,00 g/l

77 °F (25 °C)

Pour point . $14 \, ^{\circ}\text{F} (-10 \, ^{\circ}\text{C})$

Boiling point/boiling range . 214 °F (101 °C)

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

58 hPa (44 mmHg)

Vapour pressure : at $68 \,^{\circ}\text{F} (20 \,^{\circ}\text{C})$

Density : 0,96 g/cm³

at 77 °F (25 °C)

Water solubility . Note: completely soluble

Viscosity, dynamic : <100 mPa.s at 77 °F (25 °C)

SECTION 10 STABLITY AND REACTIVITY

Conditions to avoid : Remarks: Strong oxidizing agents

Reducing agents

Hazardous decomposition : Note: nitrogen oxides (NOx)

products Carbon oxides

Thermal decomposition : Remarks: no data available

Shelf life when stored below : 12 Months

30°C

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50 rat

Dose: 404 mg/kg

Acute dermal toxicity : LD50 rabbit

Dose: 3 418 mg/kg

Skin irritation : rabbit

Result: Corrosive

Method: DOT

Eye irritation : rabbit

Result: severe irritant

Sensitisation : Photoallergy guinea pig

Result: not photoallergenic

guinea pig

Result: not sensitizing

: Information given is based on data on the components

Further information and the toxicology of similar products.

No data is available on the product itself.

N-Alkyl(C12-16)-N,N-dimethyl-N-benzylammonium chloride (CAS-No.: 68424-85-1)

Acute oral toxicity : LD50 rat

Dose: ca. 344 mg/kg

Acute dermal toxicity : LD50 rabbit

Dose: ca. 3 340 mg/kg

Skin irritation : rabbit

Page No: 5 of 10

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

Result: Corrosive Method: DOT

Exposure time: 24 h

rabbit

Eye irritation Result: Corrosive

Method: DOT

Buehler Test guinea pig

Classification: Did not cause sensitization on laboratory

Sensitisation animals.

Result: not sensitizing

Method: OECD Test Guideline 406

SECTION 12 ECOLOGICAL INFORMATION

Additional ecological : Information given is based on data on the components

information and the ecotoxicology of similar products.

The following ecotoxicological data refer to:

N-Alkyl(C12-16)-N,N-dimethyl-N-benzylammonium chloride (CAS-No.: 68424-85-1)

Biodegradability : OECD Confirmatory Test

>90 %

Method: OECD 303 A

Modified SCAS Test Exposure time: 7 d

>99 %

Method: OECD 302 A

CO2 Evolution Test Concentration: 5 mg/l Exposure time: 28 d

Result: Readily biodegradable.

95.5 %

Method: OECD 301 B

Remarks:

The surfactant(s) contained in this mixture

complies(comply) with the biodegradability criteria as

laid down in Regulation (EC) No.648/2004 on

detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

request or at the request of a detergent

manufacturer.

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Exposure time: 35 d Concentration: 0,05 mg/l

Bioconcentration factor (BCF): 79

Method: US-EPA

Acute Fish toxicity : Acute toxicity LC50

Species: Oncorhynchus mykiss (rainbow trout)

Concentration: 0,93 mg/l Exposure time: 96 h Analytical monitoring: yes

Method: US-EPA

Acute toxicity LC50

Species: Pimephales promelas (fathead minnow)

Concentration: 0,28 mg/l Exposure time: 96 h Analytical monitoring: yes

Method: US-EPA

Acute toxicity LC50

Species: Lepomis macrochirus (Bluegill sunfish)

Concentration: 0,51 mg/l Exposure time: 96 h Analytical monitoring: yes

Method: US-EPA

Early-life Stage NOEC

Species: Pimephales promelas (fathead minnow)

Concentration: 0,03 mg/l Exposure time: 34 d Analytical monitoring: yes Method: EPA-FIFRA

Toxicity to daphnia and other aquatic invertebrates.

Immobilization EC50

Species: Daphnia magna (Water flea)

Concentration: 0,01 mg/l Exposure time: 48 h Analytical monitoring: yes

Method: OECD Test Guideline 202

Reproduction Test NOEC

Species: Daphnia magna (Water flea)

Concentration: 0,00 mg/l Exposure time: 21 d Analytical monitoring: yes

Page No: 7 of 10

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

Method: EPA-FIFRA

Chronic toxicity NOEC Species: Chironomus sp. Concentration: 520,00 mg/l

Exposure time: 28 d Analytical monitoring: yes

Method: US-EPA

Toxicity to algae : Cell multiplication inhibition test ErC50

Species: Pseudokirchneriella subcapitata (green algae)

Dose: 0,04 mg/l Exposure time: 72 h Analytical monitoring: yes

Method: OECD Test Guideline 201

Toxicity to bacteria : Respiration inhibition EC50

Species: activated sludge

Dose: 7,75 mg/l Exposure time: 3 h Method: OECD 209

Growth inhibition EC100 Species: Pseudomonas putida

Dose: ca. 16,00 mg/l Exposure time: 96 h

SECTION 13. DISPOSAL CONSIDERATIONS

Further information : The organic ingredients can be incinerated in a suitable

installation when in accordance with local regulations.

Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

DOT :

UN number : 2920

Description of the goods : Corrosive liquids, flammable, n.o.s.

(Alkyldimethylbenzylammoniumchloride)

Class : 8 Packing group : II Labels : 8(3)

IATA

UN number 2920

Description of the goods : Corrosive liquids, flammable, n.o.s.

(Alkyldimethylbenzylammoniumchloride)

Class : 8

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

Packing group : II Labels : 8(3) Packing instruction (cargo : 855

aircraft)

Packing instruction : 851

(passenger aircraft)

Packing instruction : Y840

(passenger aircraft)

IMDG-CODE

UN number 2920

Description of the goods : Corrosive liquids, flammable, n.o.s.

(Alkyldimethylbenzylammoniumchloride)

Class : 8
Packing group : II
Labels : 8(3)
EmS Number 1 : F-E
EmS Number 2 : S-C
Marine pollutant : Yes

RID

UN number : 2920

Description of the goods : Corrosive liquids, flammable, n.o.s.

(Alkyldimethylbenzylammoniumchloride)

Class : 8
Packing group : II
Classdification Code : CF1
Hazard identification No : 83
Labels : 8(3)

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Corrosive to skin, Flammable

WHMIS Classification : E

B2

TSCA Status : All components of this product are currently listed on

the EPA TSCA 8(b) inventory list or are incidental byproducts. This product is not an EPA registered pesticide. It cannot be used in the United States as a commercial antimicrobial agents without first obtaining

an EPA FIFRA registration. It can be used

commercially in non-antimicrobial applications, and for

all research and development (R&D) applications

including as a potential antimicrobial agent.

Regd. Office & Factory: 237/2, Vellivoyal Chavadi, Chennai – 600 103.

CERCLA Reportable : 1 000 lbs

Quantity

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO - KNOW

SARA 302 Components : SARA 302: No chemicals in this material are subject to

the reporting requirements of SARA Title III, Section

302.

SARA 313 Components : 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.

SECTION 16. OTHER INFORMATION

Further information :

HMIS Classification : Health hazard: 3

Flammability: 2 Reactivity: 0

The information provided in this 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 relaees 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

Page No: 10 of 10