

SECTION 1: Identification

1.1. Product identifier

Product name : BioMIC
Product code : Not available.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Antimicrobial concrete admixture

1.3. Details of the supplier of the safety data sheet

Penetron International, Ltd.
601 S. 10th Street, Unit 300
Allentown, PA 18103 - USA
T +1 (631) 941-9700
info@penetron.com – www.penetron.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: US and Canada: 1-800-424-9300; International +1 703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Environmental hazards : Hazardous to the aquatic environment, acute hazard Category 3
: Hazardous to the aquatic environment, long-term hazard Category 3
OSHA defined hazards : Not classified

2.2. Label elements

GHS-US labeling

No labeling applicable.
Precautionary statements (GHS-US)
Prevention : Avoid release to the environment. Wash hands after handling.
Storage : Store away from incompatible materials.
Disposal : Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Unknown acute toxicity (GHS US)

Not applicable.

2.4. Other hazards

Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable.

3.2. Mixture

Name	Product identifier	%
3-(Trimethoxysilyl) propyldimethyloctadecyl ammonium chloride	(CAS No) 27668-52-6	1 - 5
Methanol	(CAS No) 67-56-1	0 - 1

* The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200. Components not listed are either non-hazardous or are below reportable limits.

SECTION 4: First-aid measures

4.1. Description of first-aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact : In case of contact, immediately wash skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.
First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately. Hold eye open and rinse slowly and gently with water for 15-20 minutes.
First-aid measures after ingestion : Rinse mouth out with water. Get medical attention if symptoms occur.

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : No known significant effects or critical hazards.
- Symptoms/injuries after skin contact : No known significant effects or critical hazards.
- Symptoms/injuries after eye contact : Direct contact with eyes may cause temporary irritation.
- Symptoms/injuries after ingestion : No known significant effects or critical hazards.

4.3. Indication of any immediate medical attention and special treatment needed

- Notes to physician : Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible). Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).
- Unsuitable extinguishing media : Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

- Protection during firefighting : Keep upwind of fire. Wear full firefighting turn-out gear (full Bunker gear) and respiratory protection (SCBA). Move container from fire area if you can do so without risk.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Wear appropriate personal protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

6.2. Methods and material for containment and cleaning up

- For containment : Prevent further leakage or spillage if safe to do so. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases.
- Methods for cleaning up : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE). Prevent further leakage or spillage if safe to do. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Avoid prolonged exposure. Provide adequate ventilation. Use appropriate personal protective equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Avoid release to the environment.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep out of the reach of children. Store in accordance with local regulations. Store in original labeled container protected from direct sunlight in a dry, cool and well-ventilated area, away from food, drink and incompatible materials (see section 10). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

Methanol (67-56-1)			
ACGIH	STEL 250 ppm TWA 200 ppm		
OSHA	PEL 260mg/m ³	200 ppm	
NIOSH	STEL 325 mg/m ³ TWA 260 mg/m ³	250 ppm 200 ppm	

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8.2. Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Methanol (67-56-1)	15 mg/l	Methanol	Urine	See the source document

8.3. Exposure guidelines

Methanol (67-56-1)	
US - California OELs: Skin designation	Can be absorbed through the skin
US - Minnesota Haz Subs: Skin designation applies	Skin designation applies
US - Tennessee OELs: Skin designation	Can be absorbed through the skin
US ACGIH Threshold Limit Values: Skin designation	Can be absorbed through the skin
US NIOSH Pocket Guide to Chemical Hazards: Skin designation	Can be absorbed through the skin

8.4. Exposure controls

Appropriate engineering controls	: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.
Hand protection	: Protective gloves made of rubber or PVC.
Eye protection	: Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.
Skin and body protection	: Wear appropriate chemical resistant gloves. Wear suitable protective clothing.
Respiratory protection	: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Environmental exposure controls	: Maintain levels below Community environmental protection thresholds.
Other information	: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Not available
Color	: Clear to light amber
Odor	: Amine-like
Odor threshold	: Not available
pH	: 3.8
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flash point	: > 100° C (> 212° F)
Relative evaporation rate (butyl acetate=1)	: Not available
Flammability (solid, gas)	: Not applicable
Explosion limits	: Not available
Explosive properties	: Not available
Oxidizing properties	: Not available
Vapor pressure	: Not available
Relative density	: 8.33 lb/gal @ 22° C
Relative vapor density at 20°C	: Not available
Solubility	: Not available
Partition coefficient: n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available

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Viscosity	: 17.46 cSt @ 21° C
Viscosity, kinematic	: Not available
Viscosity, dynamic	: Not available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Contact with incompatible materials.

10.5. Incompatible materials

Anionic surfactants. Detergents.

10.6. Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1. Information on likely routes of exposure

Inhalation	: Prolonged inhalation may be harmful.
Skin contact	: Causes mild skin irritation.
Eye contact	: Direct contact with eyes may cause temporary irritation.
Ingestion	: May cause discomfort if swallowed.

11.2. Information on toxicological effects

Acute toxicity	: Not available.
Skin corrosion/irritation	: Prolonged skin contact may cause temporary irritation.
Serious eye damage/irritation	: Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	: Not a respiratory sensitizer. This product is not expected to cause skin sensitization.
Germ cell mutagenicity	: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	: Not classifiable as to carcinogenicity to humans.

11.3. Delayed and immediate effects as well as chronic effects from short and long-term exposure

Reproductive toxicity	: This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity (single exposure)	: Not classified.
Specific target organ toxicity (repeated exposure)	: Not classified.
Aspiration hazard	: Not an aspiration hazard.
Chronic effects	: Prolonged inhalation may be harmful.

SECTION 12: Ecological information

12.1. Ecotoxicity

Toxicity	: Harmful to aquatic life with long lasting effects.
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BioMIC	
Daphnia Magna	48h LC50: = 13.9 mg/l (Water Flea)
Toxicity to Fish	96h LC50: = 10.8 mg/l (Pimephales promelas)

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

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12.5. Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Disposal methods : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.
- Contaminated packaging : Do not reuse empty containers. Follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1. DOT, ADR, IMDG, IATA transportation

In accordance with DOT, ADR, IMDG, IATA

Not regulated for transport

Not regulated as dangerous goods

14.2. Additional information

- Other information : No supplementary information available.
- Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Section 313

Methanol (67-56-1)	
Listed on CERCLA. Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	<1 %

SARA Hazard categories

Immediate Hazard	Delayed Hazard	Fire Hazard	Pressure Hazard	Reactivity Hazard
No	No	No	No	No

- CWA : This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (CWA) (40 CFR 122.21 and 40 CFR 122.42)

15.2. Other Federal regulations

- FIFRA Information : This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.
- Signal word : CAUTION
- Hazard statement : KEEP OUT OF REACH OF CHILDREN.
- Precautionary statement : HAZARD TO HUMANS AND DOMESTIC ANIMALS Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Environmental hazards : This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. Deactivation may be required during clean up if a spill occurs. Deactivation of BioMIC can be achieved by the addition of an anionic surfactant or detergent (such as soap, sulfones, or sulfates) in quantity equivalent to that of the active ingredient. It is a violation of Federal Law to use this product in a manner inconsistent with its label.

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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

15.3. US State regulations

California Proposition 65 : This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Methanol (67-56-1)

Listed on US-California Proposition 65-CRT: Listed date/Developmental toxin: March 16, 2012

Listed on US-California Candidate Chemicals List. Safer Consumer Products Regulations (Cal Code Regs, tit 22, 69502.3, subd. (a))

US State Right-to-Know : This product does not contain any substances regulated by the right-to-know regulations.

SECTION 16: Other information

16.1. Hazardous Materials Information System (U.S.A)

Health	1
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the American Coatings Association. The customer is responsible for determining the PPE code for this material.

Date of issue : 03/20/2018

Revision date : 3/11/2021

Other information : None.

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