 **SAFETY DATA SHEET**

**1. Identification**

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| **Product Identifier**  **Other means of Identification**  **Product Code**  **Product Registration**  **Number**  **Recommended use**  **Recommended restrictions** | **AEM 5772-12, 12-Month Antimicrobial**  AEM5772-5 (12)  EPA: 64881-1  Antimicrobial  Use in accordance with manufacturer’s recommendations |

**Manufacturer/Importer/Supplier/Distributor Information**

|  |  |
| --- | --- |
| **Company Name**  **Address**  **Telephone**  **Email**  **Emergency Phone Number** | Bio-Protect Innovations, Inc  1011 Niagra Falls Dr.  Mansfield, TX. 76063  USA  214-449-7807  [Infoleads@microban.com](mailto:Infoleads@microban.com)  (24 Hr Emergency) 1-900-535-5053 or 352-323-3500 |

**2. Hazard(s) identification**

|  |  |  |
| --- | --- | --- |
| **Physical hazards**  **Health hazards**  **Environmental hazards**  **OSHA defined hazards**  **Label elements** | Not classified.  Not classified.  Hazardous to the aquatic environment, acute  Hazard  Hazardous to the aquatic environment,  long term hazard  Not Classified.  None. | Category 3  Category 3 |
| **Signal word**  **Hazard statement**  **Precuationary statement**  **Prevention**  **Response**  **Storage**  **Disposal**  **Hazard(s) not otherwise classified (HNOC)**  **Supplemental Information** | None.  Harmful to aquatic life with long lasting effects.  Avoid release to the environment.  Wash hands after handling.  Store away from incompatible materials.  Dispose of contents/container in accordance with local/regional/national/international regulations.  None known.  None. | | |

**3. Composition/information on ingredients**

**Mixtures**

|  |  |  |  |
| --- | --- | --- | --- |
| **Chemical name**  3-(Trimethoxysilyl) propyldmethyloctadecyl ammonium chloride  Methanol | **Common name and synonyms** | **CAS number**  27668-52-6  67-56-1 | **%**  < 5  < 1 |

|  |  |
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| **Composition comments** | All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.  Components not listed are either non-hazardous or are below reportable limits. |

**4. First-aid measures**

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| **Inhalation**  **Skin contact**  **Eye contact**  **Ingestion**  **Most important symptoms/effects, acute and delayed**  **Indication of immediate medical attention and special treatment needed**  **General information** | Move to fresh air. Call a physician if symptoms develop or persist.  Wash off with soap and water. Get medical attention if irritation develops and persists.  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.  Rinse mouth. Get medical attention if symptoms occur.  Direct contact with eyes may cause temporary irritation.  Treat symptomatically.  Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

**5. Fire-fighting measures**

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| **Suitable extinguishing media**  **Unsuitable extinguishing media**  **Specific hazards arising from the chemical**  **Special protective equipment and precautions for firefighters**  **Fire-fighting equipment/instructions**  **Specific methods**  **General fire hazards** | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).  Do not use water jet as an extinguisher, as this will spread the fire.  During fire, gases hazardous to health may be formed.  Self-contained breathing apparatus and full protective clothing must be worn in case of a fire.  Move containers from fire area if you can do so without risk.  Use standard firefighting procedures and consider the hazards of other involved materials.  No unusual fire or explosion hazards noted. |

**6. Accidental release measures**

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| --- | --- |
| **Personal precautions, protective equipment and emergency procedures**  **Methods and materials for containment and cleaning up**  **Environmental precautions** | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate 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.  Prevent entry into waterways, sewer, basements or confined areas.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material where this is possible. Absorb in vermiculite, sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use.  Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. |

**7. Handling and Storage**

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| **Precautions for safe handling**  **Conditions for sage storage, including any incompatibilities** | Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.  Store locked up. Keep away from heat, sparks, and open flame. Prevent electrostatic charge of build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep away from food, drink, and animal feeding stuffs. Keep out of the reach of children. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Sections 10 of the SDS). |

**8. Exposure controls/personal protection**

**Occupational exposure limits**

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.

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

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| --- | --- | --- |
| **Components**  Methanol (CAS 67-56-1)  **US ACGIH Threshold Limit Values**  **Components**  Methanol (CAS 67-56-1)  **US. NIOSH: Pocket Guide to Chemical Hazards**  **Components**  Methanol (CAS 67-56-1) | **Type**  PEL  **Type**  STEL  TWA  **Type**  STEL  TWA | **Value**  260 mg/m3  200 ppm  **Value**  250 ppm  200 ppm  **Value**  325 mg/m3  250 ppm  260 mg/m3  200 ppm |

**Biological limit values**

**ACGIH**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Material**  AEM 5772-5 Antimicrobial | **Value**  15 mg/l | **Determinant**  Trade Secret | **Specimen**  Urine | **Sampling Time**  For sampling details, please see the source document. |

**ACGIH Biological Exposure Indices**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Components**  Methanol (CAS 67-56-1) | **Value**  15 mg/l | **Determinant**  Methanol | **Specimen**  Urine | **Sampling Time**  For sampling details, please see the source document. |

**Exposure guidelines**

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

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| **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 to an acceptable level. Provide eyewash stations. |

**Individual protection measures, such as personal protective equipment**

**Eye/face protection Face shield is recommended.** Wear chemical goggles

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves.

**Other** 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,

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

**Appearance**

**Physical state** Liquid

**Form** Liquid

**Color** Colorless to light amber

**Odor** Amine-like

**Odor threshold** Not available

**pH**  3.5

**Melting point/Freezing point** Not available

**Initial boiling point and boiling range** Not available

**Flash point** >212.0 °F (> 100.0 °C)

**Evaporation rate** Not available

**Flammability (solid/gas)** Not available

**Upper/lower flammability or explosive limits**

**Explosive limit – lower (%)** Not available

**Explosive limit – upper (%)** Not available

**Vapor pressure** Not available

**Relative density** 0.998 g/cm3 at 22° C.

**Solubility (ies)**

**Solubility (water)** Not available

**Partition coefficient** Not available

**(n-octanol/water)**

**Auto-ignition temperature** Not available

**Decomposition temperature** Not available

**Viscosity** 17.46 cSt at 21° C.

**Other information**

**Explosive properties** Not explosive

**Oxidizing properties** Not oxidizing

**10. Stability and reactivity**

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| **Reactivity**  **Chemical Stability**  **Possibility of hazardous reactions**  **Conditions to avoid**  **Incompatible materials**  **Hazardous decomposition products** | The product is stable and non-reactive under normal conditions of use, storage and transport.  Material is stable under normal conditions.  No dangerous reaction known under conditions of normal use.  Contact with incompatible materials.  Anionic surfactants. Detergents.  No hazardous decomposition products are known. |

**11. Toxicological information**

**Information on likely routes of exposure**

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| --- | --- |
| **Inhalation**  **Skin contact**  **Eye contact**  **Ingestion**  **Symptoms related to the physical, chemical and toxicological characteristics**  **Information on toxicological effects**  **Acute toxicity** | Prolonged inhalation may be harmful.  Causes skin irritation.  Direct contact with eyes may cause temporary irritation.  May cause discomfort if swallowed.  Direct contact with eyes may cause temporary irritation.  Not available |

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritations.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer

**Skin sensitization** 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.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not registered

**US National Toxicology Program (NTP) Report on Carcinogens**

Not listed

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity** Not classified

**- single exposure**

**Specific target organ toxicity** Not classified

- **double exposure**

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful.

**12. Ecological information**

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

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| --- | --- | --- |
| **Product**  AEM 5772-5 Antimicrobial  **Aquatic**  Acute  Crustacea LC50 | **Species**  Daphnia magna  Fathead Minnow (Pimephales) | **Test Results**  13.9 mg/l, 48 hours  10.8 mg/l, 96 hours |

**Persistence and degradability** No data available on the degradability of this product.

**Bioaccumulative potential**

**Mobility in soil** Not data available.

**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.

**13. Disposal considerations**

**Disposal considerations** Collect and reclaim or dispose in sealed containers at license waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local Disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. (see: Disposal instructions)

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to** Not established.

**AnnexII of MARPOL 73/78 and**

**the IBC Code**

**15. Regulatory information**

**US federal regulations** This product is known to be a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard. 29 CFR 1910.1200

**Toxic Substances Control Act (TSCA)**

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt, D)**

Not regulated

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Methanol (CS 67-56-1)

**SARA 304 Emergency release notification**

Not regulated

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not regulated

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** no

**chemical**

**SARA 313 (TRI reporting)**

**Chemical name CAS number/Category % by wt.**

METHANOL 67-56-1 < 1

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Methanol (CAS 67-56-1)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

**Safe Drinking Water Act (SWDA)** Not regulated.

**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 REEACH OF CHILDREN

PRECAUTIONARY STATEMENTS

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.

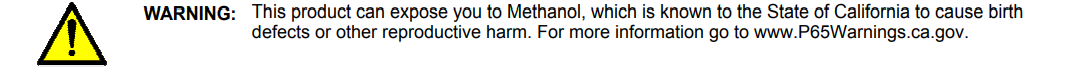
ENVIRONMENTAL HAZARDS

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 AEM 5772-5 Antimicrobial 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.

**US state regulations**

**California Proposition 65**



**California Proposition 65 – CRT: Listed date/Developmental toxin**

Methanol (CAS 67-56-1) Listed: March 16, 2012

**US. California. Candidate Chemical List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22 69502.3, subd. (a))**

Methanol (CAS 67-56-1)

**16. Other information, including date of preparation or last revision**

**Issue date 03-March-2017**

**Revision date 08-November-2018**

**Version # 04**

**HMIS® ratings** Health: 1

Flammability: 0

Physical hazard: 0

**NFPA rating** Health: 1

Flammability: 0

Instability: 0

**NFPA ratings**



**List of abbreviations** LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

**Disclaimer** The information provided in the 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 a s a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or qualify specification. The information relates 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.

**Revision information** Product and Company Identification: Product and Company Identification

Composition / Information on Ingredients: Disclosure Overrides

Accidental release measure: Personal Protection: OELs

Physical & Chemical Properties: Multiple Properties

Regulatory information: California Proposition 65

Regulatory information: US state regulations