

## MATERIAL SAFETY DATA SHEET (MSDS)

ÆGIS Microbe Shield® — AEM 5700 Antimicrobial  
(Typical Application Strength)

Current Version: 08/26/2009

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY INFORMATION

GERMGUARD  
2110 Matheson Blvd. E Suite 102  
Mississauga, ON L4W 5E1

Telephone: (905) 602-1555  
Fax: (905) 602-5757

Generic Description: Organosilane in water  
Physical Form: Solid  
Color: Colorless  
Odor: None  
NFPA\* Profile: Health 1 Flammability 0 Reactivity 0  
\* NFPA = National Fire Protection Association

### SECTION 2 — OSHA HAZARDOUS COMPONENTS

CAS Number	Wt. %	Component	Exposure Limits
000067-56-1	0.75%	Methyl Alcohol	OSHA PEL (final rule) and ACGIH TLV-skin: TWA 200 ppm; STEL 250 ppm.
027668-52-6	0.84%	Octadecyldimethyltrihydroxy-silylpropyl Ammonium Chloride	Observe above limits for methanol formed or exposure to water or humid air
002530-87-2	0.16%	Chloropropyltrihydroxysilane	Observe above limits for methanol formed or exposure to water or humid air
7732-18-5	98.25%	Water	None

### SECTION 3 — EFFECTS OF OVEREXPOSURE

#### Acute Effects

Eye	Direct contact may cause transient irritation, which should heal within a few days.
Skin	No untoward effects
Inhalation	No untoward effects
Oral	No untoward effects

#### Prolonged/Repeated Exposure Effects

Skin	No untoward effects
Inhalation	No untoward effects
Oral	No untoward effects

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**SECTION 3 continued — EFFECTS OF OVEREXPOSURE**

**Signs and Symptoms of Overexposure**

No known applicable information

**Medical Conditions Aggravated by Exposure**

No known applicable information

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product.

Please refer to Section 11 for detailed toxicology information.

**SECTION 4 — FIRST AID MEASURES**

Eye	Immediately flush with water for 15 minutes. Get medical attention.
Skin	Get medical attention if irritation or ill effects develop or persist
Inhalation	Remove to fresh air. Get medical attention if ill effects persist
Oral	Get medical attention if ill effects develop or persist.
Comments	None

**SECTION 5 — FIRE FIGHTING MEASURES**

Flash Point (closed cup)	None
Autoignition Temperature	Not Applicable
Extinguishing Media	Not Applicable
<u>Fire Fighting Procedures</u>	Not Applicable
Unusual Fire Hazards	None

**Hazardous Decomposition Products**

Thermal breakdown of this product during fire or very high heat conditions may evolve hazardous decomposition products: Carbon oxides and traces of incompletely burned carbon compounds; Nitrogen oxides; Chlorine compounds; Silicon dioxide; Formaldehyde.

**SECTION 6 — ACCIDENTAL RELEASE MEASURES**

Containment/Cleanup	Use absorbent material to collect and contain for salvage or disposal
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**SECTION 7 — HANDLING AND STORAGE**

Storage	Store below 100°F
Other Precautions	None

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## SECTION 8 — EXPOSURE CONTROLS / PERSONAL PROTECTION

### Engineering Controls

Local exhaust	Recommended
Recommended	Recommended

### Personal Protective Equipment for Routine Handling

Eyes	Use chemical worker's goggles.
Skin	Wash at mealtime and end of shift. Contaminated clothing and shoes should be cleaned before reuse. Rubber or plastic gloves are recommended.
Inhalation/Suitable Respirator	No special requirements. If methanol STEL is exceeded or predicted, use self-contained breathing apparatus (SCBA) or other supplied-air respirator.

### Personal Protective Equipment for spills

Eyes	Use chemical worker's goggles.
Skin	Wash at mealtime and end of shift. Contaminated clothing and shoes should be cleaned before reuse. Rubber or plastic gloves are recommended.
Inhalation/Suitable Respirator	No special requirements. If methanol STEL is exceeded or predicted, use self-contained breathing apparatus (SCBA) or other supplied-air respirator.
Precautionary Measures	Do not get in eyes. Avoid skin contact. Do not breathe vapor. Do not take internally.

Note: These precautions are for room temperature handling. Use at elevated temperature, or of aerosol/spray applications may require added precautions.

## SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical Form	Liquid
Colour	Colorless to pale yellow
Odour	None
Specific Gravity @ 25C	1.00
Viscosity	5.00 CST
Freezing/Melting Point	32°F / 0°C
Boiling Point	212°F / 100°C
Vapor Pressure @ 25C	Not Determined
Vapor Density	Not Determined
Solubility in Water	Not Applicable
pH	Not Applicable
Volatile content	0.75%

Note: The above information is not intended for use in preparing product specifications. Contact GERMGUARD before writing specifications.

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## SECTION 10 — STABILITY AND REACTIVITY

Chemical Stability	Stable
Hazardous Polymerization	Hazardous polymerization will not occur
Conditions to Avoid	None
Materials to Avoid	Oxidizing material can cause a reaction. Anionic materials, i.e. surfactants. Materials that would shift pH to 10.5
Comments	None

## SECTION 11 — TOXICOLOGICAL INFORMATION

### Acute Toxicology Data for Product

Complete information is not yet available

## SECTION 12 — ECOLOGICAL INFORMATION

### Environmental Fate and Distribution

No specific information is available

### Ecotoxicity

No specific information is available

### Persistence and Degradation

No specific information is available

#### Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	≤1	>1 and ≤100	>100
Acute Terrestrial Toxicity (mg/kg)	<-100	>100 and ≤ 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ATMA STP 1179, p. 34, 1993

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

## SECTION 13 — DISPOSAL CONSIDERATIONS

### RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? Yes

Federal Hazardous Waste Code

Characteristic Waste      Ignitable: N/A      Corrosive: N/A      Reactive: N/A      TCLP: N/A

Comments: State or local laws may impose additional regulatory requirements regarding disposal

N/A = Not Applicable

Call GERMGUARD, 1-905-602-1555, if additional information is required

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## SECTION 14 — REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29CFR 1910.1200

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

### EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances None

Section 304 CERCLA Hazardous Substances 000067561 0.75% Methyl alcohol

Section 312 Hazard Class Acute: N\* Chronic: N Fire: N Pressure: N Reactive: N

\* Y= Yes N = No

Section 313 Toxic Chemicals 000067561 0.75% Methyl alcohol

### Supplemental State Compliance Information

#### CAS Number

#### Wt.% Component

California

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer.

None Known

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer.

None Known Massachusetts

000067561	0.75%	Methyl alcohol
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New Jersey

027668526	0.84%	Octadecylaminodimethyl trimethoxysilylpropyl ammonium chloride
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002530872	0.16%	Chloropropyltrimethoxysilane
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000067561	0.75%	METHYL ALCOHOL; #1222
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Pennsylvania

027668526	0.84%	Octadecylaminodimethyl trimethoxysilylpropyl ammonium chloride
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002530872	0.16%	Chloropropyltrimethoxysilane
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000067561	0.75%	Methyl alcohol
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## SECTION 15 — OTHER INFORMATION

Prepared by GERMGUARD.

This information is offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate

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