



# Attack

**Disinfectant - Cleaner - Deodorizer  
Detergent - Fungicide  
(against Pathogenic fungi) - Mildewstat  
(on hard, non-porous, inanimate surfaces)**

## DESCRIPTION

**Attack** is a red, fragrance-free and phosphate-free formulation designed to provide effective cleaning, deodorizing, and disinfection in hospitals, nursing homes, hotels, schools, food processing plants, restaurants, athletic/recreation facilities, sports stadiums, amphitheatres, convention centers and other institutions where housekeeping is of prime importance in controlling cross-contamination from treated surfaces. **Attack**, when used as directed, is formulated to disinfect hard, non-porous, inanimate environmental surfaces such as floors, walls, metal surfaces, stainless steel surfaces, porcelain, glazed ceramic tile, plastic surfaces, bathrooms showers stalls, bathtubs and cabinets. For larger areas such as operating rooms and patient care facilities, **Attack** is designed to provide both general cleaning and disinfecting.

**Attack** deodorizes those areas which generally are hard to keep fresh smelling, such as garbage storage areas, empty garbage bins and cans, toilet bowls and other areas prone to odors caused by microorganisms. **Attack** controls mold, mildew and the odors they cause on hard surfaces. **Attack** is also an effective bactericide, fungicide and virucide in the presence of organic soil (5% blood serum).

**Attack** kills HIV-1 and HIV-2 (associated with AIDS) on pre-cleaned environmental surfaces previously soiled with blood or body fluids.

## SPECIAL INFORMATION

Canadian DIN #: 02247846

### **Guarantee**

Octyl decyl dimethyl ammonium chloride	6.510%
Dioctyl dimethyl ammonium chloride	3.255%
Didecyl dimethyl ammonium chloride	3.255%
Alkyl (50% C <sub>14</sub> , 40% C <sub>12</sub> , 10% C <sub>16</sub> ) dimethyl benzyl ammonium chloride	8.680%

Canadian Food Inspection Agency (CFIA) Approval for use in Food Plants

## DIRECTIONS

### **Disinfection of hospitals, food processing establishments, dairies, restaurants and bars:**

Dilute 4 ml of **Attack** per litre of water. Before using **Attack**, food products and packaging must be removed from the area and carefully protected. Apply this solution with a mop, cloth, sponge or trigger sprayer so as to wet all surfaces thoroughly. Allow to remain wet for a period of 10 minutes then remove all excess liquid. Prepare a fresh solution for each use. All food processing surfaces require rinsing with potable water. For heavily soiled areas, a pre-cleaning step is required.

### **Disinfection of toilet bowls:**

Remove gross filth or soils from surfaces with bowl brush. Add 4 ml of **Attack** to the bowl water and brush or swab the bowl completely using a scrub brush or toilet mop, making sure to get under the rim. Let stand 10 minutes and flush.

### **Deodorization of garbage storage areas, empty garbage bins and cans and pet areas:**

To deodorize, apply **Attack** as indicated under the Disinfection heading.



# Attack

**Disinfectant - Cleaner - Deodorizer  
Detergent - Fungicide  
(against Pathogenic fungi) - Mildewstat  
(on hard, non-porous, inanimate surfaces)**

### ***Fungicidal Activity:***

At the 4 ml per litre dilution, **Attack** demonstrates effective fungicidal activity against the pathogenic fungi *Trichophyton mentagrophytes* and *Candida albicans*.

### ***Mildewstat:***

To control mold and mildew (such as *Aspergillus niger*) and the odours they cause on pre-cleaned, hard, non-porous surfaces add 4 ml **Attack** per litre of water. Apply solution with a cloth, mop or sponge making sure to wet all surfaces completely. Let air dry. Prepare a fresh solution for each use. Repeat application at weekly intervals or when mildew growth reappears.

**Attack KILLS HIV-1 AND HIV-2 ON PRE-CLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS** in health care settings (Hospitals, Nursing Homes) or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with blood or body fluids, and in which the surfaces/objects likely to be soiled with blood or body fluids can be associated with the potential transmission of Human Immunodeficiency Virus Type 1 and Type 2 (HIV-1 and HIV-2).

### ***Special Instructions for Cleaning and Decontamination against HIV-1 and HIV-2 on Surfaces/Objects Soiled with Blood or Body Fluids:***

**Personal Protection:** When handling items soiled with blood or body fluids, use disposable latex gloves, gowns, masks, or eye coverings.

**Cleaning Procedures:** Blood or body fluids must be thoroughly cleaned from surfaces and objects before application of this product.

**Contact Time/Dilution:** At a use dilution of 4 mL per litre of water, **Attack** is effective against HIV-1 and HIV-2 in the presence of 5% blood serum with a 10 minute contact time.

**Disposal of Infectious Materials:** Blood or other body fluids should be autoclaved and disposed of according to local regulations for infectious waste disposal.

**Efficacy tests have demonstrated that this product is an effective Bactericide, and Virucide in water up to 400 ppm hardness (as CaCO<sub>3</sub>) in the presence of organic soil (5% blood serum). Efficacy tests have demonstrated that this product is an effective fungicide in water up to 200 ppm hardness (CaCO<sub>3</sub>) in the presence of organic soil (5% blood serum).**

### **DISINFECTION DATA:**

**Test Method:** AOAC Use Dilution

**Test Conditions:** 5% serum, 10 minute contact time, stainless steel carrier substrates, 400 ppm hard water, 20°C exposure temperature, 0.5 oz/US gallon dilution.



# Attack

**Disinfectant - Cleaner - Deodorizer  
Detergent - Fungicide  
(against Pathogenic fungi) - Mildewstat  
(on hard, non-porous, inanimate surfaces)**

**DISINFECTION DATA continued:**  
**Results:**

No. of Carriers

<u>Test Organism</u>	<u>Sample</u>	<u>Exposed</u>	<u>Positive</u>
<i>Staphylococcus aureus</i> (ATCC 6538)	A&B&C	60	1
<b><i>Salmonella choleraesuis</i> (ATCC 10708)</b>	<b>A&amp;B&amp;C</b>	<b>60</b>	<b>0</b>
<i>Pseudomonas aeruginosa</i> PRD-10 (ATCC 15442)	A&B&C	60	0
<b><i>Bordetella bronchiseptica</i> (ATCC 31437)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Corynebacterium ammoniagenes</i> (ATCC 6871)	A&B	10	0
<b><i>Enterobacter aerogenes</i> (ATCC 13048)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Enterobacter cloacae</i> (ATCC 23355)	A&B	10	0
<b><i>Enterobacter cloacae</i> (clinical isolate)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Enterococcus faecalis</i> (ATCC 19433)	A&B	10	0
<b><i>Enterococcus faecalis</i> (clinical isolate)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Fusobacterium necrophorum</i> (ATCC 27852)	A&B	10	0
<b><i>Klebsiella pneumoniae subsp. pneumoniae</i> (ATCC 13883)</b>	<b>A</b>	<b>10</b>	<b>0</b>
	<b>B</b>	<b>10</b>	<b>0</b>
<b>Cefazolin resistant <i>Acinetobacter</i> <i>baumannii</i> (Fairfax Hospital CI 02001)</b>	<b>A</b>	<b>10</b>	<b>0</b>
	<b>B</b>	<b>10</b>	<b>0</b>
Ceftriaxone resistant <i>Acinetobacter</i> <i>baumannii</i> (Fairfax Hospital CI 02001)	A	10	0
	B	10	0
<b>Tobramycin resistant <i>Acinetobacter</i> <i>baumannii</i> (Fairfax Hospital CI 02001)</b>	<b>A</b>	<b>10</b>	<b>0</b>
	<b>B</b>	<b>10</b>	<b>0</b>
Levofloxacin resistant <i>Acinetobacter</i> <i>baumannii</i> (Fairfax Hospital CI 02001)	A	10	0
	B	10	0
<b>Ampicillin resistant <i>Acinetobacter</i> <i>baumannii</i> (Fairfax Hospital CI 02001)</b>	<b>A</b>	<b>10</b>	<b>0</b>
	<b>B</b>	<b>10</b>	<b>0</b>
Ceftriaxone resistant <i>Acinetobacter</i> <i>baumannii</i> (Fairfax Hospital CI 02001)	A	10	0
	B	10	0
<b>Gentamicin resistant <i>Acinetobacter</i> <i>baumannii</i> (Fairfax Hospital CI 02001)</b>	<b>A</b>	<b>10</b>	<b>0</b>
	<b>B</b>	<b>10</b>	<b>0</b>
Ciprofloxacin resistant <i>Acinetobacter</i> <i>baumannii</i> (Fairfax Hospital CI 02001)	A	10	0
	B	10	0
<b>Bactrim resistant <i>Acinetobacter</i> <i>baumannii</i> (Fairfax Hospital CI 02001)</b>	<b>A</b>	<b>10</b>	<b>0</b>
	<b>B</b>	<b>10</b>	<b>0</b>
Community Associated Methicillin resistant <i>Staphylococcus aureus</i> (CA-MRSA)	A	10	0
	B	10	0
(NRS 384, Genotype US300)	C	10	0
<b><i>Staphylococcus aureus</i> (Methicillin resistant) (ATCC 33592)</b>	<b>A</b>	<b>10</b>	<b>0</b>
	<b>B</b>	<b>10</b>	<b>0</b>
<i>Enterococcus faecalis</i> (Vancomycin Resistant) (VRE) (ATCC 51575)	A	10	0
	B	10	0



# Attack

**Disinfectant - Cleaner - Deodorizer  
Detergent - Fungicide  
(against Pathogenic fungi) - Mildewstat  
(on hard, non-porous, inanimate surfaces)**

## EFFICACY DATA

### DISINFECTION DATA continued:

#### Results:

No. of Carriers

<u>Test Organism</u>	<u>Sample</u>	<u>Exposed</u>	<u>Positive</u>
<b><i>Escherichia coli</i> (ATCC 11229)</b>	<b>A&amp;B</b>	<b>60</b>	<b>0</b>
<i>Escherichia coli</i> (clinical isolate)	A&B	60	0
<b><i>Lactobacillus casei subsp. Rhamnosus</i> (ATCC 7469)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Listeria monocytogenes</i> (ATCC 35152)	A&B	10	0
<b><i>Pasteurella multocida</i> (ATCC 7707)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Proteus mirabilis</i> (ATCC 9921)	A&B	10	0
<b><i>Proteus mirabilis</i>(ATCC 25933)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Proteus vulgaris</i> (ATCC 13315)	A&B	10	0
<b><i>Salmonella enterica subsp. enterica serotype paratyphi B</i> (ATCC 8759)</b>	<b>A</b>	<b>10</b>	<b>0</b>
<i>Salmonella enterica subsp. enterica serotype paratyphi B</i> (ATCC 8759)	B	10	0
<i>Salmonella enterica subsp. enterica serotype pullorum</i> (ATCC 9120)	A	10	0
<i>Salmonella enterica subsp. enterica serotype pullorum</i> (ATCC 9120)	B	10	0
<b><i>Salmonella enterica subsp. enterica serotype typhi</i> (ATCC 6539)</b>	<b>A</b>	<b>10</b>	<b>0</b>
<i>Salmonella enterica subsp. enterica serotype typhi</i> (ATCC 6539)	B	10	0
<i>Salmonella enterica subsp. enterica serotype typhimurium</i> (ATCC 14028)	A	10	0
<i>Salmonella enterica subsp. enterica serotype typhimurium</i> (ATCC 14028)	B	10	0
<b><i>Serratia marcescens</i> (ATCC 8100)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Shigella dysenteriae</i> (ATCC 12180)	A&B	10	0
<b><i>Shigella flexneri Type 2b</i> (ATCC 12022)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Shigella sonnei</i> (ATCC 25931)	A&B	10	0
<b><i>Staphylococcus aureus subsp. aureus</i> (ATCC 33592)</b>	<b>A</b>	<b>60</b>	<b>0</b>
<i>Staphylococcus aureus</i> (clinical isolate)	B	60	0
<i>Staphylococcus aureus</i> (clinical isolate)	A&B	60	0
<b><i>Staphylococcus epidermidis</i> (clinical isolate)</b>	<b>A&amp;B</b>	<b>10</b>	<b>0</b>
<i>Staphylococcus epidermidis</i> (clinical isolate)	A&B	10	0
<i>Streptococcus pyogenes</i> Group A (ATCC 19615)	A&B	10	0
<b><i>Streptococcus pyogenes</i> (clinical-flesh eating strain, BIRD M3)</b>	<b>A</b>	<b>10</b>	<b>0</b>
<i>Streptococcus pyogenes</i> (clinical-flesh eating strain, BIRD M3)	B	10	0
<i>Xanthomonas maltophilia</i> (clinical isolate)	A&B	10	0
<b>Community Associated Methicillin Resistant <i>Staphylococcus aureus</i> (CA-MRSA) (NRS 123, Genotype USA400)</b>	<b>A</b>	<b>10</b>	<b>0</b>
<i>Staphylococcus aureus</i> (CA-MRSA) (NRS 123, Genotype USA400)	B	10	0
<i>Staphylococcus aureus</i> (CA-MRSA) (NRS 123, Genotype USA400)	C	10	0
<i>Salmonella enteritidis</i>	A&B	10	0
<i>Staphylococcus aureus</i> Vancomycin Intermediate Resistant (VISA) (HIP 29641)	A	10	0
<i>Staphylococcus aureus</i> Vancomycin Intermediate Resistant (VISA) (HIP 29641)	B	10	0

Disinfectant - Cleaner - Deodorizer  
Detergent - Fungicide  
(against Pathogenic fungi) - Mildewstat  
(on hard, non-porous, inanimate surfaces)

## EFFICACY DATA

### DISINFECTION DATA continued:

#### **Conclusion:**

Under the conditions of these investigations, **Attack** demonstrated disinfectant activity against *Staphylococcus aureus*, *Salmonella choleraesuis*, *Pseudomonas aeruginosa* PRD-10, *Bordetella bronchiseptica*, *Corynebacterium ammoniagenes*, *Enterobacter aerogenes*, *Enterobacter cloacae*, *Enterococcus faecalis*, *Enterococcus faecalis* (Vancomycin Resistant)(VRE), *Escherichia coli*, *Fusobacterium necrophorum*, *Klebsiella pneumoniae* subsp. *pneumoniae*, *Lactobacillus casei* subsp. *rhamnosus*, *Listeria monocytogenes*, *Pasteurella multocida*, *Proteus mirabilis* (ATCC 9921), *Proteus mirabilis* (ATCC 25933), *Proteus vulgaris*, *Salmonella choleraesuis* subsp. *choleraesuis* serotype *paratyphi B*, *Salmonella enterica* subsp. *enterica* serotype *pullorum*, *Salmonella enterica* subsp. *enterica* serotype *typhi*, *Salmonella enterica* subsp. *enterica* serotype *typhimurium*, *Serratia marcescens*, *Shigella dysenteriae*, *Shigella flexneri* Type 2b, *Shigella sonnei*, *Staphylococcus aureus* subsp. *aureus*, *Staphylococcus aureus* (Methicillin Resistant)(MRSA), *Staphylococcus aureus* (Vancomycin Intermediate Resistant (VISA), *Staphylococcus epidermidis*, *Streptococcus pyogenes* Group A, Cefazolin resistant *Acinetobacter baumannii*, Ceftriaxone resistant *Acinetobacter baumannii*, Tobramycin resistant *Acinetobacter baumannii*, Levofloxacin resistant *Acinetobacter baumannii*, Ampicillin resistant *Acinetobacter baumannii*, Ceftazidime resistant *Acinetobacter baumannii*, Gentamicin resistant *Acinetobacter baumannii*, Ciprofloxacin resistant *Acinetobacter baumannii*, Bactrim resistant *Acinetobacter baumannii*, *Staphylococcus aureus* Vancomycin Intermediate Resistant (VISA) (HIP 29641) Community Associated Methicillin resistant *Staphylococcus aureus* (CA-MRSA) (NRS 123 Genotype USA400), Community Associated Methicillin resistant *Staphylococcus aureus* (CA-MRSA) (NRS 384 Genotype USA300), *Salmonella enteritidis* and *Streptococcus pyogenes* (clinical-flesh eating strain, BIRD M3) according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a bactericide.

**Attack** also demonstrated disinfectant activity against the following antibiotic resistant clinical isolates: *Enterobacter cloacae*, *Enterococcus faecalis*, *Escherichia coli*, *Staphylococcus aureus*, *Staphylococcus epidermidis* and *Xanthomonas maltophilia*.

### VIRUCIDAL DATA:

#### Test Methods:

\*U.S. E.P.A. Pesticide Assessment Guidelines, Subdivision G: Product Performance, Section 91-2 (f), and Section 91-30, (d), (e), November 1982.

#### Test Conditions:

10 minute contact time, 5% serum, sterile glass petri dishes, 400 ppm hard water, 21-24°C exposure temperature, 0.5 oz/US gallon dilution.





# Attack

**Disinfectant - Cleaner - Deodorizer  
Detergent - Fungicide  
(against Pathogenic fungi) - Mildewstat  
(on hard, non-porous, inanimate surfaces)**

**VIRUCIDAL DATA cont:**

**Results:**

<u>Test Organism</u>	<u>Sample</u>		<u>Titer Reduction</u>	
*Avian Influenza A Virus (H3N2) (Avian Resortant) (ATCC VR-2072)	A	B	≥ 4.25 log	≥ 4.25 log
*Avian Influenza Virus, Type A (Turkey/WIS/66)(H9N2)	A	B	≥ 4.0 log	≥ 4.0 log
*Bovine rhinotracheitis, strain LA(ATCC VR-188)	A	B	≥ 5.0 log	≥ 5.0 log
*Canine Distemper, strain Lederle (ATCC VR-128)	A	B	≥ 6.25 log	≥ 6.25 log
*Feline Picornavirus, strain FRV (ATCC VR-649)	A	B	≥ 4.25 log	≥ 4.25 log
*Herpes Simplex type 1 (ATCC VR-260)	A	B	≥ 5.0 log	≥ 5.0 log
*Herpes Simplex type 2 (ATCC VR-734)	A	B	≥ 6.0 log	≥ 6.0 log
*Human Immunodeficiency Virus, HTLV-III <sub>RF</sub> , strain of HIV-1 (associated with AIDS)	A	B	≥ 3.5 log	≥ 3.5 log
*Human Immunodeficiency Virus type 2 (HIV-2), strain CBL-20	A	B	≥ 3.25 log	≥ 3.25 log
*Influenza A <sub>2</sub> , strain Hong Kong (ATCC VR-544)	A	B	≥ 4.25 log	≥ 4.25 log
*Pseudorabies, strain Aujeszky (ATCC VR-135)	A	B	≥ 5.25 log	≥ 5.25 log
*Vaccinia, strain WR (ATCC VR-119)	A	B	≥ 5.5 log	≥ 5.5 log
*Paramyxovirus	A	B	≥ 3.0 log	≥ 3.0 log

**VIRUCIDAL DATA cont:**

**Conclusion:**

Under the conditions of this investigation, **Attack**, was virucidal for Avian A Virus (H3N2), Avian Influenza Virus, Type A (H9N2), Bovine rhinotracheitis, Canine Distemper, Feline Picornavirus, Herpes Simplex type 1, Herpes Simplex type 2, Human Immunodeficiency Virus (HIV-1), Human Immunodeficiency Virus type 2 (HIV-2), Influenza A<sub>2</sub>, Pseudorabies, Vaccinia, and Paramyxovirus according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a virucide.

**Attack** has demonstrated effectiveness against Vaccinia and Influenza A virus and is expected to inactivate all Influenza A viruses including 2009 (H1N1) pandemic Influenza A virus.



# Attack

Disinfectant - Cleaner - Deodorizer  
Detergent - Fungicide  
(against Pathogenic fungi) - Mildewstat  
(on hard, non-porous, inanimate surfaces)

### MILDEW FUNGISTATIC DATA:

Test Method: Hard Surface Mildew Fungistatic Test  
Test Organism: *Aspergillus niger* (ATCC 6275)  
Test Conditions: 400 ppm hard water, ceramic tile carriers, 0.5 oz/US gallon dilution

### **Results:**

<u>Sample</u>	<u>No. of Exposed Tiles</u>	<u>No. of Tiles Showing Growth</u>
A	10	0
B	10	0
Control	10	10

### **Conclusion:**

Under the conditions of this investigation, **Attack**, was fungistatic for *Aspergillus niger* according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a fungistat. *Note:* The **Hard Surface Mildew Fungistatic Test** is accepted in Canada.

### FUNGICIDAL DATA:

Test Method: AOAC Fungicidal Activity of Disinfectants  
Test Conditions: 5% blood serum, 20°C exposure temperature, 200 ppm hard water, 0.5 oz/US gallon dilution

### **Results:**

<u>Test Organism</u>	<u>Exposure Time (min.) vs. Growth</u>			
	<u>Sample</u>	<u>5</u>	<u>10</u>	<u>15</u>
<i>Trichophyton mentagrophytes</i> (ATCC 9533)	A	+	0	0
	B	+	0	0
<i>Candida albicans</i> (ATCC 10231)	A	0	0	0
	B	0	0	0

### **Conclusion:**

Under the conditions of this investigation, **Attack**, was fungicidal for *Trichophyton mentagrophytes* and *Candida albicans* according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a fungicide. *Note:* The AOAC **Fungicidal Activity of Disinfectants** test method is accepted in Canada.

Maxim Technologies Inc.  
1607 Derwent Way  
Delta, BC V3M 6K8, Canada  
604-526-5655

**MATERIAL SAFETY DATA SHEET** Page 1 of 4

**SECTION I PRODUCT IDENTIFICATION**

**Product Trade Name:** Attack  
**Description:** Cleaner disinfectant (1:256)  
**Canada DIN 02247846**  
**Manufacturer:** Maxim Technologies Inc.  
**Effective Date:** Dec. 29, 2014

**SECTION II COMPOSITION IDENTIFICATION**

Ingredient	Approx. Wt. %	SARA-313	CAS Number
Di-(C8-10)-Alkyl Dimethyl Ammonium Chlorides	10.0-15.0		68424-95-3
Alkyl Dimethyl Benzyl Ammonium Chlorides	5.0-10.0		68424-85-1
Ethanol	1.0-5.0		64-17-5
Alcohol Ethoxylate	1.0-5.0		68439-46-3
Tetrasodium Salt of Ethylenediaminetetraacetic Acid	1.0-5.0		64-02-8

None of the other components in this mixture contribute significantly to the hazards associated with this component. All pertinent hazard information has been provided in this MSDS, per the requirements of the U.S. Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, and the Canadian Workplace Hazardous Materials Identification System Standards (CPR 4).

**SECTION III HAZARD IDENTIFICATION**

**Route of Entry:** Skin, eye, inhalation.  
**Eyes:** Direct contact may cause irritation.  
**Skin:** Prolonged or repeated exposure to skin may cause dryness.  
**Inhalation:** May cause irritation.  
**Ingestion:** Ingestion may cause gastro-intestinal or abdominal discomfort.  
**Effects of Chronic Exposure:** Prolonged or repeated exposure may cause skin irritation or dermatitis, respiratory disorder.  
**Effects of Acute Exposure to Product:** Product exposure may irritate or cause burning sensation to skin and eyes. Inhaling vapors or mists may irritate mucous membranes. Prolonged inhalation exposure may cause headaches, nausea, etc. Ingestion may cause gastro-intestinal and abdominal discomfort.

**SECTION IV FIRST AID MEASURES**

**Ingestion:** Give plenty of clean water to drink to dilute product. Do not induce vomiting. Call a Physician.  
**Skin Contact:** Wash with clean water and rinse well.  
**Eye Contact:** Flush with clean water for 15 minutes.  
**If irritation occurs or persists, get medical attention.**

**SECTION V FIRE FIGHTING MEASURES**

**Extinguishing Media:** Dry chemical, foam, carbon dioxide, water fog.  
**Special Firefighting Procedures:** Firefighters should wear full fire-fighting turn-out gear (full Bunker gear) including NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.  
**Unusual Fire / Explosion Hazards:** Vapors may form explosive mixture with air.



Maxim Technologies Inc.  
1607 Derwent Way  
Delta, BC V3M 6K8, Canada  
604-526-5655

## MATERIAL SAFETY DATA SHEET Page 2 of 4

### SECTION VI ACCIDENTAL RELEASE MEASURES

**Environmental Protection Precautions:** Keep away from sewers and out of natural waters.

**Steps To Be Taken In Case Material Is Released Or Spilled:** Wear protective equipment. Dike and contain large spills. Pump spills into an approved waste container. For small spills, soak up with a suitable absorbent such as clay, soil or commercially available absorbents, and then dispose of into an approved waste container. Keep away from sewers and out of natural waters.

### SECTION VII HANDLING AND STORAGE

**Precautions To Be Taken In Handling And Storage:** Use good industrial hygiene. Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing sprays or mists. Store in a cool, dry place away from incompatibles. Keep container closed when not in use. Do not mix with any other chemicals. Store at temperatures below 30°C (86°F) and keep from freezing.

### SECTION VIII EXPOSURE CONTROLS / PERSONAL PROTECTION

**Respiratory Protection:** If product is misted or sprayed, or used in a confined area, use a NIOSH/MSHA approved dust/mist respirator.

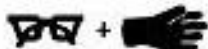
**Ventilation: Local Exhaust:** Good general ventilation or local exhaust ventilation for spraying and misting in confined areas.

**Protective Gloves:** Natural or butyl rubber, nitrile or neoprene gloves.

**Eye Protection:** Chemical goggles, safety goggles or face shield.

**Other Protective Equipment:** Long sleeve coveralls. Eye wash recommended in the immediate work area.

HMIS Protection  
Group B



### SECTION IX PHYSICAL DATA

Appearance:	Clear red liquid.
Odor:	No added odor.
pH:	7.0-8.0
Boiling Point:	>93.3°C
Melting Point:	N/D
Flash Point:	54.4°C
Explosive Properties:	None
Oxidizing Properties:	None
Vapor Pressure:	N/D
Vapor Density (Water Vapor=1):	N/D
Specific Gravity (Water=1):	1.025 @ 20°C
Evaporation Rate (Water=1):	N/D
Solubility in Water:	Soluble

### SECTION X STABILITY AND REACTIVITY INFORMATION

<b>Stability:</b>	Stable under normal storage conditions.
<b>Incompatibility:</b>	Strong oxidizing and reducing agents, acids.
<b>Hazardous Polymerization:</b>	Will not occur.
<b>Hazardous Decomposition Products:</b>	Oxides of carbon and nitrogen, ammonia vapors.

Maxim Technologies Inc.  
1607 Derwent Way  
Delta, BC V3M 6K8, Canada  
604-526-5655

**MATERIAL SAFETY DATA SHEET**      Page 3 of 4

**SECTION XI    ECOLOGICAL INFORMATION**

This product does not exhibit the properties of ignitability, corrosivity, reactivity or environmentally persistent toxicity.

This product does not adversely inhibit a diverse aquatic range of organisms (animal, plant, bacteria) as required by the EcoLogo™ program under CCD-146.

**SECTION XII    TOXICOLOGICAL PROPERTIES**

**Di-(C8-10)-Alkyl Dimethyl Ammonium Chlorides  
Alkyl Dimethyl Benzyl Ammonium Chlorides**

LD<sub>50</sub> (oral rat): 426 mg/kg  
LC<sub>50</sub> (rat): 20,000 ppm/10H

**Ethanol**

LD<sub>50</sub> (oral rat): 7060 mg/kg.  
LD<sub>50</sub> (oral mouse): 919 mg/kg.

**Alcohol Ethoxylate**

LD<sub>50</sub> (oral rat): 1376 mg/kg  
LD<sub>50</sub> (dermal rabbit): >2 g/kg

**Tetrasodium Salt of Ethylenediaminetetraacetic Acid**

LD<sub>50</sub> (oral rat): 3030 mg/kg.  
LD<sub>50</sub> (dermal rabbit): >5000 mg/kg  
LC<sub>50</sub>: >100 mg/L

**Threshold Limit Value:**

None known.

**Carcinogenicity:**

None known.

**Mutagenicity:**

None known.

**Reproductive Toxicity:**

None known.

**Teratogenicity:**

None known.

**Sensitization:**

None known.

**Irritancy of Product:**

May be corrosive to skin and eyes. Irritating to respiratory system.

**SECTION XIII    DISPOSAL CONSIDERATIONS**

**Recommended Waste Disposal Methods:** Reuse if possible. Otherwise dispose recovered material in accordance with all local, Provincial or Federal regulations.

**SECTION XIV    TRANSPORT INFORMATION**

This product is classified as "Non-flammable, Non-hazardous, Not Restricted" for Transport purposes.

**United Nations Number:** N/A

**ADR/RID Class:**

**IATA Class:**

**IMO Class:**

**IMDG Code:**

**Marine Pollutant classification:** Not classified as a Marine Pollutant.

Maxim Technologies Inc.  
1607 Derwent Way  
Delta, BC V3M 6K8, Canada  
604-526-5655

**MATERIAL SAFETY DATA SHEET**      Page 4 of 4

**SECTION XV    REGULATORY INFORMATION**

**HAZARD RATING INFORMATION**

4=Extreme  
3=High  
2=Moderate  
1=Slight  
0=Insignificant

HMIS	
3	Health
2	Flammability
0	Reactivity
B	Personal

A=Gloves, B=Goggles & Gloves  
C=Goggles, Gloves and Apron

**SECTION XV    REGULATORY INFORMATION – CONTINUED**

Canada

WHMIS classification – N/A

**SECTION XVI    OTHER INFORMATION**

**SARA: (USA)**      Section 302 – This product does not contain materials listed in Appendix A or B as an Extremely Hazardous Substance.  
Sections 311/312 – Materials listed in 29 CFR 1910, Subpart Z are identified in Section III. None are known or suspected carcinogens listed by the National Toxicology Program, International Agency for Research on Cancer, or OSHA.  
Section 313 – No ingredients listed.

**USER'S RESPONSIBILITY**

It is the responsibility of the user to provide a safe workplace, using the health and safety information contained herein as a guide. **Maxim Technologies Inc.** will accept no liability for damages or loss incurred from the improper handling and use of this product.

**PREPARATION INFORMATION**

The information provided in the Material Safety Data Sheet has been obtained from current sources and is believed to be reliable.

PREPARED BY: Technical Service/Regulatory Division

LAST UPDATE: Dec. 29, 2014