



# Steramine®

**Disinfectant-Sanitizer-Deodorizer-Fungicide-Mildewstat-Virucide\***

## Directions for Sanitizing Food Contact Surfaces in Public Eating Places, Dairy Processing Equipment and Food Processing Equipment, Utensils, Regulated by 40CFR sec 180.940 (a):

1. Scrape, flush or presoak articles (whether mobile or stationary) to remove gross food particles and soil.
2. Thoroughly wash articles with an appropriate detergent or cleaner.
3. Rinse articles thoroughly with potable water.
4. Sanitize articles using a solution of 1 ounce Steramine® per 4 gallons of water (or equivalent use dilution)(200 ppm active). Articles that can be immersed in solution must remain in solution for 60 seconds. Articles too large for immersing should be thoroughly wetted by rinsing, spraying or swabbing.
5. Remove immersed items from solutions and make certain all surfaces are adequately drained and air dried. No potable water rinse allowed. Thoroughly drain non-immersed items and air dry.

## Wisconsin State Division of Health, Directions for Eating Establishments (Not applicable in California)

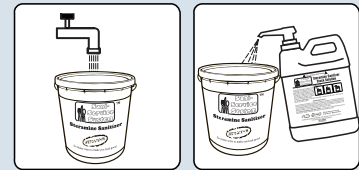
1. Scrape and pre-wash utensils and glasses whenever possible.
2. Wash with a good detergent or compatible cleaner.
3. Rinse with potable water.
4. Sanitize in a 1 ounce solution of Steramine® per 4 gallons water (200 ppm active quaternary) (or equivalent use dilution). Immerse all utensils for at least two minutes or for contact time specified by governing sanitary code.
5. Place sanitized utensils on a rack or drain board to air-dry.
6. Prepare fresh sanitizing solution at least daily or when visibly soiled or diluted.

NOTE: A clean potable water rinse following sanitization is not permitted under Section HSS 196.13 of the Wisconsin Administrative Code.



### For Stock Solution:

Use ST-9956 Steramine® Stock Solution Bottle to prepare a Sanitizer Stock Solution that can be converted for use in a spray bottle for sanitizing above floor and food contact surfaces too large to sanitize by immersion. Fill this bottle to ridge with water and add contents of one (1) pack of ST-718 Steramine Sanitizer concentrate. Empty and rinse bottle before refilling.



### For Soaking Wiping Cloths:

1. Fill ST-9961 Steramine® Sanitizer Bucket to indicated line.
2. Add one pump stroke (1 ounce) from ST-9956 Stock Solution Bottle.
3. Soak clean wiping cloths between use.



### For Spray Cleaning:

The Steramine® Sanitizer Spray Bottle ST-9959 is for use only with SANI-SERVICE SYSTEM Steramine Sanitizer. Fill this bottle with water to the uppermost ridge (see diagram) on the neck of the bottle and add one pump (1 ounce) from your ST-9956 Sanitizer Stock Solution Bottle. For sanitizing food contact surfaces or equipment too large for immersion, spray prewashed objects thoroughly. Allow sanitized surface to drain and/or air dry. Do not rinse. Empty and rinse bottle before refilling. See carton for precautionary and additional use instructions.

Steramine® Sanitizer							
Application Size	Steramine® 32 Ounce Spray Bottle ST-9959	Steramine® Sanitizer Bucket ST-9961	3 Gallon Sink	4 Gallon Sink	8 Gallon Sink	16 Gallon Sink	Steramine® 64-ounce Sanitizer Stock Solution Bottle & Pump* ST-9956
Steramine® Sanitizer / Disinfectant	*Use 1 stroke of ST-9956 Steramine® Stock Solution Pump to make 32 ounces of sanitizer solution	*Use 1 stroke of ST-9956 Steramine® Stock Solution Pump to make 32 ounces of sanitizer solution	ST-767 0.75 fl. oz.	ST-722 1fl. oz.	ST-723 2 fl. oz	ST-718 4 fl. oz.	ST-718 and ST-906 4 fl. oz.

**Disinfection Performance in Hospitals, Dental Offices, Nursing Homes and other Health Care Institutions:**

Add 4 ounces of Steramine® to 5 gallons of water (or equivalent use dilution) (625 ppm active quaternary). Treated surfaces must remain wet for 10 minutes. Please consult the Steramine® Efficacy Summary for performance data against specific pathogens and consult the Steramine® product case label for specific usage instructions.

**General Disinfection Performance, Non-Medical (Schools, Restaurants, Food Service, beverage and food processing plants):** Add 3 ounces of Steramine® to 5 gallons of water (or equivalent use dilution)(469 ppm active quaternary). Treated surfaces must remain wet for 10 minutes. Please consult the Steramine® Efficacy Summary for performance data against specific pathogens and consult the Steramine® product case label for specific usage instructions.



**Virucidal\* Performance:** At 4 ounces per 5 gallons use level (or equivalent use dilution)(625 ppm active quaternary). Steramine® was evaluated in the presence of 5% serum with a 10 minute contact time. Please consult the Steramine® Efficacy Summary for performance data against specific pathogens and consult the Steramine® product case label for specific usage instructions.

**Disinfection/Fungicide/Virucide\* of Poultry/Turkey Equipment, Swine Quarters, Animal Quarters and Kennels:**

Remove all animals and feeds from premises, vehicles and enclosures such as coops and crates. Remove all litter, droppings and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with soap or detergent and rinse with water. Use 4 ounces of Steramine® per 5 gallons of water (or equivalent use dilution)(625 ppm active quaternary). Saturate surfaces with the recommended disinfecting solution for a period of 10 minutes. Immerse all halters, ropes and other types of equipment used in handling or restraining animals as well as forks, shovels, and scrapers used for removing litter and manure.

**\*KILLS HCV AND HBV ON PRECLEANED ENVIRONMENTAL SURFACES/OBJECTS PREVIOUSLY SOILED WITH BLOOD/BODY FLUIDS** in health care settings or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with body fluids and in which the surfaces/objects likely to be soiled with blood or body fluids can be associated with the potential for transmission of Human Immunodeficiency Virus Type 1 (associated with AIDS), Hepatitis C virus (HCV) and Hepatitis B virus (HBV).

**“SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATION AGAINST HIV-1, HCV AND HBV ON SURFACES/OBJECTS SOILED WITH BLOOD/BODY FLUIDS.”**

**Personal Protection:** Specific barrier protection items to be used when handling items soiled with blood or body fluids are disposable latex gloves, gowns, masks, or eye coverings.

**Cleaning Procedure:** Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of the disinfectant.

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

**Contact Time:** For HBV and HCV, leave surfaces wet for 10 minutes with 4 ounces of Steramine® per 5 gallons of water (or equivalent use dilution)(625 ppm active quaternary). Efficacy tests have demonstrated that Steramine® is an effective bactericide, virucide and fungicide in the presence of organic soil (5% blood serum).

Steramine® Disinfectant						
Application Size	16 ounce spray bottle	32 ounce spray bottle	1 gallon mop bucket	2 gallon mop bucket	4 gallon mop bucket	5 gallon Quik Tank
<b>Steramine® Sanitizer / Disinfectant</b>	Use ST-718 in the 5 gallon Quik Tank	Use ST-718 in the 5 gallon Quik Tank	ST-722 <sup>1</sup>	ST-723 <sup>2</sup>	ST-718 <sup>3</sup>	ST-718 <sup>3</sup>

<sup>1</sup> Each Steramine® ST-722 1 fl. oz. pack makes 1.67 or 1.25 gallons depending on application. See case label.

<sup>2</sup> Each Steramine® ST-723 2 fl. oz. pack makes 3.33 or 2.50 gallons depending on application. See case label.

<sup>3</sup> Each Steramine® ST-718 4 fl. oz. pack makes 5.67 or 5.00 gallons depending on application. See case label.

# MATERIAL SAFETY DATA SHEET

## SECTION 1 – PRODUCT/MANUFACTURER'S IDENTITY

Product Name: Steramine®

Formula ID Number: SL10

Synonyms: ST-718, ST-722, ST-723, ST-767, ST-906  
Steramine® Disinfectant/Sanitizer

MSDS File Name: STERAMINE

EPA Reg #: 10324-63-3640

DOT Hazard Class: 8, Corrosive

DOT Shipping Name: UN1903, disinfectants, liquid, corrosive,  
n.o.s. (quaternary ammonium compound), 8, PGIII, Ltd. Qty.

Hazard Label: Ltd Qty Diamond

NSF Certified: None

Company: Stearns Packaging Corporation  
4200 Sycamore Avenue (53714)  
PO Box 3216  
Madison, WI 53704-0216  
800-655-5008

Fax: 608-246-5149

Website: www.stearnspkg.com

**Emergency Contact: CHEM-TEL, 800-255-3924**

Concentrate		In Dilution		HAZARD RATING
0	Flammability	0	0	
2	Health	1	1	
0	Reactivity	0	0	
None	Special Hazard	None	None	

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

Abbreviation Key: N.A.=Not Applicable,  
N.D.=Not Determined

## SECTION 2 – HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

CHEMICAL IDENTIFICATION	CAS NO.	HAZARD	PEL(ppm)	TLV(ppm)	%(Optional)
Water	7732-18-5				
Alkyl dimethyl benzyl ammonium chloride (C <sub>12-18</sub> )	68391-01-5	Corrosive/Disinfectant	N.D.	N.D.	5%
Alkyl dimethyl ethylbenzyl ammonium chloride(C <sub>12-14</sub> )	85409-23-0	Corrosive/Disinfectant	N.D.	N.D.	5%

SARA Section 313 Title III Notification Required: No

## SECTION 3 – PHYSICAL DATA

Appearance and Odor: Clear liquid Benzaldehyde odor	Solubility in water: Complete Boiling Point: N.D. VOC Content: < 13%	Vapor Pressure (mm Hg): N.D. Vapor Density (Air=1): Heavier than air Evaporation Rate (Water=0.3): N.D.	pH (Concentrate): 6 – 8 pH (1% Solution): N.D. Specific Gravity: 0.994
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## SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method: None when heated to 100°C–Cleveland Open Cup	Special Fire Fighting Procedures: Firefighters should wear full protective clothing including self-contained breathing apparatus. Cool the fire-exposed containers with spray.
Flammable Limits LEL: N.D. UEL: N.D.	Unusual Fire & Explosion Hazards: Combustion products are toxic. Irritating and toxic gases or fumes may be released during a fire.
Extinguishing Media: Any agent suitable for surrounding fire.	

## SECTION 5 – REACTIVITY DATA

Chemical Stability: Stable: <input checked="" type="checkbox"/> Unstable: <input type="checkbox"/>	Hazardous Polymerization: May Occur <input type="checkbox"/> Will Not Occur <input checked="" type="checkbox"/>
Conditions to Avoid: Keep away from heat and strong oxidizing agents.	Hazardous Decomposition or By-Products: Carbon monoxide, carbon dioxide, hydrogen chloride vapors.
Incompatibility (Materials to Avoid): Strong oxidizing agents (may result in fire), reducing agents, anionic soaps and detergents.	

## SECTION 6 – HEALTH HAZARD DATA/FIRST AID PROCEDURES

Health Hazards (Acute and Chronic): Corrosive. Hazards to humans and domestic animals. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through the skin. Do not get into eyes, on skin, or on clothing.	<u>Emergency and First Aid Procedures:</u> <b>IF ON SKIN OR CLOTHING:</b> Take off contaminated clothing and wash clothing before reuse. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. <b>IF IN EYES:</b> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. <b>IF SWALLOWED:</b> Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Signs and Symptoms of Exposure: May cause irritation or burn to the eyes, skin, gastrointestinal tract, and respiratory system. Exposures may cause irritation and defatting of the skin, and may result in permanent injury to eyes including blindness. Mists and vapors can irritate the throat and respiratory tract. High vapor concentrations may cause central nervous system effects. Symptoms may include headaches, dizziness, and drowsiness. Ingestion can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.	<b>NOTE TO PHYSICIAN:</b> Probable mucosal damage may contraindicate the use of gastric lavage.
Medical Conditions Aggravated by Exposure: No data available	
Carcinogenicity: IARC Monographs? No data available	
NTP? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> OSHA Regulated? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

## SECTION 7 – PREVENTATIVE AND CONTROL MEASURES

Ventilation: Provide adequate local exhaust (explosion proof).	Steps to be Taken if Material is Spilled or Released: Remove ignition sources. Wear respirator. Small spills may be mopped up, flushed away with water or absorbed on some absorbent material and incinerated. Large spills should be contained; the material then moved into containers and disposed of by approved methods for hazardous wastes.
Skin Protection: Use impervious gloves (rubber or neoprene). Wear suitable protective clothing. Wash hands thoroughly with soap and water after handling.	Waste Disposal: Comply with all local, state and federal regulations. Do not reuse empty container. Wrap and discard in trash (or recycle).
Eye Protection: Wear chemical goggles. Use face shield around splashing.	Handling and Storage: Store in original container in areas inaccessible to small children. Do not store on side. Avoid creasing or impacting of side walls.
Respiratory Protection: If exposure limits are exceeded or if irritation is experienced, NIOSH approved respiratory protection should be worn. Ventilation and other forms of engineering controls are often the preferred means for controlling chemical exposures. Respiratory protection may be needed for non-routine or emergency situations.	
Other Precautions: Keep out of the reach of children. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Eye wash fountain and emergency showers are recommended.	

## SECTION 8 – OTHER REGULATORY INFORMATION

Toxicity:	
Acute Oral LD <sub>50</sub> :	>2,500 mg/kg in male and female rats
Acute Dermal LD <sub>50</sub> :	>2,000 mg/kg in male and female rabbits
Primary Skin:	Corrosive
Primary Eye:	Corrosive

rev 12/17/13

This MSDS data relates only to the material designated and does not relate to its use with any other material or process. The data is believed to be accurate. However, since use conditions vary and are outside our control, Stearns Packaging Corporation makes no warranties, expressed or implied, and assumes no liability for failure to follow directions and safety precautions.



# Steramine®

**Disinfectant-Sanitizer-Deodorizer-Fungicide-Mildewstat-Virucide\* with...**  
Organic Soil Tolerance for Hospitals, Nursing Homes, Hotels & Motels, Institutions, Industries, Schools, Restaurants, Food Handling & Process Areas, Federally-Inspected Meat & Poultry Plants, Bar and Kitchen Use.

*Steramine*® is an effective disinfectant, sanitizer and deodorizer with fungicidal, mildewstatic and virucidal\* performance.

Use *Steramine*® to sanitize food-processing equipment, food utensils, dishes, silverware, and glasses in restaurants, taverns, hotels and institutions. Following the use of *Steramine*® as a sanitizer on previously cleaned hard food-contact surfaces, a potable water rinse is not allowed.

In hospitals, use *Steramine*® for the general disinfection of floors, walls, countertops, bathing areas, lavatories, tables, chairs, garbage pails and other hard non-porous surfaces. Apply *Steramine*® with cloth, mop or mechanical spray device.

Be sure to follow label directions and dilute to the proper strength for the application. To be certain you are getting the right strength for the job, Stearns recommends checking the use solution with quaternary test strips.



*Steramine*®  
ST-718, 4 fl. oz. pack

<b>STERAMINE® Efficacy Summary</b>					
<b>SANITIZER • DISINFECTANT • DEODORIZER</b>					
<small>Food Contact Sanitizer (No. Rinse)</small>					
<small>All 0.25 ounces per gallon (1 ounce per 4 gallons) (250 ppm) Steramine® is an effective food contact surface sanitizer eliminating 99.999% of the following bacteria in 60 seconds in 500 ppm hard water (calculated as CaCO<sub>3</sub>) according to the ADAC Germicidal and Detergent Sanitizing Action of Disinfectants test.</small>					
<small>(Testing is performed per the AOAC method (AOAC Germicidal and Detergent Sanitizers) on 3 separate lots, one of which must be &gt; 60 days old, against both Escherichia coli and Staphylococcus aureus. Acceptable results must demonstrate a 99.999% reduction in the number of test microorganisms within 30 seconds.)</small>					
ORGANISM	ATCC #	CARRIER POPULATION	SAMPLE	30 SECOND KILL	60 SECOND KILL
Escherichia coli	ATCC #11229	7.47 Log <sub>10</sub>	A	7.47 Log <sub>10</sub>	7.47 Log <sub>10</sub>
			B	7.47 Log <sub>10</sub>	7.47 Log <sub>10</sub>
			C	7.47 Log <sub>10</sub>	7.47 Log <sub>10</sub>
Staphylococcus aureus	ATCC #6538	7.0 Log <sub>10</sub>	A	7.0 Log <sub>10</sub>	7.0 Log <sub>10</sub>
			B	7.0 Log <sub>10</sub>	7.0 Log <sub>10</sub>
			C	7.0 Log <sub>10</sub>	7.0 Log <sub>10</sub>

Consult the *Steramine*® Efficacy Summary for performance data against specific pathogens.

ST-No.	Case UPC No. Mfg. No. 071206	Each UPC No. Mfg. No. 071206	Case Size	Case Weight	Cases/Pallet
ST-767	076700	N/A	100 x 0.75 fl. oz. packs	5.5 pounds	100
ST-722	007223	N/A	144 x 1 fl. oz. packs	12 pounds	75
ST-723	007230	N/A	72 x 2 fl. oz. packs	11 pounds	75
ST-718	007186	N/A	36 x 4 fl. oz. packs	11 pounds	75
ST-906	009067	109064	KIT (Contains 6 ST-718, 1 ST-9956, 1 ST-9959, and 1 ST-9961)	4 pounds	75
ST-1266	009470	003331	4 x 1 gallon	36 pounds	48
ST-2010	003850	N/A	5 gallon pail	47 pounds	36
ST-9956	099565	N/A	1 x 64 fl. oz. Stock Solution Bottle w/ pump	0.75 pounds	100
ST-9959	099594	N/A	12 x 32 fl. oz. empty spray bottles	3.0 pounds	40
ST-9961	099617	N/A	(1) 5-qt. Sanitizer/Disinfectant bucket	1.5 pounds	48

**ACTIVE INGREDIENTS:**

Alkyl (C<sub>14</sub> 60%, C<sub>16</sub> 30%, C<sub>12</sub> 5%, C<sub>18</sub> 5%)  
dimethyl benzyl ammonium chloride..... 5.0%  
Alkyl (C<sub>12</sub> 68%, C<sub>14</sub> 32%)  
dimethyl ethylbenzyl ammonium chloride..... 5.0%

**INERT INGREDIENTS:**

90.0%  
**TOTAL:** 100.0%



EPA Reg. No. 10324-63-3640  
EPA Est. No. 3640 WI-01

**Chemical Characteristics**

**Abrasive** .....no  
**Appearance** ..... clear liquid  
**Biodegradable** ..... yes  
**Corrosive (concentrate)** .....no  
**EPA Registered** ..... yes  
**Fragrance** ..... alcohol odor  
**Non-Flammable** ..... yes  
**pH (concentrate)** .....6.0 - 8.0  
**Phosphate-free** ..... yes



**STEARNS PACKAGING CORPORATION**

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