



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

April 30, 2015

Ms. Kimberly Hensley  
Regulatory Specialist  
Heritage Systems, Inc.  
2471 Solano Avenue; Suite 141  
Napa, CA 94558

Subject: Notification per PRN 98-10 – Typo Correction  
Product Name: **HSI Sodium Hypochlorite Solution 12.5%**  
EPA Registration Number: **81456-1**  
Application Date: March 17, 2015  
Decision Number: 502783

Dear Ms. Hensley:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Antimicrobials Division (AD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

If you have any questions, you may contact Killian Swift at 703-308-6346 or via email at [Swift.Killian@epa.gov](mailto:Swift.Killian@epa.gov).

Sincerely,

A handwritten signature in blue ink that reads "Wanda J. Fuller, for".

Demson Fuller, Product Manager 32  
Regulatory Management Branch II  
Antimicrobials Division (7510P)  
Office of Pesticide Programs

# HSI SODIUM HYPOCHLORITE SOLUTION (12.5%)

ACTIVE INGREDIENT: SODIUM HYPOCHLORITE..... 12.5%  
OTHER INGREDIENTS ..... 87.5%  
TOTAL ..... 100.0%

## KEEP OUT OF REACH OF CHILDREN DANGER - PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

For emergency information, please contact: 800.535.5053 (InfoTrac)  
Have the product container or label with you when calling a poison control center or doctor, or going for medical treatment.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER: Highly Corrosive.** Causes skin and eye damage. May be fatal if swallowed. Do not get in eyes, on skin, or on clothing. Wear goggles or safety glasses and rubber gloves when handling this product. Irritating to nose and throat. Avoid breathing dust. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until strong odors have dissipated.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. 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 (NDPES) 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.

## NOTIFICATION

81456-1

**PHYSICAL OR CHEMICAL HAZARDS:** The applicant has certified that no changes, other than those reported to the Agency, have been made to the product since the date of the last notification. Mixing this product with other chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (e.g. urine, feces, etc.) will release unknown gases which is irritating to eyes, lungs and mucous membranes. This notification by letter dated: 04/30/2015

### STORAGE AND DISPOSAL

Do not contaminate food or feed by storage, disposal or cleaning of equipment

**PESTICIDE STORAGE:** Store in a cool dry area, away from direct sunlight and heat to avoid deterioration. In case of spill, flood areas with large amounts of water.

**PESTICIDE DISPOSAL:** Pesticide wastes may be acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinseate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. For 5 gallon containers: allow to drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinseate into application equipment or a mix tank or store rinseate for later use or disposal. Allow to drain for 10 seconds after flow begins to drip. Repeat this procedure two more times. For containers over 5 gallons: Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinseate into application equipment or a mix tank or store for later use or disposal. Repeat this procedure two more times. For onsite refillable tanks: Refillable container. This tank is the property of Heritage Systems, Inc. Heritage Systems is responsible for refilling and maintaining this container. Refill this container with sodium hypochlorite 12.5% ONLY. Do not reuse this container for any other purpose. Cleaning this container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

### DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

**NOTE:** This product degrades with age. Use a chlorine test kit and increase dosage, as necessary, to obtain the required level of available chlorine.

### AGRICULTURAL USES

**POST-HARVEST PROTECTION:** - Potatoes can be sanitized after cleaning and prior to storage by spraying with a sanitizing solution at a level of 1 gallon of sanitizing solution per ton of potatoes. Thoroughly mix 1 oz. HSI Solution to 2 gallons of water to obtain 500 ppm available chlorine.

**FOOD EGG SANITIZATION:** - Thoroughly clean all eggs. Thoroughly mix 2 oz. HSI Solution with 10

gallons of warm water to produce a 200 ppm available chlorine solution. The sanitizer temperature should not exceed 130 degrees F. Spray the warm sanitizer so that the eggs are thoroughly wetted. Allow the eggs to thoroughly dry before casing or breaking. Do not apply a potable water rinse. The solution should not be re-used to sanitize eggs.

**FRUIT & VEGETABLE WASHING:** - Thoroughly clean all fruits and vegetables in a wash tank. In a second wash tank, thoroughly mix 5 oz. HSI Solution in 200 gallons of water to make a sanitizing solution of 25 ppm available chlorine. After draining the first wash tank, submerge fruit or vegetables for 2 minutes in the second wash tank containing the recirculating sanitizing solution. Spray rinse vegetables with the sanitizing solution prior to packaging. Rinse fruit with potable water only prior to packaging.

**MEAT AND POULTRY PLANTS:** - Authorized by USDA for use in Federally inspected meat and poultry plants. Chlorine may be present in meat and poultry plant processing water at concentrations up to 5 ppm calculated as available chlorine. Also, chlorine may be present in poultry chiller intake water, and in carcass wash water at concentrations up to 50 ppm calculated as available chlorine. Chlorine must be dispensed at a constant and uniform level and the method or system must be such that a controlled rate is maintained. Thoroughly mix 1.15 oz. HSI Solution in 200 gallons of water to make a sanitizing solution of 5 ppm available chlorine, or 11.5 oz. in 200 gallons of water for 50 ppm available chlorine.

#### **SANITATION OF NONPOROUS FOOD CONTACT SURFACES**

**RINSE METHOD** - A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to ensure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 oz. **HSI Solution** with 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 oz. **HSI Solution** with 10 gallons of water to provide approximately 200 ppm available chlorine by weight.

Clean equipment surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes. If solution contains less than 50 ppm available chlorine, as determined by a suitable test kit, either discard the solution or add sufficient product to re-establish a 200 ppm residual. Do not rinse equipment with water after treatment and do not soak equipment overnight.

Sanitizers used in automated systems may be used for general cleaning but may not be re-used for sanitizing purposes.

**IMMERSION METHOD** - A solution of 100 ppm available chlorine may be used in the sanitizing solution if a chlorine test kit is available. Solutions containing an initial concentration of 100 ppm available chlorine must be tested and adjusted periodically to ensure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 oz. **HSI Solution** with 10 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 oz. **HSI Solution** with 10 gallons of water to provide approximately 200 ppm available chlorine by weight.

Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 2 minutes and allow the sanitizer to drain. If solution contains less than 50 ppm available chlorine, as determined by a suitable test kit, either discard the solution or add sufficient product to re-establish a 200 ppm residual. Do not rinse equipment with water after treatment.

Sanitizers used in automated systems may be used for general cleaning but may not be re-used for sanitizing purposes.

**FLOW/PRESSURE METHOD** - Disassemble equipment and thoroughly clean after use. Assemble equipment in operating position prior to use. Prepare a volume of a 200 ppm available chlorine sanitizing solution, equal to 110% of volume capacity of the equipment, by mixing **HSI Solution** in a ratio of 2 oz. product with 10 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 10 minutes to ensure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

Clean/IN-PLACE METHOD - Thoroughly clean equipment after use. Prepare a volume of a 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing **HSI**

**Solution** in a ratio of 2 oz. product with 10 gallons of water. Pump solution through the system until full flow is obtained at all extremities, the system is completely filled with the sanitizer and all air is removed from the system. Close drain valves and hold under pressure for at least 10 minutes to ensure contact with all internal surfaces. Remove some cleaning solution from drain valve and test with a chlorine test kit. Repeat entire cleaning/sanitizing process if effluent contains less than 50 ppm available chlorine.

**SPRAY METHOD** - Pre-clean all surfaces after use. Use a 200 ppm available chlorine solution to control bacteria, mold or fungi and a 600 ppm solution to control bacteriophage. Prepare a 200 ppm sanitizing solution of sufficient size by thoroughly mixing **HSI Solution** in a ratio of 2 oz. product with 10 gallons of water. Prepare a 600 ppm solution by thoroughly mixing **HSI Solution** in a ratio of 6 oz. product with 10 gallons of water. Use spray equipment which can resist hypochlorite solutions. Always empty and rinse spray/log equipment with potable water after use. Thoroughly spray all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment, rinse all surfaces treated with a 600 ppm solution with a 200 ppm solution.

#### **SANITATION OF POROUS FOOD CONTACT SURFACES**

**RINSE METHOD** - Prepare a sanitizing solution by thoroughly mixing 6 oz. **HSI Solution** with 10 gallons of water to provide 600 ppm available chlorine by weight. Clean surfaces in the normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 2 minutes and allow the sanitizer to drain. Following this, prepare a 200 ppm sanitizing solution by thoroughly mixing 2 oz. **HSI Solution** with 10 gallons of water and rinse all surfaces with this 200 ppm solution. Do not rinse with water and do not soak equipment overnight.

**IMMERSION METHOD** - Prepare a sanitizing solution by thoroughly mixing, in an immersion tank, 6 oz. **HSI Solution** with 10 gallons of water to provide 600 ppm available chlorine by weight. Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution, maintaining contact for at least 2 minutes and allow the sanitizer to drain. Following this, prepare a 200 ppm sanitizing solution by thoroughly mixing 2 oz. **HSI Solution** with 10 gallons of water and rinse all surfaces with this 200 ppm solution. Do not rinse with water and do not soak equipment overnight.

**SPRAY METHOD** - Pre-clean all surfaces after use. Prepare a 600 ppm available chlorine sanitizing solution of sufficient size by thoroughly mixing **HSI Solution** in a ratio of 6 oz. product with 10 gallons of water. Use spray equipment which can resist hypochlorite solutions. Always empty and rinse spray equipment with potable water after use. Thoroughly spray all surfaces until wet, allowing excess sanitizer to drain. Vacate area for at least 2 hours. Prior to using equipment, rinse all surfaces with a 200 ppm available chlorine solution. Prepare a 200 ppm sanitizing solution by thoroughly mixing 2 oz. **HSI Solution** with 10 gallons of water.

**SWIMMING POOL WATER DISINFECTION** - For a new pool or spring start-up, super-chlorinate with 52 -104 oz. **HSI Solution** for each 10,000 gallons of water to yield 5 - 10 ppm available chlorine by weight. Check the available chlorine level with a test kit. Adjust and maintain pool water pH to between 7.2 - 7.6. Adjust and maintain pool water alkalinity to between 50 - 100 ppm.

To maintain the pool, add manually or by a feeder device, 11 oz. **HSI Solution** for each 10,000 gallons of water to yield an available chlorine residual between 0.6 - 1.0 ppm by weight. Stabilized pools should maintain a residual of 1.0 - 1.5 ppm available chlorine. Test the pH, available chlorine residual and alkalinity of the water frequently with appropriate test kits. Water treatment frequency will depend upon the temperature and number of swimmers. Re-entry into treated pools is prohibited above 4 ppm due to risk of bodily harm.

Every 7 days, or as necessary, super-chlorinate the pool with 52 -104 oz. **HSI Solution** for each 10,000 gallons of water to yield 5 - 10 ppm available chlorine by weight. Check the level of available chlorine with a test kit. Do not reenter pool until the chlorine residual is between 1.0 - 3.0 ppm.

At the end of the swimming pool season or when water is to be drained from the pool, chlorine must be allowed to dissipate from treated pool water before discharge. Do not chlorinate the pool within 24 hours prior to discharge.

**WINTERIZING POOL** - While water is still clear & clean, add 3 oz. **HSI Solution** per 1000 gallons, while filter is running, to obtain a 3 ppm available chlorine residual, as determined by a suitable test kit. Cover pool, prepare heater, filter and heater components for winter by following manufacturers' instructions.

**SPAS, HOT-TUBS, IMMERSION TANKS, ETC.** - Add 5 oz. **HSI Solution** per 1000 gallons of water to obtain a free chlorine concentration of 5 ppm, as determined by a suitable test kit. Adjust and maintain pool water pH to between 7.2 - 7.8. Re-entry into treated Spas is prohibited above 5 ppm due to risk of bodily harm. Some oils, lotions, fragrances, cleaners, etc. may cause foaming or cloudy water as well as reduce the efficiency of the product.

After each use, shock treat with 8 oz. **HSI Solution** per 500 gallons of water to control odor and algae. During extended periods of disuse, add 3 oz. **HSI Solution** daily per 1000 gallons of water to maintain a 3 ppm chlorine concentration.

**HYDROTHERAPY TANKS** - Add 1 oz. **HSI Solution** per 1000 gallons of water to obtain a chlorine residual of 1 part per million (ppm), as determined by a suitable chlorine test kit. Tank should not be entered until the chlorine residual is below 3 ppm. Adjust and maintain the water pH to between 7.2 and 7.6. Operate tank filter continuously. Drain tank weekly, and clean before refilling.

#### **DISINFECTION OF DRINKING WATER**

**PUBLIC SYSTEMS** - Mix 1 oz. **HSI Solution** per 100 gallons of water. Begin feeding this solution with a hypochlorinator until a free available chlorine residual of at least 0.2 ppm and no more than 0.6 ppm is attained throughout the distribution system. Check water frequently with a chlorine test kit. Bacteriological sampling must be conducted at a frequency no less than that prescribed by the National Primary Drinking Water Regulations. Contact your local Health Department for further details.

#### **Manufactured by:**

**Heritage Systems, Inc.**  
2471 Solano Ave., Suite 141  
Napa, CA 94558  
REV 031715

For more information, please call: 707.258.0553

EPA Reg. No.: 81456-1

EPA Est. No.: 87736-CA-001

**NET CONTENTS:** (1 - 350 gallons & Bulk)