

**BACTI-CHLOR**

ACTIVE INGREDIENT – Sodium Hypochlorite	11.0%
OTHER INGREDIENTS	89.0%
<b>TOTAL</b>	<b>100.0%</b>

**KEEP OUT OF REACH OF CHILDREN****DANGER****FIRST AID**

Call a poison control center or doctor immediately for treatment advice. Have the product container or label with you when you call a poison control center or doctor, or when going for treatment.

<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.</li> <li>• Remove contact lenses, if present, after the first five minutes, then continue rinsing eye.</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> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>

**HOT LINE NUMBER**

You may contact the Poison Center at 1-800-222-1222 for emergency medical treatment information.

**NOTE TO PHYSICIAN**

Probable mucosal damage may contraindicate the use of gastric lavage

See other precautions on this label.

Pioneer Americas LLC  
Houston, Texas 77002  
[phone number]

EPA REG. NO 37982-38

EPA EST. NO.: [Est. No. to be inserted]

Net Contents: xxx Gallons

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DEC - 6 2005

Page 1 of 7

37982-38

**MASTER LABEL**

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER:** Corrosive, may cause severe skin and eye irritation or chemical burns to broken skin. Causes eye damage. Wear safety glasses or goggles and rubber gloves when handling this product. Wash after handling. Avoid breathing vapors. Vacate poorly ventilated areas as soon as possible. Do not return until strong odors have dissipated.

*[Use the following when drip irrigation/rice seed directions are on the label.]*

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- A. Goggles or face shield
- B. Long-sleeved shirt and long pants
- C. Waterproof gloves
- D. Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

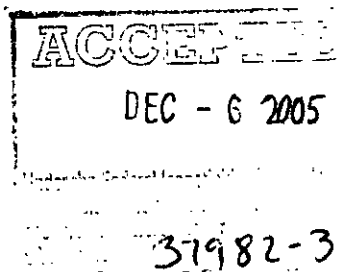
*[In accordance with PR notice 95-1, the Environmental Hazards statement is only required for containers 5 gallons and larger.]*

### ENVIRONMENTAL HAZARDS

The pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless in accordance with the requirements of National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharges. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

### PHYSICAL AND CHEMICAL HAZARDS

**STRONG OXIDIZING AGENT:** Use only according to label directions. Mixing this product with gross filth, such as feces, urine, etc. or with ammonia, acids, detergents or other chemicals will release hazardous gases which are irritating to eyes, lungs, and mucous membranes.



## 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.

For a copy of the complete usage instructions, contact Pioneer or your Pioneer distributor or dealer.

### SANITIZATION 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 insure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 oz. of this product with 8 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 oz. of this product with 8 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 reestablish 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 insure that the available chlorine does not drop below 50 ppm. Prepare a 100 ppm sanitizing solution by thoroughly mixing 1 oz. of this product with 8 gallons of water. If no test kit is available, prepare a sanitizing solution by thoroughly mixing 2 oz. of this product with 8 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 reestablish 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 200 ppm available chlorine sanitizing solution equal to 110% of volume capacity of the equipment by mixing the product in a ratio of 2 oz. of product with 8 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 2 minutes to insure 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 the product in a ratio of 2 oz. of product with 8 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 insure 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 FOG 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 the product in a ratio of 2 oz. product with 8 gallons of water. Prepare a 600 ppm solution by thoroughly mixing the product in the ratio of 3 oz. product with 4 gallons of water. Use spray or fogging equipment which can resist hypochlorite solutions. Always empty and rinse spray/fog equipment with potable water after use. Thoroughly spray or fog 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.

ACCEPTED  
DEC - 6 2005  
37982-38

## AGRICULTURAL USES

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirement for the protection of agricultural workers on farms, forests, nurseries, greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Workers Protection Standard.

The Restricted-Entry Interval (REI) is 0 days when using this product.

There are no posting or notification requirements when using this product.

Personal Protective Equipment should be worn as described under the "Precautionary Statements" section of this label.

**DRIP IRRIGATION** – This product is to be applied through drip/trickle sprinkler irrigation systems only for agricultural crops and only where this manner of use will not cause crop damage. The plugging of drip irrigation emitters is a universal problem that will cause a lack of water application uniformity. One of the primary causes of emitter plugging is the proliferation of bacteria and algae within the lines and emitters of a drip irrigation system. Bacti-Chlor is an additive that controls both algae and bacterial growth resulting in a uniform distribution of water. The amount of Bacti-Chlor required for injection into the irrigation water to supply a desired dosage in ppm can be calculated by the following equation:

$$I = (0.006) (\text{ppm desired}) (\text{system flow rate in gallons per minute}) / 0.11$$

With a chlorine test kit, determine the residual chlorine at the emitter farthest from the injection pump. The residual chlorine should be between 1.0 ppm and 2.0 ppm with a water pH of 7.2 - 7.6.

**NOTE:** This calculation, when applied to clean water which is free of amine nitrogen and organic nutrients, will give a result close to the actual product injection rate required. In actual practice, however, contaminants in the water may consume the product such that the available chlorine concentration is less than expected from the calculation. To correctly establish the product dose setting required, it is necessary to measure the available chlorine at the end of the treated increment in the field and adjust the dose setting until the desired available chlorine concentration is obtained. Only

DEC - 6 2005

37982-38

experience can establish the actual injector settings required to provide the desired level of available chlorine at the end of the farthest lateral.

Injection should be started during irrigation, near the end of the irrigation sequence, but early enough to establish the desired available chlorine concentration throughout the system being treated. Apply the product upstream of the filter to help keep the filter clean. Allow sufficient time to achieve a steady reading.

If the irrigation water has high levels of nutrients causing bacterial, algae, or other bio-fouling that reduces system performance, continuous use of this product may be necessary. The recommended level of free residual chlorine for continuous feed is 1 to 2 ppm, measured at the end of the farthest lateral using a good quality test kit for free chlorine (also called "free residual" or "free available" chlorine).

Periodic shock treatments at a higher chlorine rate of up to 20 ppm free residual may be appropriate where bacteria and/or algae clogging and build-up are not managed by maintaining a continuous residual. The frequency of the shock application depends upon the frequency and extent of bio-clogging.

Bringing concentrations to as much as 100 ppm total available chlorine, is recommended for reclaiming low-volume irrigation systems if clogged by algae and bacterial slimes. Deliver 100 ppm in the drip system and monitor the free chlorine residual at the end of the farthest lateral. As soon as it is established that the free residual reading is between 10 and 20 ppm, shut the system down and leave it undisturbed for up to 24 hours. Then flush all sub-mains and laterals with fresh water. Sodium Hypochlorite will not dissolve or remove scale or inorganic sediment fouling.

**DO NOT** apply when fertilizers, herbicides, and insecticides are being injected since they will consume the available chlorine and may produce toxic reaction products.

Shut down the feed as soon as the irrigation water is switched to the next irrigation sector. Leave the treated water residing in the section which has been shut down.

If its source water is connected to a potable water system, the irrigation water system must contain a functional reduced-pressure-principle back-flow prevention device approved by your state Department of Health, appropriately situated to prevent contamination of the potable water system. This device must be certified operational by an agent authorized for making certifications by the state Department of Health.

**SENSITIVE PLANT SPECIES** - Certain plants, including various species of trees, flowers, shrubs, agronomic crops, fruits and vegetables are adversely affected by chlorinated irrigation. The use of this product can impact the growth, appearance and health of the plants.

Begonias, geraniums and other ornamental plant species are known to be sensitive to continuous chlorination at levels of 1-2 ppm free chlorine. Plant species such as tomato,

lettuce, broccoli, and petunia are sensitive to periodic chlorination levels of 10-20 ppm free chlorine.

If uncertain of a plant's tolerance, consult an agronomist or a support agency such as your local University Extension Service or your local agent of the US Department of Agriculture or use an alternate method to remove bio-fouling from the irrigation system.

**CONTROLLING SEEDBORNE BAKANAE DISEASE OF RICE:** To aid in surface sterilization of rice seed for prevention of bakanae disease *Fusarium fujikuroi* [syn. *F. moniliforme*] or *Gibberella fujikuroi*, mix 3 gallons of this product per 110 gallons of water to make a 3000 ppm available chlorine solution. Mix solution thoroughly, then apply to seeds. Soak the seeds for two hours, then drain solution and replace with fresh water. Continue seed soaking and draining as usual. Do not apply undiluted product directly to seed.

Alternatively, make a 1500 ppm available chlorine solution by mixing 1.5 gallons of this product with 110 gallons of water. Mix solution thoroughly, then apply to seeds. Soak and drain seed as usual. No rinsing is required. Do not apply undiluted product directly to seed.

Prepare a fresh solution for each batch of seed. Do not use treated seeds for food or feed.

## STORAGE AND DISPOSAL

Store this product in a cool dry area, away from direct sunlight and heat to avoid deterioration. In case of spills, flood areas with large quantities of water. If container required a deposit, return it to Pioneer or its distributor for a refund. If container is a "no deposit" container, then triple rinse and discard. Product or rinsate, which can not be used, should be diluted with water and discarded in a sanitary sewer. Do not contaminate food or feed by storage, disposal or cleaning of equipment.

