

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



Office of Pesticide Programs

October 17, 2006

Erik Balling
California Water Services
700 W. Elmn
Coalinga, CA 93210

Subject: Drip Clear
EPA Registration No. 81987-1
Application Date: July 19, 2006
Receipt Date: July 24, 2006

Dear Mr. Balling:

The following amendment submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is accepted with conditions.

Conditions

1. Align the Ingredient Statement as follows:

Active Ingredient:	
Chlorine	99.5%
Other Ingredients.	<u>0.5%</u>
Total	100.0%
Available Chlorine: XX%	

2. Add headings to routes of exposure in the "First Aid" section as follows:

IF INHALED:
IF IN EYES:
IF ON SKIN:

3. Correct the typographical error for the word **matter** under the "Physical and Chemical Hazards" statement.

General Comments

A stamped copy of the labeling accepted with conditions is enclosed. Submit one copy of your final printed labeling before distributing or selling the product bearing the revised labeling.

Should you have any questions or comments concerning this letter, please call Wanda Henson at (703) 308-6345.

Sincerely,

Emily H. Mitchell
Product Manager - Team 32
Regulatory Management Branch II
Antimicrobials Division (7510P)

Drip Clear

(Liquefied Gas Under Pressure)
NON-FLAMMABLE

This product is intended for use in agricultural drip/trickle/sprinkler irrigation systems for the control of algae, bacteria and slime build up. This product is to be applied under the supervision of the registrant of this product. All persons applying this product must be instructed in safety procedures and proper use of application equipment.

ACTIVE INGREDIENT – Chlorine	99.5%
OTHER INGREDIENTS	0.5%
TOTAL	100%

KEEP OUT OF REACH OF CHILDREN



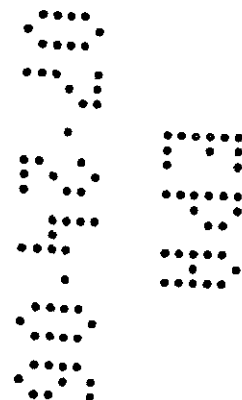
DANGER POISON FATAL IF INHALED LIQUID CAUSES SEVERE BURNS

California Water Services
700 W. Elm
Coalinga, CA 93210

EPA REG. NO 81987-1

ACCEPTED
with COMMENTS
EPA Letter Dated:
OCT 17 2006

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No. 81987-1



PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS:

DANGER: Fatal if inhaled or absorbed through skin. Corrosive. Causes irreversible eye damage and skin burns. Do not breath vapors or get in eyes, on skin or clothing. Wear goggles, protective clothing and rubber gloves. Wash hands thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothes before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

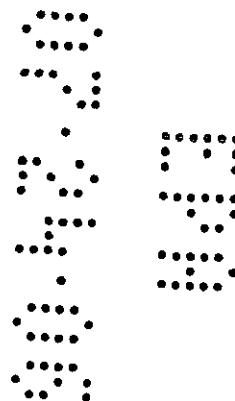
Personal Protective Equipment: Applicators and other handlers must wear long-sleeved shirts, long pants, shoes, and socks.

Spill or Leakage: Under normal use and normal conditions, protective eyewear, respirator, or gloves are not required. In the case of a spill or leak, handlers must wear chemical-resistant gloves (nitrile or butyl) and full-face canister-style respirator with a canister approved for chlorine (MSHA/NIOSH APPROVAL NUMBER PREFIX tc-13F). The possibility of a leak or spill is always present, a respirator meeting the specification above and gloves are required for anyone entering the leak or spill area. In the event of a spill or leak do not breath vapors; leave poorly ventilated areas as soon as possible. Do not return to the area without proper safety equipment or until the area is ventilated or strong odors have dissipated.

Environmental Hazards: This pesticide is toxic or highly toxic to fish and aquatic invertebrates. Do not discharge this product into lakes, ponds, oceans, streams or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit. Permission must be obtained in writing prior to any discharge from the NPDES. Do not discharge effluent containing this product into sewer systems without with out first obtaining permission from the local sewage treatment plant authority. For guidance on approved discharge methods contact you State Water Board or Regional Office of the EPA.

PHYSICAL AND CHEMICAL HAZARDS: Chlorine is a non-flammable gas, liquefied, under pressure. Do not drop container. Do not heat container. Keep away from intense heat or open sunlight. If container is stored or used in an open area the container must be covered to reduce the amount of direct sunlight on the container. Corrosive to most metals in the presence of moisture.

Mix only with water according to label directions. Mixing with other chemicals (ammonia, acids, detergents, etc.) or organic ~~water~~ (urine, feces, etc.) will result in a release of chlorine gas, which is irritating to eyes, lungs, and mucous membranes.



First Aid Treatment

Have product container or label with you when you call a poison control center or doctor or when going for treatment.

IF INHALED:

If product is inhaled move the person to fresh air. If the person is not breathing, call 911 then give artificial respiration, preferably mouth to mouth, if possible. Call the poison control center or a doctor for further treatment advice.

IF IN EYES:

If product comes in contact with a persons eyes, hold eyes open and rinse slowly with water for 15 – 20 minutes. If the person is wearing contacts remove the contacts after the first 5 minutes of flushing, then continue flushing the eyes. Call the poison control center or a doctor for further treatment advice.

IF ON SKIN:

If product comes in contact with a persons skin, take off all contaminated clothing. Rinse the area of skin with water for 15 – 20 minutes. Call the poison control center or a doctor for further treatment advice.

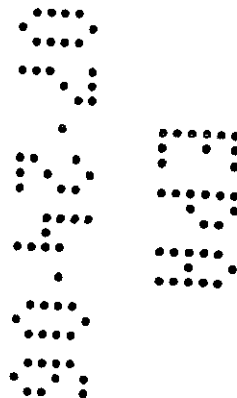
DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

Refer to the "chlorine Manual" published by The Chlorine Institute, Inc. for instructions on the required product use and safety procedures. Before using this product, handlers must be trained how to appropriately use respirators that conform to OSHA requirements (described in 29 DFR Part 1910.134) and how to appropriately handle and use chlorine. Use this product in accordance with the practices specified by all applicable product labeling and the "Chlorine Manual" published by The Chlorine Institute, Inc. Use only in well ventilated areas.

Before using "Drip Clear" (liquefied Gas Under Pressure), please read, understand and observe all the precautionary statements.

Chlorine demand will change depending on the water temperature and purity. The following chart gives the necessary pounds per day to obtain a specific residual in clean water.



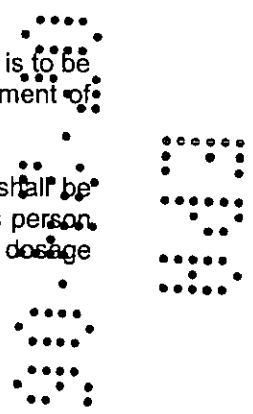
Flow	GPM	900	1125	1350	1575	1800	2025	2250	2475	2700	2925	3150	3375	3600	3825	4050
	CFS	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9
I N J E C T I O N R A T E	1 PPM	11	14	16	19	22	24	27	30	32	35	38	41	43	46	49
	2 PPM	22	27	32	38	43	49	54	59	65	70	76	81	86	92	97
	3 PPM	32	41	49	57	65	73	81	89	97	105	113	122	130	138	146
	4 PPM	43	54	65	76	86	97	108	119	130	141	151	162	173	184	195
	5 PPM	54	68	81	95	108	122	135	149	162	176	189	203	216	230	243
	6 PPM	65	81	97	113	130	146	162	178	195	211	227	243	259	276	292
	7 PPM	76	95	113	132	151	170	189	208	227	246	265	284	303	322	340
	8 PPM	86	108	130	151	173	195	216	238	259	281	303	324	346	367	389
	9 PPM	97	122	146	170	195	219	243	268	292	316	340	365	389	413	438
	10 PPM	108	135	162	189	216	243	270	297	324	351	378	405	432	459	486
	11 PPM	119	149	178	208	238	268	297	327	357	386	416	446	476	505	535
	12 PPM	130	162	195	227	259	292	324	357	389	422	454	486	519	551	584
	13 PPM	141	176	211	246	281	316	351	386	422	457	492	527	562	597	632
	14 PPM	151	189	227	265	303	340	378	416	454	492	530	567	605	643	681
	15 PPM	162	203	243	284	324	365	405	446	486	527	567	608	649	689	730
	16 PPM	173	216	259	303	346	389	432	476	519	562	605	649	692	735	778
	17 PPM	184	230	276	322	367	413	459	505	551	597	643	689	735	781	827
	18 PPM	195	243	292	340	389	438	486	535	584	632	681	730	778	827	875
	19 PPM	205	257	308	359	411	462	513	565	616	667	719	770	821	873	924
	20 PPM	216	270	324	378	432	486	540	594	649	703	757	811	865	919	973
	21 PPM	227	284	340	397	454	511	567	624	681	738	794	851	908	965	1021
	22 PPM	238	297	357	416	476	535	594	654	713	773	832	892	951	1011	1070
	23 PPM	249	311	373	435	497	559	621	684	746	808	870	932	994	1057	1119
	24 PPM	259	324	389	454	519	584	649	713	778	843	908	973	1038	1102	1167
	25 PPM	270	338	405	473	540	608	676	743	811	878	946	1013	1081	1148	1216
50 PPM	540	676	811	946	1081	1216	1351	1486	1621	1756	1892	2027	2162	2297	2432	
100 PPM	1081	1351	1621	1892	2162	2432	2702	2972	3243	3513	3783	4053	4323	4594	4864	

This product is to be applied through agricultural drip/trickle/sprinkler irrigation systems only where the agricultural crops will not be damaged by the application. Chlorine gas contains 99.5% or higher chlorine content. While using chlorine gas is considered the least expensive method of applying chlorine, it may be hazardous if used without following the direction of trained service personnel. This product should only be used under the supervision of the registrant of this pesticide product. This product should not be used on a chlorine injection system that was not installed or is not currently maintained by the registrant of this product.

Chlorine gas should only be applied using a vacuum regulator and ejector device rated for use with chlorine. The vacuum regulator and ejector device to be used must meet the specifications for approval set by The Chlorine Institute Inc. Do not attempt to use a venturi ejector device (i.e. Mazi Ejector) intended for other purposes such as fertigation. Crop damage, hazardous equipment failure or a lack of product effectiveness can result from using equipment not intended for chlorine injection.

DO NOT connect any irrigation system, including greenhouse systems into which chlorine is to be added, to a public water system unless safety devices prescribed by the state Department of Health, safe Drinking Water Branch, for cross connection protection are in place.

A person who has received training on the proper operation of the irrigation system shall be responsible for the start up, shut down and adjustments to the chlorination system. This person shall also make the necessary changes to the injection rate to ensure proper chlorine dosage under this label.



CHLORINE DOSAGE RATES

Continuous chlorination is recommended for irrigation water containing high levels of bacteria, algae or other bio-fouling that reduces irrigation system performance. Chlorine should be injected at a dosage that will yield 1 ppm to 2 ppm of free residual chlorine. Residuals should be taken at the end of the furthest lateral from the injection point with a chlorine residual test kit. An increase or decrease of chlorine dosage will need to be made periodically on the chlorinator to achieve/maintain, a free residual chlorine yield of 1 ppm to 2 ppm as weather and water conditions change.

Periodic shock treatments at a higher chlorine dosage of 10 ppm to 20 ppm should be performed once per month during the irrigation season. One day after the shock treatment the irrigator should open the ends of the irrigation lines to flush out any algae, bacteria or other build up which may have been clogging the lines.

Superchlorination which is increasing the chlorine dosage concentrations to between 50 and 100 ppm is recommended if systems are clogged by algae, bacteria or root intrusion. After the proper chlorine dosage has been set on the chlorinator inject the chlorine until the desired residual is achieved at the furthest lateral from the injection point. Once the desired residual is achieved turn off the water to the system for 24 hours. The high concentration of chlorine will vigorously attack organic material and will help clear the blockage. After the high concentration has set in the system for 24 hours flush the irrigation system until there is no longer free chlorine residual in the system.

Chlorine Dosage Formula:

Chlorine Gas Injection Rate (lbs/day)	=	Irrigation System Flow Rate (gpm)	x	Desired Chlorine Dosage (ppm)	x	0.012
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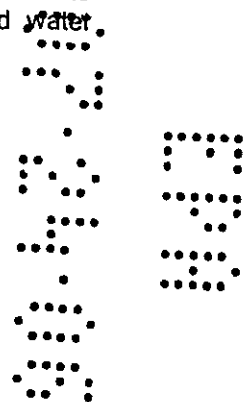
Example:

36 lbs./day	=	1500 gpm	x	2.0 ppm	X	0.012
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36 pounds of chlorine per day injected into an irrigation system with a water flow rate of 1500 gpm will result in a dosage of 2.0 ppm.

In this example 36 pounds of chlorine per day may or may not result in a free chlorine residual of 2.0 ppm at the furthest lateral from the injection point. The amount of free chlorine residual at the furthest lateral is affected by the demand for chlorine created by impurities in the water. If the demand for chlorine is greater than 2.0 ppm there will not be any residual chlorine at the furthest end of the lateral. In this situation increase the "Desired chlorine Dosage" in the formula by 1 ppm, let the irrigation water run long enough to allow the chlorine to reach the furthest end of the drip/trickle/sprinkler irrigation system, then test for a free chlorine residual. Continue increasing the dosage by 1 ppm until a free chlorine residual of 1 to 2 ppm is achieved at the furthest lateral from the injection point.

An increase or decrease of chlorine dosage will need to be made periodically on the chlorinator to achieve/maintain, a free residual chlorine yield of 1 ppm to 2 ppm as weather and water conditions change.



CHLORINE INJECTION PROCEDURE

START UP Begin the chlorine injection at the beginning of the irrigation set. Inject chlorine continuously at a dose that yields 1 ppm – 2 ppm at the furthest lateral from the injection point during the entire irrigation set. Inject the chlorine up stream of the filter to help keep the filter clean.

DO NOT inject chlorine while fertilizers, herbicides, and insecticides are being injected because they will consume the chlorine and may produce toxic reaction products.

SHUT DOWN Turn off the cylinder valve on the chlorine container before stopping the water flow to the drip/trickle/sprinkler irrigation system. Allow the chlorine gas inside of the chlorinator to be evacuated and then turn off the water to the drip/trickle/sprinkler irrigation system. Leave the chlorinated water in the drip/trickle/sprinkler irrigation system; do not flush the drip/trickle/sprinkler irrigation system after chlorine injection has stopped. The chlorinated water will continue to oxidize any bacteria, algae or slime build up in the lines while the drip/trickle/sprinkler irrigation system is not in use.

EQUIPMENT REQUIREMENTS

Drip/trickle/sprinkler irrigation systems connected to a potable water system must have a functional reduced pressure back-flow device installed up stream of all chemical injection points. The device must be approved for use by your state Department of Health to prevent the contamination of the potable water system. An agent authorized by the state Department of Health must certify the operation of the back-flow device annually.

The chlorine vacuum ejector must incorporate a functional check valve to prevent water flowing into the chlorine regulator. Water entering the chlorine regulator can cause damage to the regulator and may cause the regulator to not function properly.

The water supply and water discharge valves for the chlorine vacuum ejector must either incorporate a normally closed solenoid valve or a manual shut off valve. The purpose of the valves is to prevent water flowing through the vacuum ejector when chlorine is not being injected into the drip/trickle/sprinkler irrigation system.

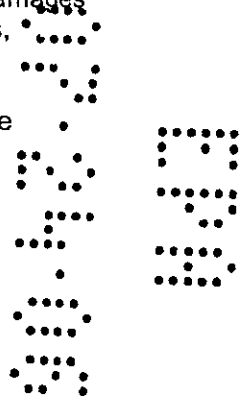
WARRANTY AND DISCLAIMER

California Water Services warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the risks referred to therein.

California Water Services makes no other express or implied warranty of fitness or merchantability or any other express or implied warranty is made regarding performance, stability or otherwise warranty.

In no case shall California Water Services be liable for consequential, special or indirect damages resulting from the use or handling of this product including, but not limited to, loss of profits, business reputation, or customers; labor cost, or other expenses incurred.

In no case shall California Water Services be liable for the consequences resulting from the misuses or mishandling of this product.



California Water Services offers this product and the buyer and user accept it subject to the foregoing conditions of sale and warranty which may be varied only by agreement in writing signed by an authorized representative of California Water Services.

