

21164-3

12-24-2003

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

December 24, 2003

Roger E. Etherington
Vulcan Performance Chemicals
1200 Urban Center Drive
Birmingham, AL 35242

Subject: Dura Klor
EPA Registration No. 21164-3
Application Date: September 26, 2003
Receipt Date: October 6, 2003

Dear Mr. Etherington:

The following amendment, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable with the conditions listed below.

- Revise the First Aid statement per PR Notice 2001-1

Conditions

1. Revise the Ingredient statement as follows:

<i>Active Ingredient:</i>	
Sodium Chlorite.....	8.3%
Other Ingredients.....	<u>91.7%</u>
Total.....	100.0%

2. The first sentence of the Environmental Hazards statement should be revise to read "This product is toxic to fish and aquatic organisms."

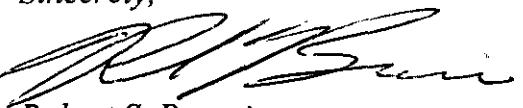
General Comments

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

CONCURRENCES							
SYMBOL	7510C						
SURNAME	Mitchell						
DATE	12-24-03						

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If you have any questions concerning this letter, please contact Wanda Mitchell at (703) 308-6345.

Sincerely,

Robert S. Brennis
Product Manager 32
Regulatory Management Branch II
Antimicrobials Division (7510C)

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DURA KLOR

A PRE-ACTIVATED AND STABILIZED SOLUTION OF SODIUM CHLORITE THAT PROVIDES A CONTROLLED RELEASE OF CHLORINE DIOXIDE AT THE POINT OF USE APPLICATION

ACTIVE INGREDIENTS:

Sodium Chlorite	8.3%
INERT INGREDIENTS	91.7%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> • 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.
If on skin or clothing:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice if burning or irritation of the skin persists.
If swallowed:	<ul style="list-style-type: none"> • Have person drink a glass of water immediately if able to swallow. • Call a poison control center or doctor immediately for treatment advice. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
<p>For emergency information call: 800-835-2030 (24 Hours) Have the product container or label with you when calling a poison control center or doctor or going for treatment.</p>	
<p>NOTE TO PHYSICIAN Probable mucosal damage may contraindicate the use of gastric lavage.</p>	

EPA Reg. No. 21164-3

EPA Est. No. 5382-KS-01
70547-IL-01

NET CONTENTS: _____ gal
_____ liters

**MADE IN U.S.A.
MANUFACTURED BY:**

Vulcan CHEMICALS

A Business Group of Vulcan Materials Company
P O Box 385015, Birmingham Alabama 35238-5015

ACCEPTED
with COMMENTS
In EPA Letter dated:
DEC 24 2003

Registered Under EPA Reg. No. 21164-3

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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION IRRITANT. Harmful if swallowed. Causes eye irritation. Avoid contact with skin, eyes or clothing. Irritating to nose and throat. Avoid breathing spray mist. In case of contact, immediately flush eyes and skin with plenty of water. Get medical attention if irritation persists.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. 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 (NPDES) 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.

PHYSICAL OR CHEMICAL HAZARDS

DO NOT mix with acids or other chemicals except water. Mixing with acid or other chemicals may cause evolution of chlorine dioxide gas, which is poisonous and explosive. Do not let spilled solution evaporate to dryness. If resultant residue contacts oxidizable or combustible materials, the mixture is easily ignited by heat or friction. This results in a fiercely burning fire, or in a confined space, a possible explosion. Examples of such materials are cloth, paper, wood, sawdust, hydrocarbons such as greases, oils, and solvents, rubber, leather, plastics, and organic substances in general; also sulfur, sulfides, powdered metals, phosphorous and ammonium compounds.

EMERGENCY HANDLING

In case of contamination or decomposition, do not reseal container. Isolate in an open, well-ventilated location. Flood with large volumes of water.

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EPA Letter Dated:

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STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended for all pesticides, registered under EPA Reg. No.

Pesticide Storage: Do not store this product with oxidizers, acids, reducing agents, or combustible materials. Store in a cool, dry well-ventilated location away from direct sunlight. Protect from freezing. Store upright and do not stack over two drums per pallet. A drum pump is recommended for transferring this material. Keep drums tightly closed when not in use. Store only in the original containers or approved storage containers and guard against cross-contamination with other pesticides, fertilizers, food and feed. Do not reuse containers.

Pesticide Disposal: Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Triple rinse (or equivalent) all containers and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Spills: In case of spills, dilute with large quantities of water and flush to a designated sewer in accordance with all applicable federal, state and local regulations. Alternatively, this product may be flushed to a collection basin or container for disposal. Comply with all applicable federal, state and local regulations regarding spill notification requirements.

DIRECTIONS FOR USE

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

•AS A PAPER PROCESSING SLIMICIDE IN WHITE WATER SYSTEMS: This product has FDA GRAS status when used as a slimicide in the manufacture of paper and paperboard that contacts food (21 CFR 186.1750)

APPLICATION DIRECTIONS:

- (1) If the pH of the white water is below 7.0, use 5 to 15 gallons of DURA KLOR per 100,000 gallons of white water to be treated, which corresponds to an active ingredient concentration of 3 to 9 ppm. Alternatively, use 2 to 4 gallons DURA KLOR per 100 tons of paper produced, which correlates to a dosage rate of 5 to 15 ppm active ingredient.
- (2) If the pH of the white water is above 7.0, then add 0.5 gallon of 5% to 6% sodium hypochlorite as an activator with each 4 gallons of DURA KLOR.

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Continuous proportioning of feed via a suitable metering pump is recommended for best results. In many cases, the amount can be reduced after the system is clean.

•FOR ENCLOSED AND RECIRCULATING WATER SYSTEMS:

DURA K LOR should be injected at a point in the system where it will undergo uniform mixing. It is recommended that a slow feed rate be applied directly into the suction side of the system pump. Badly fouled systems should be clean prior to treatment.

- (1) If the pH of the water system is less than 5.5, DURA K LOR should be applied as follows:
 INITIAL DOSE -- When the system is noticeably fouled, apply 1 gallon of DURA K LOR per 10,000 gallons of water in the system. Repeat dosage every 24 hours until acceptable microbiological quality is achieved. Usually 3 to 6 applications will suffice.
 SUBSEQUENT DOSE -- After acceptable microbiological quality is achieved, the system may be maintained by adding 3 doses of DURA K LOR every 14 to 24 days or as often as required for control. Each dose consists of 1 gallon of DURA K LOR per 10,000 gallons water in the system repeated every 24 hours for a total of 3 additions. Treatment may then be discontinued for another 14 to 24 days or until fouling again becomes evident.
- (2) If the pH of the water system is greater than 5.5, DURA K LOR should be applied as follows: Dilute each gallon of DURA K LOR to be added with 5 to 10 gallons water then adjust this mixture to a mildly acidic pH (2.5 to 5.5) with careful additions of a dilute (10% by weight maximum) acid/water mixture (e.g. muriatic, phosphoric, acetic, citric); an acidic mixture containing corrosion inhibitors, descalers, surfactants, or sequestrants; an aqueous solution of sodium hypochlorite; or an aqueous solution of hypochlorous acid. This pH adjusted pre-mix should then be added immediately to the given process system at the above indicated dose rate of 1 gallon acidified or activated DURA K LOR pre-mix to 10,000 gallons system water. The DURA K LOR pre-mix should be injected into the system at a point where it will be uniformly diluted and mixed.

NOTE: The addition of concentrated acids or mixtures of acids to undiluted DURA K LOR can cause the evolution of chlorine dioxide gas, which may be poisonous or explosive at high concentrations. Do not allow the chlorine dioxide concentration in the pre-mix to exceed 1500 ppm. Measurement of chlorine dioxide concentrations may be made with a Hach DPD chlorine test kit or by amperometric titration. Always consult your Vulcan Chemicals representative for guidance and analytical procedures before performing any acid additions to DURA K LOR.

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SPECIFIC APPLICATIONS

DURA K LOR may be used to treat enclosed and recirculating systems in the following application DEC 24 2003

- A) Dairy -- Sweet water systems to reduce microbiological levels.
- B) Farming -- Irrigation systems for slime reduction in tubing and piping.
- C) Papermills -- General water treatment to reduce microbiological growth.
- D) Oilfield -- To improve secondary recovery process water quality.
- E) General Industrial Applications Including Food Processing -- To reduce microbiological growth in cooling towers and industrial process water, including wash water of uncut and unpeeled fruits and vegetables. (Note: Residual concentrations of up to 5 ppm chlorine dioxide in process water may be used for washing whole uncut fruits and vegetables although a final potable water rinse is required if the residual exceeds 1 ppm).

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended for pesticides, registered under Reg. No. 211643

•FOR FOGGING AND MISTING APPLICATIONS:

DURA K LOR may be added to the plant misting or fogging systems to deodorize and to control odor causing bacteria, mold and mildew in food processing plants, dairies, bottling plants, poultry, meat and fish plants and animal facilities such as poultry houses, swine pens, calf barns and kennels.

Application Directions:

When fogging rooms with DURA K LOR care should be taken not to exceed the TLV-TWA of 0.1 ppm (0.30 mg/m³). If the TLV-TWA is to be exceeded, turn off air handlers and vacate people and livestock from the rooms to be fogged or misted. Ventilate for 15 minutes prior to reentry.

- (1) Mix 1.5 mL to 30 mL DURA K LOR per gallon of water. To this dilution, add a sufficient amount of 1 to 3% by weight of an aqueous food grade acid solution (phosphoric, citric, acetic, etc.) to lower the pH to 3.5 to 5.0.
- (2) Allow this diluted mixture to react for at least 15 minutes before adding to the plant fogging or misting system.
- (3) For best results, fogging or misting with diluted, acidified DURA K LOR should be done as close to the ceiling as possible.

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NOTE -- Be careful not to add concentrated acid solutions to undiluted DURA KLOR as high concentrations of chlorine dioxide gas may evolve. The concentration of chlorine dioxide in the diluted DURA KLOR solution should not be allowed to exceed 0.5 ppm as determined by the Hach DPD method for chlorine dioxide detection. Please consult your Vulcan Chemicals representative for exact testing procedures before adding any acid to DURA KLOR. The use of DURA KLOR in fogging or misting should be accompanied by a regular air monitoring program.

• TO PREVENT CORROSION AND SLIME FORMATION IN OIL FIELD SECONDARY RECOVERY OPERATIONS:

Application Directions

- (1) Prepare a working solution by diluting each gallon of DURA KLOR to be used with 6 gallons injection water.
- (2) Proportion 1 part of the diluted DURA KLOR solution into 130 to 140 parts reinjection water acidified to a pH of 3.0 to 4.0.
- (3) Increase or decrease the dose rate of the DURA KLOR solution as indicated by monitoring the microbial quality of the water.

• POULTRY PROCESSING:

Carcass sprays, dips, rinses: DURA KLOR may be used as an equipment rinse and carcass spray or dip at a use rate of 0.7 to 1.7 ounces per gallon (500 - 1200 ppm sodium chlorite) in combination with any GRAS acid at levels sufficient to achieve a solution pH of 2.5 to 2.9.

Chill water applications: DURA KLOR is a source of sodium chlorite for treating poultry chill water and pre-chill water when used at a rate of 0.1 to 0.3 ounces per gallon on combination with any GRAS acid at levels sufficient to achieve a solution pH of 2.8 to 3.2.

• TO DISINFECT AND SANITIZE AGAINST ODOR CAUSING BACTERIA ON HARD NON-POROUS SURFACES, SUCH AS WALLS, CEILINGS, FLOORS, DRAINS, PIPELINES, COUNTERS, SINKS, TILES:

- (1) Before disinfection or sanitization, remove gross debris, food and beverages from the surfaces to be cleaned.
- (2) Add 1 to 2 fluid ounces DURA KLOR per five (5) gallons of water to be used [100 - 200 ppm available chlorine dioxide; 21 CFR 178.1010 (b)(34), (c)(29)].
- (3) The DURA KLOR solution may be applied by spraying, misting, pouring, or wiping onto the surface to be treated. Allow the DURA KLOR solution to contact the surface for at least 5 minutes before wiping off.

• TO CONTROL SLIME AND MOLD GROWTH ON FOOD PROCESS AND BEVERAGE CONVEYORS:

DURA KLOR may be sprayed on food process conveyors to control mold and slime build-up that leads to product contamination and possible belt slippage. Apply DURA KLOR at a rate of 1 to 2 fluid ounces per 5 gallons of water either by itself or in combination with a non-reactive water based lubricant.

• FOR DEODORIZATION:

DURA KLOR effectively eliminates odors in the air and at their source.

- (1) Before deodorization, remove unopened and unwrapped food and beverages for the area to be treated.
- (2) Dilute a minimum of 0.5 fluid ounces of DURA KLOR per gallon of water to be used. For severe conditions, DURA KLOR may be used undiluted.
- (3) For room deodorization, spray, pour, or wipe the DURA KLOR solution as needed. For best results, apply the DURA KLOR as near to the center of the area to be treated as possible.
- (4) For surface deodorization, spray, pour, or wipe the DURA KLOR on the effected area as often as necessary. For best results, allow to air dry for 10 minutes after treatment and then rinse surfaces treated with potable water.

• TO CONTROL MOLD AND MILDEW:

DURA KLOR is effective in controlling mold and mildew on bathroom surfaces, shower stalls, on curtains, in laundry rooms, hampers, and on other surfaces where mold and mildew may be present.

- (1) Before treatment, remove gross filth and debris from the affected surfaces. Remove all open and unwrapped food and beverages from the vicinity.

ACCEPTED
WITH COMMENTS
DATE
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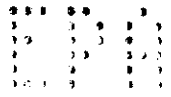
Under the Federal Insecticide,
Fungicide and Rodenticide Act as
amended for the pesticides
registered under EPA Reg. No. 21164-3

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- (2) Dilute a minimum of 12 fl. oz. of DURA KLOR per gallon of water to be used. For several applications, DURA KLOR may be used undiluted.
- (3) Spray, mist, fog, pour or wipe the DURA KLOR solution onto the surface to be treated. Allow the DURA KLOR to contact the surface for at least 5 minutes. Allow surfaces to drain and air dry. After 30 minutes, rinse with water. Repeat as necessary.

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Under the
 Fungicide
 amendment
 registered under EPA Reg. No. 21164-3