

5382-41

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United States  
Environmental Protection  
Agency

**Office of Pesticide Programs**

Kindra V. Levels  
Industrial Health Specialist  
Occidental Chemical Corporation  
PO Box 809050  
Dallas, TX 75380-9050

DEC 30 2009

**FILE COPY**

Subject: Technical Sodium Chlorite Solution 50  
EPA Registration No. 5382-41  
Application Date: December 03, 2009  
Receipt Date: December 11, 2009

Dear Ms. Levels:

This acknowledges receipt of your notification, submitted under the provision of PR Notice 98-10, FIFRA section 3(c)9.

**Proposed Notification:**

- Revision to "Storage and Disposal" statement per PR Notice 2007-4

**General Comments:**

Based on a review of the material submitted, the following comment applies:

The notification application is acceptable and a copy has been inserted in your file for future reference.

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

Sincerely,

Wanda Y. Henson  
Acting Product Manager (32)  
Regulatory Management Branch II  
Antimicrobials Division (7510P)



United States  
Environmental Protection Agency  
Washington, DC 20460

☐ Registration  
☐ Amendment  
☒ Other

OPP Identifier Number

## Application for Pesticide - Section I

1. Company/Product Number Occidental Chemical Corporation / 5382-41	2. EPA Product Manager Emily Mitchell	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Technical Sodium Chlorite Solution 50	PM# 32	
5. Name and Address of Applicant (Include ZIP Code) Occidental Chemical Corporation PO Box 809050 Dallas, TX 75380-9050 <input type="checkbox"/> Check if this is a new address	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

## Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. - (The complete statement required by PR Notice 2007-4 is on the additional page. See attached.)

## Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input checked="" type="checkbox"/> Metal	
* Certification must be submitted				<input type="checkbox"/> Plastic	
If "Yes" Unit Packaging wgt. No. per container		If "Yes" Package wgt. No. per container		<input type="checkbox"/> Glass	
				<input type="checkbox"/> Paper	
				<input checked="" type="checkbox"/> Other (Specify) bulk	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container bulk, 55-Gal. drum, and 330-Gal. tote bin		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

## Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Kindra V. Levels	Title Industrial Health Specialist	Telephone No. (Include Area Code) 972-404-3446
<b>Certification</b> I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received (Stamped)
2. Signature 	3. Title Industrial Health Specialist	
4. Typed Name Kindra V. Levels	5. Date Dec 3, 2009	

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“ Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA’s regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA. “



**Occidental Chemical Corporation**

A subsidiary of Occidental Petroleum Corporation

**OxyChem.**

5005 LBJ Freeway, Suite 2200, Dallas, TX 75244-6119  
P. O. Box 809050, Dallas, TX 75380-9050  
Phone 972.404.3800

December 3, 2009

Document Processing Desk (NOTIF)  
Office of Pesticide Programs (7504P)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Ave., NW  
Washington, DC 20460-0001

**SUBJECT: Notification of label changes per PR Notice 2007-4**

Dear Madam or Sir:

Enclosed is a pesticide registration amendment application for Occidental Chemical Corporation's **Technical Sodium Chlorite Solution 50, EPA Reg. No. 5382-41**. The registration is being amended by notification to bring it into compliance with the current regulatory requirements of Pesticide Registration Notice (PR) 2007-4: Labeling Revisions Required by the Final Rule "Pesticide Management and Disposal; Standards for Pesticide Containers and Containment."

Enclosed you will find the following documents supporting this notification:

- *Application for Pesticide Registration*, EPA Form 8570-1, with an attachment
- One (1) copy of the new label (with changes highlighted)

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Should you have any questions regarding this registration amendment application, please give me a call at the number indicated below or you may e-mail me at [kindra\\_levels@oxy.com](mailto:kindra_levels@oxy.com).

Sincerely,

Kindes Luth

## Kindra Levels

## Enclosures

{ All text in brackets [xxx] is optional and may or may not be included on a final label}  
{All text in braces {xxx} is administrative and will not appear on a final label}

## PRECAUTIONARY STATEMENTS

**DANGER. Corrosive.** Causes irreversible eye damage and skin burns. Harmful if swallowed. Irritating to nose and throat. Do not get in eyes, on skin or on clothing. Wear protective eyewear (splashproof goggles). Wear protective clothing and rubber gloves when handling this product. Avoid breathing mists or fumes. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse to avoid fire.

This product 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 (NPDES) permit and the permitting authority has been notified in writing prior to the 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.

Technical Sodium Chlorite Solution 50 may partially solidify (crystallize) when exposed to temperatures of 70°F (20°C) or below. Dry sodium chlorite is a strong oxidizing agent. This product becomes a fire or explosive hazard if allowed to dry. Mix only into water. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with garbage, dirt, organic matter, household products, chemicals, soap products, paint products, solvents, acids, vinegar, beverages, oils, pine oil, dirty rags, or any other foreign matter.

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

1. Clean badly fouled systems before starting treatment. 2. When algae are visible, add an initial dosage of 4.6 fluid ounces of Sodium Chlorite per 1,000 gals. of water in the system. Repeat if necessary until control is evident. 3. Where algae control is evident, use a subsequent dose of 2.3 fluid ounces of Sodium Chlorite solution per 1,000 gals. of water in the system twice a week or as needed to maintain control. 4. Add Sodium Chlorite directly to the cooling tower drip pan (cold water basin) near the inlet to the recirculating pump.

**Feed requirements:** Feed rates of Technical Sodium Chlorite Solution 50 will depend on the severity of contamination and the degree of control desired. The exact dosage will depend on the size of the system and residual necessary for effective control. Technical Sodium Chlorite Solution 50 is typically diluted at the point of use to prepare a 3% to 25% active aqueous solution for use in chlorine dioxide generators.

NOTIFICATION  
Date Reviewed: 12/30/09  
Reviewed By: W. Henderson

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# TECHNICAL SODIUM CHLORITE SOLUTION 50

Column 2

ACTIVE INGREDIENT: Sodium Chlorite\* .....37%  
 OTHER INGREDIENTS: .....63%  
 Total: .....100%  
 \*AVAILABLE CHLORINE .....58%

CONTAINS 4.3 LBS. OF SODIUM CHLORITE PER GALLON AT 70°F

## KEEP OUT OF REACH OF CHILDREN DANGER

FIRST AID	
If in eyes:	<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 5 minutes.</li> <li>• Call a poison control center or doctor immediately for treatment advice.</li> </ul>
If on skin or clothing:	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice if burning or irritation of the skin persists.</li> </ul>
If swallowed:	<ul style="list-style-type: none"> <li>• Have person drink a glass of water immediately if able to swallow.</li> <li>• Call a poison control center or doctor immediately for treatment advice.</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>
If inhaled:	<ul style="list-style-type: none"> <li>• Move person to fresh air and monitor for respiratory distress.</li> <li>• If cough or difficulty in breathing develops, consult a physician immediately.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>For emergency information call: 800-733-3665 (24 hours)</b> Have the product container or label with you when calling a poison control center or doctor or going to treatment	
<b>NOTE TO PHYSICIAN:</b> Probable mucosal damage may contraindicate the use of gastric lavage.	

Manufactured By:



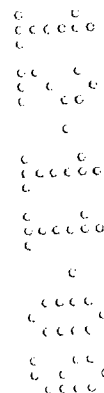
Occidental Chemical Corporation  
 P.O. Box 809050  
 Dallas, TX. 75380-9050

CHEMTREC Emergency No: 1-800-424-9300

EPA Reg. No. 5382-41

EPA Est. 5382-KS-1

\_\_\_\_\_ Gals. Net ( \_\_\_\_\_ )



## TECHNICAL SODIUM CHLORITE SOLUTION 50

### Column 3

Some examples of industrial applications of chlorine dioxide include:

- Potable water disinfection and removal of sulfide.
- Control of bacterial slime and algae and mollusks in industrial recirculating and one-pass cooling systems.
- Biocontrol in food processing flumes, water-using equipment, cooling water, and recycled waters.
- Disinfection of sewage and plant wastes.
- Destruction of phenolics, simple cyanides and sulfides by chemical oxidation.
- Bacterial slime control in white water paper mill systems.
- Bacterial control in oil well and petroleum systems.

See product bulletins (or Technical Data Sheets) for specific application instructions. Your Occidental Chemical Corporation representative can guide you in the application techniques.

**Method of feed:** Large amounts of chlorine dioxide can be generated by two common methods, including:

1. The chlorine method which utilizes a Sodium Chlorite solution and chlorine gas, or
2. The hypochlorite method which utilizes a Sodium Chlorite solution, a hypochlorite solution, and an acid.

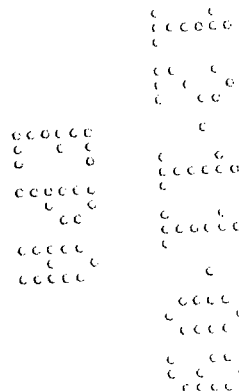
Your Occidental Chemical Corporation representative can guide you in the selection, installation and operation for feed systems. Consult product bulletin and also the instructions on the chlorine dioxide generation system before using Technical Sodium Chlorite Solution 50. User is responsible for compliance with applicable Federal, state and local laws regarding proper use and disposal of the chlorine dioxide generated.

#### Potable Water Treatment

Chlorine dioxide ( $\text{ClO}_2$ ) is used as both an oxidant and a disinfectant in drinking water treatment. The required dosages will vary with source water conditions and the degree of contamination present. For most municipal and public potable water systems, a chlorine dioxide residual concentration of up to 2 ppm is sufficient to provide adequate disinfection. Residual disinfectant and disinfection byproducts must be monitored as required by the National Primary Drinking Water Regulations (40 CFR Part 141) and state drinking water standards.

#### Industrial Cooling Water Treatment

For control of bacterial slime and algae in industrial recirculating and one-pass cooling systems, the required dosages will vary depending on the exact application and the degree of contamination present. The required chlorine dioxide residual concentrations range between 0.1 and 5.0 ppm. Chlorine dioxide may be applied either continuously or intermittently. The typical chlorine dioxide residual concentration range is 0.1 - 1.0 ppm for continuous doses, and 0.1 - 5.0 ppm for intermittent doses. The minimum acceptable residual concentration of chlorine dioxide is 0.1 ppm for a minimum one minute contact time.



TECHNICAL SODIUM CHLORITE SOLUTION 50

Column 4

Mollusk Control in Water Systems

Chlorine dioxide generated from sodium chlorite may be used for mollusk control in commercial and industrial recirculating and one-pass cooling water systems. The required dosages will vary with the system type, system conditions, the degree of water contamination present and the desired level of control. Depending on the extent of the infestation, sodium chlorite may be applied either continuously or intermittently through a chlorine dioxide generating system to achieve the necessary chlorine dioxide residual concentration.

Veliger Control: Maintain a continuous chlorine dioxide residual of 0.1 - 0.5 ppm.

Intermittent Dose: Apply chlorine dioxide to obtain a chlorine dioxide residual concentration of 0.2 - 25 ppm. Repeat as necessary to maintain control.

Continuous Dose: Maintain a chlorine dioxide residual concentration of up to 2 ppm.

Food Plant Process Water Treatment

Chlorine dioxide generated from sodium chlorite is effective for use in controlling microbiological growth in flume water and other food processing water systems such as chill water systems and hydrocoolers. The required dosages will vary with process conditions and the degree of contamination present. Depending on the requirements of the specific water system, sodium chlorite should be applied continuously or intermittently through a chlorine dioxide generating system to achieve a chlorine dioxide residual concentration between 0.25 and 5.0 ppm. Water, containing up to 3 ppm residual chlorine dioxide may be used for washing fruits and vegetables that are not raw agricultural commodities in accordance with 21CFR§173.300. Treatment of the fruits and vegetables with chlorine dioxide must be followed by a potable water rinse, or by blanching, cooking or canning.

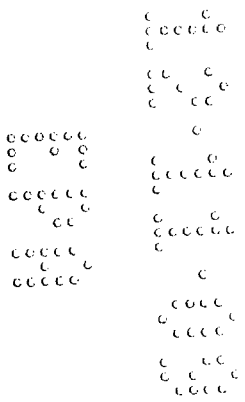
Wastewater Treatment

Chlorine dioxide (ClO<sub>2</sub>) is effective as both a disinfectant and an oxidant in wastewater treatment. The required dosages will vary with water conditions and the degree of contamination present. For most municipal and other wastewater systems, a chlorine dioxide residual concentration of up to 5 ppm is sufficient to provide adequate disinfection.

For sulfide odor control, between pH 5-9, a minimum of 5.2 ppm (wt) of chlorine dioxide should be applied to oxidize 1ppm of sulfide (measured as sulfide ion). For phenol destruction, at pH less than 8, 1.5 ppm chlorine dioxide will oxidize 1 ppm phenol; at pH greater than 10, 3.3 ppm chlorine dioxide will oxidize 1 ppm phenol.

Bacterial Slime Control in Paper Mills

Chlorine dioxide generated from sodium chlorite is effective for use in controlling microbiological growth in white water paper mill systems. The required dosages will vary with the degree of microbiological and process contamination present. Depending on the specific requirements of the system, sodium chlorite should be applied continuously or intermittently through a chlorine dioxide generating system to achieve a chlorine dioxide residual concentration between 0.1 and 5.0 ppm. Intermittent treatments should be repeated as often as necessary to maintain control.





### Bacterial Control In Oil Wells And Petroleum Systems

Chlorine dioxide is effective in the remediation of bacterial and sulfide contamination commonly found in oilfield production, injection and disposal fluids. The required dosages will vary with process conditions. Sodium chlorite may be applied either continuously or intermittently through a chlorine dioxide generating system to oil well production water as it is separated from the oil, and before it is re-injected into the well.

For continuous feeds, chlorine dioxide may be applied at dosages slightly higher than sulfide's oxidative demand as determined by a demand study. For intermittent treatment, chlorine dioxide should be applied at a shock dosage of 200 - 3000 ppm.

## STORAGE AND DISPOSAL

**STORAGE:** Do not contaminate water, food, or feed by storage or disposal. Keep product in tightly closed container when not in use.

Don't drop, roll or skid drum. Keep upright. Always replace cover. Store in a cool, dry well-ventilated area away from heat or open flame.

**EMERGENCY HANDLING:** In case of contamination or decomposition, do not reseal container. If possible, isolate container in open and well ventilated area. Flood with large volumes of water. If fire occurs, extinguish fire by applying large quantities of water. Any unopened drums near the fire should be cooled by spraying with water.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate 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.

(Text for non-refillable liquid containers that are 5 gallons or smaller)

### CONTAINER DISPOSAL: Nonrefillable Container

Do not reuse or refill this container. Offer for recycling if available. Offer for reconditioning, if appropriate. Triple Rinse or Pressure Rinse container promptly after emptying.

**Triple Rinse as follows:** Empty the remaining contents into application equipment or a mix tank and 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 rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Pressure Rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds, after the flow begins to drip.

(Text for non-refillable liquid containers that are larger than 5 gallons)

### CONTAINER DISPOSAL: Nonrefillable Container

Do not reuse or refill this container. Offer for recycling if available. Offer for reconditioning, if appropriate. Triple Rinse or Pressure Rinse container promptly after emptying.

**Triple Rinse as follows:** Empty remaining contents into application equipment or a mix tank. 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. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**Pressure Rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds, after the flow begins to drip.

(Text for refillable liquid containers)

### CONTAINER DISPOSAL: Refillable Container

Refill this container with [Technical Sodium Chlorite Solution 50] [Supplemental distributor brand name] only. Do not reuse this container for any other purpose.

Cleaning or pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

To pressure rinse the container before final disposal, empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds, after the flow begins to drip.