

5382-42

4/23/2013

1/10



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

April 23, 2013

Kindra Levels
Product Stewardship Specialist
Occidental Chemical Corporation
P. O. Box 809050
Dallas, TX 75380-9050

Subject: **TECHNICAL SODIUM CHLORITE**
EPA Registration Number: 5382-42
Application Date: April 3, 2013
EPA Receipt Date: April 9, 2013

Dear Ms. Levels:

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

Proposed Notification:

- Add the National Foundation (NSF) logo to the subject product labeling.

General Comments:

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

The notification application is acceptable. A copy of the notification has been inserted in your file for future reference.

Should you have any questions or comments concerning this letter, please contact Adam Heyward via email at heyward.adam@epa.gov or by telephone at (703) 347-0274 during the hours of 6:00 am to 2:30 pm EST.

Sincerely,

A handwritten signature in black ink that reads "Mike Mendelsohn".

Mike Mendelsohn
Acting Product Manager (32)
Regulatory Management Branch II
Antimicrobials Division (7510P)



United States
Environmental Protection Agency
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number Occidental Chemical Corporation / 5382-42	2. EPA Product Manager Monisha Harris	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Occidental Chemical Corporation / Technical Sodium Chlorite	PM# 32	
5. Name and Address of Applicant (Include ZIP Code) Occidental Chemical Corporation P.O. Box 809050 - Attn: Kindra Levels 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. N/A - Not Applicable Product Name N/A - Not Applicable	

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.)

Approved NSF logo added as per guidance letter by Mr. Frank Sanders of EPA, to Mr. Kenji Yano of NSF. This notification is consistent with the provisions of PR Notices 98-10 and EPA regulations in 40 CFR 152.46, and no other changes have been made to this product' labeling or to its confidential statement of formula (CSF). I understand it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, 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.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input type="checkbox"/> No	Metal Plastic Glass Paper Other (Specify) _____		
* Certification must be submitted	If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt No. per container			
3. Location of Net Contents Information <input type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container		5. Location of Label Directions <input type="checkbox"/> On Label <input type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input 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 Levels	Title Product Stewardship Specialist	Telephone No. (include Area Code) 972-404-3446
Certification 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 Product Stewardship Specialist	
4. Typed Name Kindra Levels	5. Date April 3, 2013	



3/10

April 3, 2013

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

USPS Certified Mail#: 7012 1010 0002 2591 7150

RE: Notification to add the NSF logo to the Technical Sodium Chlorite label – (EPA Reg. No: 5382-42)

Dear Madam or Sir:

Enclosed is the EPA 8570-1 form, marked as a notification submission, being submitted to add the National Sanitation Foundation (NSF) logo to Occidental Chemical Corporation's existing label for Technical Sodium Chlorite, EPA Reg. No. 5382-42. This notification is being submitted in accordance with PR Notice 98-10.

The following documents have been enclosed in support of this notification:

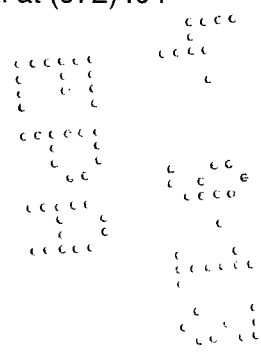
- Application for Pesticide Registration, EPA Form 8570-1
- One (1) copy of the letter from Mr. Frank Sanders, Director of Antimicrobial Division, to Mr. Kenji Yano of NSF, providing guidance on the use of the NSF logo
- A copy of the approved NSF logos from the NSF website:
http://www.nsf.org/business/water_distribution/download_marks.asp?program=WaterDistributionSys
- One (1) copy of the proposed modification of the Technical Sodium Chlorite label text that bears the actual NSF logo and any associated language
- One (1) copy of the proposed modification of the final Technical Sodium Chlorite Solution 50 label that bears the actual NSF logo and any associated language

As stated on the 8570-1 form, the only change made to the label was the addition of the NSF logo.

Should you have any questions regarding this notification, please give me a call at (972)404-3446, or you may email me at Kindra.Levels@oxy.com.

Sincerely,

Kindra Levels
 Occidental Chemical Corporation
 Product Stewardship Specialist
 Phone: 972-404-3446, Fax: 972-404-3219
 Email: Kindra.Levels@oxy.com



Enclosures



ACTIVE INGREDIENT: Sodium Chlorite*80%
 OTHER INGREDIENTS:20%
 *AVAILABLE CHLORINE125%

KEEP OUT OF REACH OF CHILDREN	
DANGER	
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. • Call a poison control center or doctor immediately for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none"> • Brush off excess chemical. • 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.
If inhaled:	<ul style="list-style-type: none"> • Move person to fresh air and monitor for respiratory distress. • If cough or difficulty in breathing develops, consult a physician immediately. • If person is not breathing, call 911 or an ambulance, then give artificial respiration. • Call a poison control center or doctor for further treatment advice.
For emergency information call: 800-733-3665 (24 hours) Have the product container or label with you when calling a poison control center or doctor or going to treatment	
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

Manufactured By:

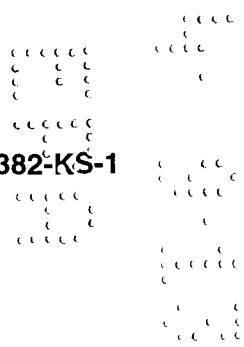


Occidental Chemical Corporation
P.O. Box 809050
Dallas, TX. 75380-9050

24-Hour Emergency No: 1-800-733-3665
 CHEMTREC Emergency No: 1-800-424-9300

EPA Reg. No. 5382-42

EPA Est. 5382-KS-1



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.

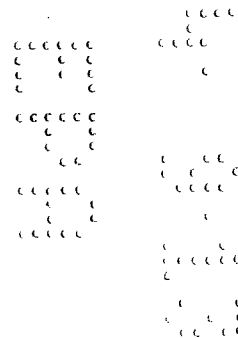
Your Occidental Chemical Corporation representative can guide you in the selection, installation and operation for feed systems. Consult product bulletin and also the instructions on the chlorine dioxide generation system before using Technical Sodium Chlorite. User is responsible for compliance with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

Potable Water Treatment

Chlorine dioxide (ClO₂) 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.



Mollusk Control in Water Systems

Chlorine dioxide generated from sodium chlorite maybe 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

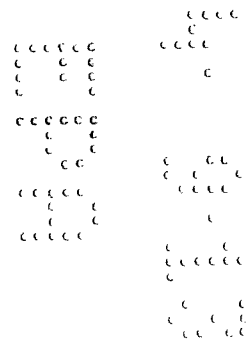
Chlorine dioxide generated from sodium chlorite is effective for use in controlling microbiological growth in flume water and other food processing water systems such as chill water systems and hydrocoolers. The required dosages will vary with process conditions and the degree of contamination present. 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 (ClO₂) 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 1 ppm 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 solid containers that are smaller than 50 lbs.)

CONTAINER DISPOSAL: Nonrefillable Container.

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

Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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.

(Text for non-refillable solid containers that are larger than 50 lbs.)

CONTAINER DISPOSAL: Nonrefillable Container.

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

Triple Rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container ¼ 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.

(Text for refillable solid containers – all sizes)

CONTAINER DISPOSAL: Refillable Container.

Refill this container with [Technical Sodium Chlorite] or [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.



Sodium Chlorite, UN1496
CAS Registry No. 7758-19-2

UNDER THE OXIDIZER SYMBOL

CLORITO DE SODIO TECNICO

INGREDIENTE ACTIVO: Clorito de Sodio* .80%
INGREDIENTE INERTES:20%
*CLORO DISPONIBLE125%

DECLARACIONES PRECAUTORIAS

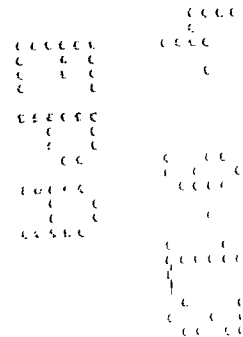
Peligros Para Los Seres Humanos y Los Animales Domesticos PELIGRO! Corrosivo! Causa daños oculares irreversibles y quemaduras cutáneas. Nocivo, si se ingiere. Irritante para la nariz y la garganta. Evítese el contacto con los ojos, la piel o las ropas. Úsese protección para los ojos (gafas o anteojos de seguridad). Úsense ropas protectoras y guantes de caucho, al manipular este producto. Evítese respirar el polvo y las emanaciones. Lávese cuidadosamente con agua y jabón, después de manipular el producto. Quitense las ropas contaminadas, y lávense antes de usarlas nuevamente, para evitar incendios.

Peligro Químico

PELIGRO! Es un agente fuertemente oxidizante. Mezcle sólo en el agua. La contaminación puede iniciar una reacción química con generación de calor, liberación de gases peligrosos (dióxido de cloro: un gas venenoso, explosivo), e incendio y explosión. Evite todo contacto con llamas o materiales en combustión, como cigarrillos encendidos. No se lo contamine con humedad, basura, tierra, materias orgánicas, productos de uso casero, químicos, productos de jabón, disolventes, ácidos, vinagre, bebidas, aceites, aceite de pino, trapos sucios, o cualquier otra materia extraña. No utilice utensilios húmedos o mojados.

Peligros Para El Medio Ambiente

Este producto es peligroso para los peces y organismos acuáticos. No se viertan los efluentes que contengan este producto, en los lagos, arroyos, pozos, estuarios, océanos u otras aguas. No se viertan los efluentes que contengan este producto en los sistemas de alcantarillado, sin avisar antes a las autoridades de la planta local de depuración de aguas negras.



TECHNICAL SODIUM CHLORITE

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS
DANGER, Corrosive. Causes irreversible eye damage and skin burns. May be fatal if swallowed, irritating to nose and throat. Do not get in eyes, on skin or clothing. Wear protective clothing and gloves when handling this product. Avoid breathing dust and fumes. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse to avoid fire.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic organisms. Do not discharge into streams, rivers, lakes 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 into sanitary sewer systems without previously notifying the local sewer treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

CHEMICAL HAZARDS

Danger: strong oxidizing agent. Mix only into water. Combustion may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine and carbon dioxide), or release of toxic gases (hydrogen cyanide). Do not combine with moisture, garbage, dirt, organic matter, household products, chemicals, soap products, paint products, solvents, acids, vinegar, grease, oil, or any material of flammable nature. Do not use moist or damp tissues.

DIRECTIONS FOR USE

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

Directions for Controlling the Growth of Algae in Recirculating Cooling Water Towers

1. Clean badly scaled systems before starting treatment. 2. Weigh out volume of Sodium Chlorite per 1,000 gallons of water in the system. Repeat necessary until control is evident. 3. Where algae control is evident, use a subsequent dose of 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 filter to the recirculating pump.

Directions for Use in the Mechanical or Electrolytic Generation of Chlorine Dioxide as a Disinfectant, or for Micropanitium or Mollusk Control and as a Chemical Oxidant in Aquatic Systems.

Feed requirements: Feed rates of Technical Sodium Chlorite will depend on the severity of contamination, and the degree of control desired. The exact dosage will depend on the nature of the algae, the amount of water in the system, and the generator used. Technical Sodium Chlorite is typically diluted at the point of use to prepare a 25% active aqueous solution for use in chlorine dioxide generators.

ACTIVE INGREDIENT: Sodium Chlorite* 80%
 OTHER INGREDIENTS: 20%
 *AVAILABLE CHLORINE 125%

KEEP OUT OF REACH OF CHILDREN
DANGER
FIRST AID

If in eyes:	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. Call a poison control center or doctor immediately for treatment advice.
If on skin or clothing:	Brush off excess chemical. 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:	Have person drink a glass of water immediately if able to do so. Call a poison control center or doctor immediately for treatment advice. If breathing is difficult, have person lean forward and breathe into a paper bag.
If inhaled:	Move person to fresh air and monitor for respiratory distress. If cough or difficulty in breathing develops, consult a physician immediately. If breathing is difficult, have person lean forward and breathe into a paper bag. Call a poison control center or doctor for further treatment advice.

For emergency information call: 800-733-3665 (24 hours)
 Have the product container or label with you when calling a poison control center or doctor or going to treatment.

NOTE TO PHYSICIAN:
 Probable mucosal damage may contraindicate the use of gastric lavage.

Manufactured By:
Oxy Occidental Chemical Corporation
 P.O. Box 809050
 Dallas, TX 75380-9050

24-Hour Emergency No: 1-800-733-3665
 24-Hour Emergency No: 1-800-424-9300
 EPA Reg. No: 5382-42
 EPA Est. 5382-KS-1

100 Lbs. Net

Residual Control in Water Systems
 Chlorine dioxide generated from sodium chlorite may be used for residual control in commercial and industrial recirculating and one-pass cooling water systems. The required dosages will vary with the system. The required dosages will vary with 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.

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

Intermittent Dose: Apply chlorine dioxide to obtain a residual of 2.0 - 5.0 ppm. Repeat as necessary to maintain level.

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

Four Phased Process Water Treatment
 Chlorine dioxide is effective for use in controlling microbiological growth in humans 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 system, chlorine dioxide may 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.

Waste Water Treatment
 Chlorine dioxide (ClO₂) is effective as both a disinfectant and oxidant in wastewater treatment. The required dosages will vary with water conditions and the degree of contamination present. The required dosages will vary with water conditions and the degree of contamination present. The required dosages will vary with water conditions and the degree of contamination present. The required dosages will vary with water conditions and the degree of contamination present.

Some examples of industrial applications of chlorine dioxide include:

- Pulp water disinfection and removal of sulfides.
- Control of bacterial slime and algae in industrial recirculating and one-pass cooling systems.
- Bleaching in food processing lines, water-using equipment, cooling water, and recycled water.
- Disinfection of swages and plant wastes.
- Disinfection of phosphates, simple cyanides and sulfides.
- 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 of chlorine dioxide to your system.

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 of feed systems. Consult product bulletins and also the instructions on the chlorine dioxide generation system before using the chlorine dioxide generating system.

User is responsible for compliance with applicable Federal, State and local laws regarding proper use and disposal of the chlorine dioxide generated.

Industrial Cooling Water Treatment
 For control of bacterial slime and algae in industrial recirculating and one-pass cooling systems, the required 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 dosing, and 0.1 - 5.0 ppm for intermittent dosing. The minimum acceptable residual concentration of chlorine dioxide is 0.1 ppm for a minimum one minute contact time.

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 bacterial control.

Bacterial Control in Oil Wells and Petroleum Systems
 Chlorine dioxide is effective in the remediation of bacterial and sulfate contamination commonly associated with petroleum systems. The required dosages will vary with process conditions. Sodium chlorite may be applied either continuously or intermittently through a chlorine dioxide generating system to achieve a chlorine dioxide residual concentration between 0.1 and 5.0 ppm. Repeat as necessary to maintain level.

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

STORAGE AND DISPOSAL
 Chlorine dioxide should be stored in a cool, dry, well-ventilated area away from heat and open flame.

EMERGENCY HANDLING: In case of contamination or decomposition, do not touch container. If possible, isolate container in open and well-ventilated area. Evacuate area, if necessary, using appropriate 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 pesticides, can be hazardous. If these wastes are not returnable to the manufacturer, they should be disposed of by one of the following methods:

- 1. Mixture with a large volume of water.
- 2. Mixture with a large volume of water and a small amount of a non-hazardous material.
- 3. Mixture with a large volume of water and a small amount of a non-hazardous material.

Wastewater Treatment
 Chlorine dioxide (ClO₂) is effective as both a disinfectant and oxidant in wastewater treatment. The required dosages will vary with water conditions and the degree of contamination present. The required dosages will vary with water conditions and the degree of contamination present. The required dosages will vary with water conditions and the degree of contamination present.

Container Disposal: Empty remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water, replace and seal tightly. Store for 30 seconds. Empty the container on its end and flip it back and forth several times. Empty the residue into application equipment or a mix tank or store residue for later use or disposal. Repeat this procedure two more times.



5.1

Sodium Chlorite. UN 1496
CAS Registry No. 7758-19-2

PELIGRO QUÍMICO
 La contaminación puede iniciar una reacción química con calor liberación de gases peligrosos (liberación de cloro, nitrógeno, dióxido de carbono, hidrógeno, etc.). Se debe evitar el contacto con los ojos, la piel o las ropas. Use equipo de protección personal apropiado. Evite el contacto con la ropa, la piel o las ropas. Use equipo de protección personal apropiado. Evite el contacto con la ropa, la piel o las ropas. Use equipo de protección personal apropiado. Evite el contacto con la ropa, la piel o las ropas.

DECLARACIONES PRECAUTORIAS
 Peligros Para Los Seres Humanos y Los Animales: Peligros PELIGRO: Corrosivo. Causa daños cutáneos graves y quemaduras químicas. Peligros PELIGRO: Irritante. Puede causar irritación de las vías respiratorias y pulmonar. Peligros PELIGRO: Nocivo. Puede causar daño a la salud por inhalación o ingestión. Peligros PELIGRO: Peligroso al medio ambiente. Puede ser dañino para los peces y organismos acuáticos. No se debe liberar en el medio ambiente. No se debe liberar en el medio ambiente. No se debe liberar en el medio ambiente.

INGREDIENTE ACTIVO, Clorito de Sodio 80%
***CLORO DISPONIBLE** 20%
125%

DECLARACIONES PRECAUTORIAS
 Peligros Para Los Seres Humanos y Los Animales: Peligros PELIGRO: Corrosivo. Causa daños cutáneos graves y quemaduras químicas. Peligros PELIGRO: Irritante. Puede causar irritación de las vías respiratorias y pulmonar. Peligros PELIGRO: Nocivo. Puede causar daño a la salud por inhalación o ingestión. Peligros PELIGRO: Peligroso al medio ambiente. Puede ser dañino para los peces y organismos acuáticos. No se debe liberar en el medio ambiente. No se debe liberar en el medio ambiente. No se debe liberar en el medio ambiente.