

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

April 16, 2013

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

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

Subject:

Technical Sodium Chlorite Solution 31.25

EPA Reg.#: 5382-43

Notification Date: April 3, 2013 Receipt Date: April 9, 2013

Dear Ms. Levels:

This acknowledges the receipt of your notification, submitted under the provision of PR Notice 98-10 and FIFRA section 3(c)7(a).

Proposed Notification:

To add the NSF logo to the "Technical Sodium Chlorite Solution 31.25" product label (EPA Reg# 5382-43). Label dated April 3, 2013 (pin punch 04/09/13).

General Comment:

Based on the review of the materials submitted, the above noted NSF logo addition to the label is **acceptable**.

This notification and this letter have been inserted in your file for future reference.

If you have further question on this letter, please contact David Liem by email at liem.david@epa.gov or call at 703-305-1284.

Sincerely,

Monisha Harris

Product Manager (32)

Regulatory Management Branch II Antimicrobials Division (7510P)

1 mendersten ful

 Please read instructions on reverse before completin	g form.	Form Approved.	OMP.No. 2070-0	Print Form
EPA Environmental I	d States Protection Agenc ton, DC 20460		Rstration Amendmen Other	OPP Identifier Number
А	pplication for Pe	sticide - Section	i	
Company/Product Number Occidental Chemical Corporation / 5382-43	1	EPA Product Manager Monisha Harris		3. Proposed Classification X None Restricted
Company/Product (Name) Occidental Chemical Corporation / Technical Sodium C		M# 32		X None Restricted
5. Name and Address of Applicant (Include ZIP Code Occidental Chemical Corporation P.O. Box 809050 - Attn: Kindra Levels Dallas. TX: 75380-9050 Check if this is a new address	(b)(i), my product is sim	ilar or identical i	with FIFRA Section 3(c)(3) n composition and labeling
	Section			
Amendment - Explain below. Resubmission in response to Agency letter de Notification - Explain below.		Final printed label Agency letter dat "Me Too" Applied Other - Explain be	ed ation.	
Explanation: Use additional page(s) if necessary. Approved NSF logo added as per guidance letter by of PR Notices 98-10 and EPA regulations in 40 CFR 1 of formula (CSF). I understand it is a violation of 18 is not consistent with the terms of PR Notice 98-10 action and penalties under sections 12 and 14 of FIF	Mr. Frank Sanders of EPA .52.46, and no other chang USC Sec 1001 to willfully r and 40 CFR 152.46, this pr FRA.	, to Mr. Kenji Yano of NSF ges have been made to th nake any false statement roduct may be in violation	nis product' labelin to EPA. I further u	g or to its confidential statement nderstand that if this notification
	Sectio	n - III		
1. Material This Product Will Be Packaged In: Child-Resistant Packaging Yes No * Certification must be submitted 1. Material This Product Will Be Packaged In: Unit Packaging Yes No If "Yes" Unit Packaging wgt.	Water Sol Ye No. per container Water Sol Ye No Peckage Value Valu	No. per	Gle	tal atic ass
<u> </u>	. Size(s) Retail Container	5. Lo	cation of Lebel Di On Label On Labeling e	rections
6. Manner in Which Label is Affixed to Product	Lithograph Paper glued Stenciled	Other		
	Section	n - IV		0.666
1. Contact Point (Complete items directly below for	identification of individu	el to be contacted, if nec	essery, to proces	s this epplicວິບັດກ.)
Name Kindra Levels	Title Product	Stewardship Specialist	~1 Q	pĥone No. (Include Area Code) 2404-3446
I certify that the statements I have made on the lacknowledge that any knowingly false or mission both under applicable law.	Certification his form and all attachme sleading statement may b	nts thereto are true, acc e punishable by fine or in	urate and complet	(Stamped)
2. Signature	3. Title Product St	tewardship Specialist		((()
4. Typed Name Kindra Levels	5. Date April 3, 20)13		

5005 LBJ Freev uite 2200, Dallas, Texas 75244-6152 P.O. Box 809050; Jallas, Texas 75380-9050 Phone: 972-404-3800

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 7167

RE: Notification to add the NSF logo to the Technical Sodium Chlorite Solution 31.25 label – (EPA Reg. No: 5382-43)

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 Solution 31.25, EPA Reg. No. 5382-43. 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 Solution 31.25 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 31.25 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 - Product Stewardship Specialist

Occidental Chemical Corporation

Phone: 972-404-3446, Fax: 972-404-3219

Email: Kindra_Levels@oxy.com

Enclosures



∴PA Reg. No. 5382-43

{ 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}

TECHNICAL SODIUM CHLORITE SOLUTION 31.25 (25% Active Sodium Chlorite)

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

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.

ENVIRONMENTAL HAZARDS

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.

CHEMICAL HAZARDS

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 uioxide 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 racis, any other foreign matter.

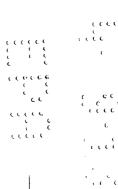
DIRECTIONS FOR USE
It is a violation of Federal law to use the product in a manner inconsistent with its labeling.

Directions for Controlling the Growth of Algae in Recirculating Cooling Water Towers dioxide a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with garbage, dirt, organic matter,

1. Clean badly fouled systems before starting treatment. 2. When algae are visible, add an initial dosage of 8.4 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 4.2 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.

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

Feed requirements: Feed rates of Technical Sodium Chlorite Solution 31.25 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. Depending on the generator type, Technical Sodium Chlorite Solution 31.25 may be diluted at the point of use to prepare a 3% to 25% active aqueous solution for use in chlorine dioxide generators.



TITE SOLUTION 31.25 TECHNICAL SODIUM CHLP ∠PA Reg. No. 5382-43

Column 2

ACTIVE INGREDIENT: Sodium Chlorite*	.25%
OTHER INGREDIENTS:	.75%
*AVAILABLE CHLORINE	39%

CONTAINS 2.58 LBS. OF SODIUM CHLORITE PER GALLON AT 70°F

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. 			
	 Call a poison control center or doctor immediately for treatment advice. 			
If on skin or clothing:	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:	 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:	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				
Probable mu	NOTE TO PHYSICIAN: ucosal 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. 5382-43	EPA Est. 5382-KS-1 EPA Est. 70547-IL-1	•
İ	Gals. Net (l)	

TECHNICAL SODIUM CHLOTITE SOLUTION 31.25

.PA Reg. No. 5382-43

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 several 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, or
- 3. The Acid-chlorite method which utilizes a Sodium Chlorite solution and an acid, or
- 4. The electrolytic method which utilizes a Sodium Chlorite solution, with sodium chloride added as needed.

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

Directions for Use in Controlling Microbial Population in Poultry Processing Water

Chlorine dioxide generated from Technical Sodium Chlorite Solution 31.25 may be used as an antimicrobial agent in water used in poultry processing, provided that the residual concentration of chlorine dioxide does not exceed 3 ppm, as determined by an appropriate method in accordance with 21CFR§173.300. For treatment of poultry chill water, apply Technical Sodium Chlorite Solution 31.25 as necessary through a chlorine dioxide generation system to maintain a residual concentration of up to 3 parts per million (ppm) chlorine dioxide in the chiller water.

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.

Aqueous Disinfection Systems for CIP Cleaning: If the concentration of chlorine dioxide generated from Technical Sodium Chlorite Solution 31.25 exceeds 5.0 ppm, a potable water rinse should follow treatment. Care should be taken to ensure the biological and chemical quality of the potable water.

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.

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.

Bacterial Slime Control in Paper Mills

Chlorine dioxide generated from sodium chlorite is effective for use in controlling microbiological growth in white water caper 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 of 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.

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TECHNICAL SODIUM CHLOTITE SOLUTION 31.25

PA Reg. No. 5382-43

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.

<u>Intermittent Dose:</u> 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.

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.



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 ppmof 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.

_PA Reg. No. 5382-43

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 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. 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.

<u>Triple Rinse as follows:</u> 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.

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 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 31.25] [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. Proint for 10 seconds, after the flow begins to drip.

TECHNICAL SODIUM CHLORITE SOLUTION 31.25 (25% Active Sodium Chlorite)

HAZARDS TO HUMANS & DOMESTIC ANIMALS OT DANGES. Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed irritating to nose and throat. An on ont get in eyes, on skin or on clothing. Wear protective eyewers (splashprong aggles). Wear protective clothing and rubber gloves when handling this product. Awalc breaking mists or fumes. Wash thoroughly with sap and wash before ito avoid fine.

This product is toxic to fish and aquatic organisms. Do not distange effluent containing his product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Dischage Elimination, System (WDES) permit and the permitting authority has been notified in writing prior to the dischage. Do not dischage effluent containing this product to sewer systems without previously indifying the local sewage treatment plant authority. For guidance contact your State In Water Board or Regional Office of the EPA.

Dry sodium chlorife is a strong oxidizing agent. This product becomes a fire or explosive heard if allowed to thy. Mix only into water. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide a polisonous: explosive agas, and possible fire and explosion. Do not contaminate with garbage, dift, organic matter, household products, chemicals, soap products, paint products, softwarts, acids, vinegar, beverages, oils, pine oil, diffy rags, or any other toneign matter.

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

Directions for Controlling the Growth of Algae in Recirculating Cooling Water Towers
1. Clean badly Yould systems before starting
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2 of 8.4 full dounces of Sodium Chlorita per 1,000
ga.s. of water in the system. Repeat if necessary until It
control is evident. 3. Where algae control is evident.
Use a subsequent of 60se of 4.2 full 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.

Directions for Use in the Mechanical or Electrolytic Generation of Chlorine Bloodie as a Disintectant, or for Microorganism or Mollusk Control and as a Chemical Oxidant in Aquatic Systems.
Feel requirements, Feel rates of Technical Sodium Chlorite Sodium 31.25 will depend on the seventy 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. Depending on the generator type, Technical Sodium Chlorids Solution 31.25 may be diluted at the point of use to prepare a 3% to 25% active aqueous solution for use in EPA chlorine dioxide generators.

ACTIVE INGREDIENT: Sodium Chlorite* OTHER INGREDIENTS:

*AVAILABLE CHLORINE

CONTAINS 2.58 LBS. OF SODIUM CHLORITE PER GALLON AT 70°F

KEEP OUT OF REACH OF CHILDREN DANGER FIRST AID

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If in eyes:	٠	Hold eye open and rinse stowly and gently with water for 15-
	•	minutes. Remove contact lenses, if present, after the first 5 minute
		then continue rinsing eye.
	•	Call a poison control center or doctor immediately for treatme atvice.
If on skin or clothing:	• •	Take off contaminated clothing. Rinse skin immerliately with plenty of water for 15-20 minut
	•	Call a poison control center or doctor for treatment advice burning or irritation of the skin persists.
if swallowed:	·	Have person drink a glass of water immediately if able
	•	swaiow. Call a poison control center or doctor immediately for treatme
	•	Do not induce vomiting unless told to do so by the pois
	•	control center of bocker. Do not give anything by mouth to an unconscious person.
If inhaled:	• •	Move person to fresh air and monitor for respiratory distress If sounh or difficulty in breathing develops. Americal
		immediately.
	•	If person is not breathing, call 911 or an ambulance, then gi artificial resolvation.
	•	Call a poison control center or doctor for further treatme

2

For emergency information call: 800-733-3665 (24 hours) Have the product container or tabel 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



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

EPA Reg. No. 5382-43

Gals. Net

EPA Est. 5382-KS-1 EPA Est. 70547-IL-1

examples of industrial applications of chlorine

MOTIFICATII Poste Reviewed By: 24

- Portable water disinfection and removal of sulfide.
 Portable water disinfection and removal of sulfide.
 Industrial recirculating and one-pass cooling systems.
 Bircontrol in food processing flumes, water-using equipment, cooling water, and recycled waters.
 Birchection of sewage and plant wastes.
 Destruction of phenotics, simple cyanides and sulfides by chemical oxidation.
 Bacterial slime control in white water paper mill control in water paper mill control in white water paper mill control in water paper mill control in white water paper mill control in white water paper mill control in water

39%

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 several common methods, including.

 1. The chlorine method which utilizes a Sodium Chlorine solution and chlorine gas, or The hypocholine method which utilizes a Sodium Chlorine solution; any prochlorine solution, and an acid, or 3. The Acid-chlorine method which utilizes a Sodium of Chlorine solution and which utilizes a Sodium of Chlorine solution and an acid, or 3. The Acid-chlorine method which utilizes a Sodium of Chlorine solution and an acid, or 4. The electrolytic method which utilizes a Sodium of Solution, with sodium chloride added as needed.

Your Occidental Chemical Corporation representative can guide you in the selection, installation and operation for feel systems. Consult product buildrin and also the instructions on the chlorine dioxide generation system betore using Technical Sodium Chlorite Solution 31.25.

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

Directions for Use in Controlling Microbial Population in Poultry Processing Water Cholme dioxide generated from Technical Sodium Chlorine Solution 31.25 may be used as an antimicrobial agent in water used in poultry processing, provided that the residual concentration of chlorine dioxide does not exceed 3 ppm, as determined by an appropriate method in accordance with 21GFR§173.300.

...5 ¥. For treatment of poultry chill water, apply Technical Sodium Chlorite Solution 31.25 as necessary through a c chlorine dioxide generation system to maintain a residual concentration of up to 3 parts per million (ppm) chlorine dioxide in the chiller water.

Food Plant Process Water Treatment

Chlorine dioxide generated from sodium chlorite is effective for use in controlling incholological growth in flume water and other food processing water systems such as chill water systems and hydrocoolers. The required doseages will vay with process conditions and the degree of contamination present. Depending on the requirements of the specific water system, sodium chorines should be applied continuously infermittently 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 furits and vegletables that are not raw agricultural commodities in accordance with 21CFR6773.300. Treatment of the furits and vegetables with chornine dioxide must be followed by a potable water firse, or by blanching, cooking or canning.

CIP Cleaning: H

the concentration of chlorifie dioxich generated Comes Technical Sodium Chlorite Sci_fiton 31.25 exceeds 53.07 ppm, a potable water rinse shruld follow treatment. Care should be taken to ensure the biological and penetrical quality of the potable water.

curemical quality of the potable water.

Industrial Cooling Water Treatment for continuous feeds, chlorine dioxide for control of bacterial stime and ages in industrial may be applied at dosages slightly industrial control of bacterial stime and ages in industrial may be applied at suffice sordiative denand for control of bacterial stime and ages in industrial ages of control of bacterial stime and ages in industrial ages of control of the pack solor of the control of the pack stime of the pack of control of the pack stime of the pack
Potable Water Treatment
Choine dioxide (QO) is used as both an oxidant and
a disinfectant in dimking water treatment. The required
dosages will vary with source water conditions and the
desages will vary with source water conditions and the
degree of contamination present. For most municipal
and public potable water systems, a chiomie dioxide
and public potable water systems, a chiomie dioxide
and public potable water systems, a chiomie dioxide
provide adequate districction. Residual disinfectant and
provide adequate districction. Residual disinfectant and
by the National Primary Dimking Water Regulations (40
CFR Part 141) and state drinking water standards.

Bacterial Silme Control in Paper Mills
Choirne dioded generated from sodium chlorite is effective for use in controlling microbiological growth in white water paper mill systems. The required diosages will vary with the degree of microbiological and process contamination present. Depending on the specific requirements of the system, sodium chloride should be applied confusiously or intermittently furning a chlorine dioxide generating system to achieve a chlorine dioxide residual concentration between 0.1 and 5.0 ppm. Infarmittent treatments should be repeated as often as necessary to maintain control.

Mollusk Control in Water Systems

Chlorine dioxide generated from soddum chlorife may be used for mollusk control in commercial and industrial retrouchating and one-base cooling water systems. The required dosages will vary with the system type, system conditions, the degree of water contramination present and the desired revised forwhort. Depending on the excitent of the infestion, sodium chlorife may be applied either continuously or intermittently through a chlorine dioxide generating system to achieve the necessary chlorine dioxide generating system to achieve the necessary chlorine dioxide generating system to achieve the necessary chlorine

<u>eliger Control:</u> Maintain a continuous chlorine dioxide esidual of 0.1 - 0.5 ppm.

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

Barterial Control In Oil Wells And Petroleum Systems
Cholrine dioxide is effective in the remediation of
Cholrine dioxide is effective in the remediation of
Dacterial and sulfide contamination commonly found
in olinely production, injection and disposal fluids. The
required dosages will vary with process conditions.
Sodium chlorife may be applied either continuously or
intermitentity through a chlorine dioxide generating

System & oil weil production water as it is separated from; it is separated from; if the weil.

that are 5-gallons or smaller

Chindred Industries (10,0); seffective as both a disinfectant and an oddarf in wastewater treatment. The required desages will vary with water conditions and the degree of contamination yeary. 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 suffide odor control, between pH 5-9, a minimum of 5.2 pm (vk) of chorinne dioxide should be applied to oxidize 1 pm of suffide (measured as suffide ion). For phenol destruction, at pH less than 8, 1.5 pm chlorine dioxide will oxidize 1 pm phenol. at th greater than 10, 3.3 ppm chlorine dioxide will oxidize 1 ppm phenol.

STORAGE: Do not comminter weaker, food or feed by storage or disposal. Keep product in tightly closed contrainer when not in use. Don't drop, roll or skid drum. Keep untight. Aways register cover. Store in a cool, dry well-ventilated area away from heat or open farme.

EMERGENCY HANDLING: In case of contamination or decomposition, do not reaso tomation; if possible, solate contamer in open and well ventilated area. Flord with large volumes of water. If the occurs, editinguish 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 wolation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, control your State Pesticide or Environmental Control Agency, or the Hazardous Waste Agpresentative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL Nornefilable Container.
Do not reuse or refil liter 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 bark and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and rescap. Shake for 10 seconds. Pour finstell this application equipment or a mix bark or store rinsate from taler use or disposas. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more

Pressure Ninse 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 hank or oldest intest for later use or disposal. Insert pressure insing nozzle in the side of the container, and mise at about 40 PSI (or at least 30 seconds. Drain for 10

Label: M47026 (6400-DOT) OC_US_Pail_EPA (0110) R01

TECHNICAL SODIUM CHLORITE SOLUTION 31.25

(25% Active Sodium Chlorite

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS OT DANGER. Correstive. Causes invenersible eye damage and skin burns. Harmful if swallowed. Irritating to nose and throat. As no not get in eyes, on solin or out cluthing. Wear protective eyewers (splashproot orgigals.) Wear protective clothing and rubber gloves when handling this product. Avoid breathing miss or furnes. Wash thoroughly with soap and water after the second organization of the second organization of the second organization or furnes. Wash thoroughly with soap and water after the second organization of the second organization or furnes. Wash thoroughly with soap and wash before it avoid fire.

This product is toxic to fish and aquatic organisms. Do not discharge efficient containing this product into lakes streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Efiniarion System (NPDES) permitting authority has been notified in wirting prior to the discharge, bo not discharge effluent containing this product to sawer systems without perviously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Dry sodium chlorite is a strong oddrang agent. This product becomes a fire or explosive hazard if allowed to dry. Mix only into water. Contamination may start a chemical reaction with the generation of heat, liberation of hazardous gases (chlorine diodde a poisonus, explosive gas, and possible fire and explosion. Do not contaminate with garbage, dirt, organic matter, hussahold products, chemicals, soap products, paint products, solvents, acids, vinegar, beverages, oils, pine oil, dirty rags, or any other foreign matter.

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

Directions for Controlling the Growth of Algae in Retireulating Conling Water Towns before starting facility fouled systems before starting sent. 2. When algae are visible, add an initial set 8. 4 field eurores of Soldium Chlority per 1,000 gals. of water in the system. Repeat if necessary until control is evident. 3. Where algae control is evident. 3. Where algae control is evident. The solution per 1,000 gals. of water in the system Chlorite solution per 1,000 gals. of water in the system twice a week or as needed to maintain control. 4. Add psodium Chlorite directly to the cooling tower drip pan (cold water basin) near the inlet to the recirculating

Directions for Use in the Methanical or Electrolytic Generation of Chlorine Dioxide as a Disinfectant, or for Microorganism or Mollusk Control and as a Chemical Cottant in Aquatic Systems.

Tead requirements, Feed retase of rechnical Sodium Chlorine Solution 31.25 will depend on the system and restude interessary for depend on the system and restude interessary for effective control. Depending on the generator type, Technical Sodium Chloride Solution 31.25 may be diluted at the point of test to prepare a 3% to 25% active aqueous solution for use in EPA chlorine dioxide generators.

ACTIVE INGREDIENT: Sodium Chlorite* OTHER INGREDIENTS:

CONTAINS 2.58 LBS. OF SODIUM CHLORITE PER GALLON AT 70°F *AVAILABLE CHLORINE

39%

KEEP OUT OF REACH OF CHILDREN DANGER FIRST AID

in eyes:	•	in eyes: • Hold eye open and rinse slowly and gently with water for 15-20
	•	Remove contact lenses, if present, after the first 5 minutes,
	•	trien continue ransing eye. Call a poison control center or doctor immediately for treatment
		advice.
on skin or	•	on skin or • Take off contaminated clothing.

,	•	 Call a poison control center or doctor for treatment advice if burning or irritation of the skin persists.
allowed:	•	allowed: . Have person drink a glass of water immediately if able to
	•	 SWallow. Call a poison control center or doctor immediately for treatment

swallow. • Call a poison control center or doctor immediately for treat advice. • Do not induce vorniting unless told to do so by the	tor imme	told to d
swallow. • Call a poison control cen advice. • Do not induce vomiting	ter or doc	ssalun (
swallow. Call a poison co advice. Do not induce	ontrol cen	vomiting
Call a gadyice advice Do not	w. Soison CC	rinduce
• •	Call a g	2
	•	•

- control center or doctor.
 Do not give anything by mouth to an unconscious person.
- 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. f inhaled:

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



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

Gals. Net EPA Reg.

No. 5382-43

- Some examples of industrial applications of chlorine Aduldod include.

 Potable water distinction and removal of suifide.

 Combot of bacterial siline and aligne and mollusks in industrial reductualisting and ne-pass cooling systems.

 Biscontrol in food processing filtmes, water-using edujument, cooling water, and respected waters.

 Disinfection of sewage and plant wastes.

 Extraction of phenotics, simple cyanides and suifides by chemical oxidation.
- 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 several common methods, including:

 1. The chlorine method which utilizes a Sodium Chlorine solution and chlorine gas, or

 2. The hypochlorite method which utilizes a Sodium Chlorine solution, a hypochlorite and which utilizes a Sodium Chlorine solution, and an action or

 3. The Acid-chlorite method which utilizes a Sodium of Chlorine solution, and an action or

 4. The electrolytic method which utilizes a Sodium of Chlorine solution, with sodium chloride added as Chlorine solution, with sodium chloride added as

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 Chlorile Solution 31.25.

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

Directions for Use in Controlling Microbial Population in Poulty Processing Water Chrome dioxide generated from Technical Sodium Chlorine Solution 31.25 may be used as an antimicrobial agent in water used in poultry processing, provided that the residual concentration of chlorine dioxide does not exceed 3 ppm, as determined by an appropriate method in accordance with 21GFR§173.300.

For treatment of poultry chill water, apply Technical Sodium Chlorite Solution 31.25 as necessary through a chlorine dioxido generation system to maintain a residual concentration of up to 3 parts per million (ppm) chlorine dioxide in the chiller water.

Food Plant Process Water Treatment
Chlorine dioxide generate from solium chlorite is effective for use in controlling microbiological growth in flume water and other food processing water systems required doceans and plant water systems in process conditions and the degree of contamination present. Depending on the requirements of the specific water system, solium chlorife should be applied continuously or intermittently intrough a chlorine dioxide residual concentration bettered 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 finits and viggitables that are not raw agricultural commodities in accordance with 21CFR§173.300. Treatment of the finits and vegetables with chlorine dioxide must be followed by a potable water finse, or by blanching, cooking or caming.

EPA Est. 5382-KS-1 EPA Est. 70547-IL-1

Aqueeus Disinfection Systams for CIP Cleaning, IV, infermitranty through a chlorine dioxide the concentration of chlorine Coxide generated frome, generating systam to our broins aboution state of some systam to our should prome a popular should follow teatment. Defore it is re-injected into the well. Care should be taken to ensure the biological and For continuous feeds, chloring afraction of the potable water.

chemical quality of the potable water.

The description o

Potable Water Treatment
Cholinen dixiode (GDb), is used as both an oxidant and
a disinfectant in drinking water treatment. The required
designes will vary with sucher water conditions and the
degree of contramination present. For most municipal
and public potable water systems, a chionine dixoxde
sisolula concentration of up to 2 ppm is sufficient to
provide adequate disinfection. Residual disinfectant and
clainfraction pyrpoducts must be monitrone as required
by the National Primary Dinking Water Regulations (40
CFR Part 141) and state drinking water standards.

Bacterial Slime Control in Paper Mills
Choline dioxide generated from sodium chlorife is
effective for use in controlling microbiological growth in
white water paper mill systems. The required dosages
will vary with the detgree of microbiological and process
contramination present. Depending on the specific
requirements of the system, sodium chlorife should be
applied confluencisty on intermittently turough a chlorine
dioxide generating system to achieve a chlorine dioxide
resistate. Concentration between 0.1 and 5.0 ppm.
Intermittent treatments should be repeated as often as
necessary to maintain control.

Mollusk Control in Waler Systems
Chorne dioxide generated from sodium chorite 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 destried level of control. Lopending on the extent of the infesticin, sodium chlorite may be applied either continuously or intemnitemby through a chlorine dioxide generating system to achieve the necessary chlorine dioxide residual concentration.

Jeliger Control: Maintain a continuous chlorine dioxide esidual of 0.1 - 0.5 ppm.

Intermittent Dase: 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.

Bacterial Control In Oil Wells And Petroleum Systems Chlorine diocode is reflective in the remediation of bacterial and suffice contramination commonly found in olifield production, injection and disposal fluids. The required Colosages will vary with process conditions. Sodium chlorite may be applied either confinuously on

For containers that are larger than 5-gallens

Chlorine dioxide (Clo₂) is effective as both a disinfectant and an oddard in wastewater treatment. The required tosages will vary with water conditions and the degree of confirmmation 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 suffide odor control, between pH 5-9, a minimum of 5.2 ppm (vt) of circlorine dioxide should be applied to oxidize 1 ppm of suffide (measured as suffide ion). For phenol destruction, at pH less than 8, 1.5 ppm chlorine dioxide will oxidize 1 ppm phenol; at pH greate than 10, 3.3 ppm chlorine dioxide will oxidize 1 ppm phenol.

STORAGE. Bo nnt contaminate water, food or feed by storage or disposal, Keep product in tightly closed contrainer when not in use. Don't drop, roll or skid drum. Keep upright. Aways replace cover. Store in a cool, dry well-verifiated area away from head to open farme.

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

PESTICIDE DISPOSAL: Pesticide wastes are acutely brazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a widation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide of Environmental Control Agency, or the Hzzardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefitable Container.
Do not teuse or refill this container, Offer for recycling if available. 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 and kath. Fill the container 1/4 full with water. Replace and tighten closures. The container on its side and roll it back and forth, ensuring at least one complete recultion, for 30 secords. Stand the confainer on its end and by it back and with several times. Empty the rinsate into application equipment or a mix tank or store mixate for later use or disposal. Repeat this procedure two more times.

Pressure Rinse as follows: Empty the remaining contents thin application equipment or a mix task and confines to drain for 10 seconds after the flow begins to drip. Hold contains the grade drown over application equipment or mix task or collect incise for false use or disposal Insert pressure intesing nozzle in the side of the container, and rinse about 64 PSI for at least 30 seconds. Drain for 10 seconds, after the flow begins to dit.

Label: M47026 (6400-DOT) OC_US_dr_EPA (0110) R03