

IVR-SAN 7.5

CHLORINE DIOXIDE PRECURSOR FOR MICROBIAL CONTROL IN WATER AND WASTEWATER

ACTIVE INGREDIENTS:

Sodium Chlorite7.5%

OTHER INGREDIENTS:.....92.5%

TOTAL 100.0%

KEEP OUT OF REACH OF CHILDREN

DANGER

FIRST AID

If on skin or clothing:	<ul style="list-style-type: none">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 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 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: 1-800-424-9300 (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. Treat as a corrosive. Inhalation has the potential for delayed pulmonary edema. Ingestion of small amounts has been reported to cause methemoglobinemia, hemolysis, and glutathione depletion, followed by renal failure. This chemical acts similarly to its related compound chlorate, and produces a drug induced G6PD deficiency. Methylene blue has not been reported as effective. Consult the Pub Med Case Report PMID 22996135 for the case description and treatment utilized.

Manufactured By:

 **CH₂O, Incorporated**

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER: Corrosive. Causes irreversible eye damage. Avoid skin contact by wearing recommended personal protective equipment. Causes skin burns. Harmful if swallowed, inhaled, or absorbed through skin. Do not get in eyes, on skin, or clothing. Avoid breathing vapor or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear chemical safety goggles and use a face shield where splashing and spraying is possible. Wear appropriate chemical resistant gloves (neoprene is a protective material type). Wear protective clothing to minimize skin contact when handling. Wash hands thoroughly with soap and water after handling. Remove contaminated clothing/PPE immediately and wash before reuse.

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 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.

DIRECTIONS FOR USE

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

Directions for Use in the Mechanical or Electrolytic Generation of Chlorine Dioxide as a Disinfectant, or for Microorganism Control in Water and Wastewater Systems.

IVR-SAN 7.5 may be used in the mechanical generation of chlorine dioxide for use in controlling microorganisms in water and wastewater systems. IVR-SAN 7.5 is fed to chlorine dioxide generation equipment, which produces an aqueous solution of chlorine dioxide by one of the following methods of generation:

1. The chlorine method which uses IVR-SAN 7.5 and chlorine gas;
2. The hypochlorite method which uses IVR-SAN 7.5 and a combination of hypochlorite solution, and an acid;
3. The acid-chlorite method, which uses IVR-SAN 7.5 and an acid as the activating agent; or
4. The electrolytic method which uses IVR-SAN 7.5, with sodium chloride added as needed.

Your CH₂O representative can guide you in the selection, installation and operation of generation systems. Consult the instructions on the chlorine dioxide generation system before using IVR-SAN 7.5.

Feed requirements: Feed rates of **IVR-SAN 7.5** 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, **IVR-SAN 7.5** may be diluted at the point of use to prepare a 3% to 7.5% active aqueous solution for use in chlorine dioxide generators.

In all cases, generated chlorine dioxide solution must be applied in such a manner to ensure adequate mixing and minimal volatilization. The water stream to be treated may either be passed directly through the chlorine dioxide generator or treated via side stream injection point. The generation system employed must be in good working order and capable of achieving chlorine dioxide solutions free from chlorine contamination.

Because of the variability of demand in water and process systems, the dosage of chlorine dioxide required to achieve the target residuals is normally lower for continuous feed systems than for slug or timed feed applications. The minimum acceptable residual for chlorine dioxide, as determined by a verified procedure, is 0.1 ppm for a minimum one minute contact time. Residual determination procedures must be substantiated methods and must also be specific for chlorine dioxide or used in systems where no chlorine contamination is possible. Do not add **IVR-SAN 7.5** directly to process water.

APPLICATIONS:

POTABLE WATER AND WASTEWATER DISINFECTION: For most municipal and public potable water systems a chlorine dioxide residual concentration up to 2.0 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. For wastewater and sewage applications, residual chlorine dioxide concentrations up to 5.0 ppm are generally adequate.

FOOD PROCESSING PLANTS, DAIRIES, BOTTLING PLANTS, AND BREWERIES: For microbial control in typical food processing water systems, such as flume transport, chill water systems, hydrocoolers, beverage and brewery pasteurizers and bottle rinsing, apply **IVR-SAN 7.5** through a chlorine dioxide generation system to achieve a chlorine dioxide residual concentration ranging from 0.25 to 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.

POULTRY PROCESSING WATER: Use **IVR-SAN 7.5** to generate chlorine dioxide for use as an antimicrobial agent in water used in poultry processing in an amount not to exceed 3 ppm residual chlorine dioxide as determined by an appropriate method in accordance with 21CFR § 173.300.

AQUEOUS DISINFECTION SYSTEMS FOR CIP CLEANING: If the concentration of chlorine dioxide generated from **IVR-SAN 7.5** exceeds 5.0 ppm, a potable water rinse must follow treatment. Care must be taken to ensure the biological and chemical quality of the potable water.

GENERAL INDUSTRIAL PROCESS WATER TREATMENT (OILFIELD INJECTION WATER, WHITE WATER PAPER MILL SYSTEMS, AND RECIRCULATING COOLING TOWERS): For control of microbial slime, these systems will require a chlorine dioxide residual concentration ranging between 0.25 and 5.0 ppm. The **IVR-SAN 7.5** dosage needed to achieve these levels will vary widely depending on the exact application.

Please consult your CH₂O representative for assistance in determining the correct dosage level.

STORAGE AND DISPOSAL

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE OR DISPOSAL.

Storage: Store this product in a cool, dry area away from direct sunlight and heat to avoid deterioration. In case of spill, flood the area with large quantities of water.

Pesticide Wastes: 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.

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 about 40 PSI for at least 30 seconds. Drain for 10 seconds, after the flow begins to drip.

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