



# **SDS**

*Manufactured by:  
ReliOx Corporation  
904.729.5097*

### SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**1.1 Product identifier**
**Product name:** Whiff!™ Aqueous Chlorine Dioxide

**Product code(s):** Whiff!™ Aqueous Chlorine Dioxide

**Synonym(s):** Aqueous solution containing chlorine dioxide

|                     |   |
|---------------------|---|
| HEALTH              | 0 |
| FLAMMABILITY        | 0 |
| PHYSICAL HAZARD     | 0 |
| PERSONAL PROTECTION | A |

**1.2 Relevant identified uses of the substance or mixture and uses advised against**
**General use:**
**Uses advised against:** None known

**1.3 Details of the supplier and of the safety data sheet**
**Manufacturer/Distributor**

 ReliOx Corporation  
 8475 Western Way, Suite 155  
 Jacksonville, FL 32256 USA  
 1-904-729-5097

**1.4 Emergency telephone number: 1-904-729-5097**

### SECTION 2 - HAZARDS IDENTIFICATION

**2.1 Classification of substance or mixture**
**Product definition:** Mixture

**Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008**

Not a hazardous substance or mixture according to OSHA or to European Union Legislation

**2.2 Label elements**

Not a dangerous substance of mixture according to GHS.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS**

None known

### SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances**

Not applicable

**3.2 Mixtures**

| % by Weight | Ingredient                   | CAS Number | EC Number | Index Number | GHS Classification                 |
|-------------|------------------------------|------------|-----------|--------------|------------------------------------|
| <0.1        | Sodium Chlorite              | 7758-19-2  | 231-836-6 | ----         | H272, H301, H310, H314, H373, H400 |
| >99.0       | Inactive Ingredients (Water) | 7732-18-5  | 231-791-2 | ----         | ----                               |

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with the applicable provisions of paragraph (i). There are no additional ingredients present in this product which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

### SECTION 4 - FIRST AID MEASURES

**4.1 Description of first aid measures**

**Inhalation:** If product mist vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If symptoms persist or if the victim feels unwell, seek medical attention.

**Eyes:** If eyes become irritated, immediately flush eyes with large amounts of water or saline solution, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after first 2 minutes and continue rinsing. If irritation persists seek medical attention, preferably from an ophthalmologist.

**Skin:** If skin becomes irritated, wash the affected area with soap and water followed by thorough rinsing. If irritation continues, seek medical attention.

**Ingestion:** If product is ingested, rinse mouth with water. Remove dentures if present. Seek medical attention if the person feels unwell or if a large quantity of material has been ingested.

**4.2 Most important symptoms and effects, both acute and delayed**
**Potential health symptoms and effects**
**Eyes:** May cause eye irritation.

**Skin:** May cause skin irritation.

**Inhalation:** Not expected to be an inhalation hazard during normal use.

**Ingestion:** May cause gastrointestinal irritation if swallowed.

**Chronic:** Persons with pre-existing skin disorders or respiratory impairment may be more susceptible to the effects of this product.

#### 4.3 Indication of any immediate medical attention and special treatment needed

##### Advice to doctor and hospital personnel

Treat symptomatically and supportively.

### SECTION 5 - FIRE FIGHTING MEASURES

#### 5.1 Extinguishing media

**Suitable methods of extinction:** Use extinguishing media suitable for surrounding fire.

**Unsuitable methods of extinction:** None known

#### 5.2 Special hazards arising from the substance or mixture

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

**Explosion hazards:** This material is not considered to be an explosion hazard.

#### 5.3 Advice to firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control runoff water to prevent environmental contamination. Fire residues and contaminated extinguishing water must be disposed of in accordance with local regulations.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Clean up spills immediately. Spill creates a slip hazard.

#### 6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways.

#### 6.3 Methods and materials for containment and cleaning up

Cover drains and contain spill. Wipe up small spills with an absorbent cloth. Cover large spills with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect material and place into an approved container for proper disposal. Dispose of waste in accordance with federal, state and local regulations.

#### 6.4 Reference to other sections

For indications about waste treatment, see Section 13.

### SECTION 7 - HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

Do not get in eyes or on skin or clothing. Do not inhale mist or vapor. No smoking. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator.

##### Advice on protection against fire and explosion

This material is not considered to be a fire or explosion hazard.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in dry, cool, well-ventilated areas away from food and drink. Avoid exposure to sunlight. Protect containers against physical damage. Keep containers tightly closed when not in use. Do not reuse containers when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Keep out of reach of children.

#### 7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

### SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1 Control parameters

##### Occupational exposure limit values

| CAS Number | Ingredient       | OSHA PEL  | ACGIH   | NIOSH   |
|------------|------------------|---|---|---|
| 10049-04-4 | Chlorine Dioxide | 0.1 ppm (0.3 mg/m <sup>3</sup> ) TWA<br>0.3 ppm (0.9 mg/m <sup>3</sup> ) STEL | 0.1 ppm (0.3 mg/m <sup>3</sup> ) TWA<br>0.3 ppm (0.9 mg/m <sup>3</sup> ) STEL | 0.1 ppm (0.3 mg/m <sup>3</sup> ) TWA<br>0.3 ppm (0.9 mg/m <sup>3</sup> ) STEL<br>5 ppm IDLH |

## 8.2 Exposure controls

**Engineering measures:** In the workplace technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable.

**Individual protection measures:** None required with normal usage.

**Hygiene measures:** Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

**Eye/face protection:** Avoid contact with eyes. Wear safety glasses with unperforated side shields if splashes are likely to occur.

**Hand protection:** Wear protective gloves for prolonged periods of exposure or if this product has caused irritation.

**Skin protection:** None required with normal use.

**Respiratory protection:** None required with normal use.

**Environmental exposure controls:** Do not empty into drains.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|   |   |
|---|---|
| Appearance                              | Clear, colorless to faint yellow liquid |
| Odor                                    | Faint, chlorine-like                    |
| Odor Threshold                          | No data available                       |
| Molecular Weight                        | Not applicable                          |
| Chemical Formula                        | Not applicable                          |
| pH                                      | 7 - 8 (10% aqueous solution)            |
| Freezing/Melting Point                  | 0 °C (32 °F) [estimated]                |
| Boiling Point, Initial                  | 100 °C (212 °F) [estimated]             |
| Evaporation Rate                        | <1 [n-BuOAc = 1]                        |
| Flammability (solid, gas)               | Not applicable                          |
| Flash Point                             | No data available                       |
| Autoignition Temperature                | No data available                       |
| Decomposition Temperature               | No data available                       |
| Lower Explosive Limit (LEL)             | No data available                       |
| Upper Explosive Limit (UEL)             | No data available                       |
| Vapor Pressure                          | No data available                       |
| Vapor Density                           | No data available                       |
| Density                                 | 1.00 g/ml (8.35 lb/gal)                 |
| Viscosity                               | No data available                       |
| Solubility in Water                     | Soluble                                 |
| Partition Coefficient (n-octanol/water) | Not applicable                          |
| Oxidizing Properties                    | Not applicable                          |
| Explosive Properties                    | Not applicable                          |
| Volatiles by Weight @ 21 °C             | >99.5%                                  |

### 9.2 Other Data

No data available

## SECTION 10 - STABILITY AND REACTIVITY

### 10.1 Reactivity

No special reactivity has been reported during normal conditions of handling and use.

### 10.2 Chemical Stability

This material is stable under recommended storage and handling conditions. Exposure to sunlight or ultra-violet light will reduce product strength.

### 10.3 Possibility of hazardous reactions

Do not allow solution to evaporate to dryness as solid residue may become a fire or explosion hazard if allowed to dry and can ignite in contact with combustible materials. Hazardous polymerization will not occur.

### 10.4 Conditions to avoid

Temperature extremes, contact with incompatible materials, exposure to light and sunlight

### 10.5 Incompatible materials

Strong reducing agents, organic materials, powdered metals, combustible materials

### 10.6 Hazardous decomposition products

Thermal decomposition products include hydrogen chloride gas and sodium oxides.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute oral toxicity

Expected to have low acute oral toxicity. LD<sub>50</sub>, rat: 82.85 g/kg [calculated]

#### Acute inhalation toxicity

Expected to have low acute inhalation toxicity.

#### Acute dermal toxicity

Expected to have low acute dermal toxicity. LD<sub>50</sub>, rat: 76.16 g/kg [calculated]

#### Skin irritation

May cause skin irritation.

#### Eye irritation

May cause eye irritation.

#### Sensitization

No data available

#### Genotoxicity in vitro

No data available

#### Mutagenicity

No data available

#### Specific organ toxicity - single exposure

No data available

#### Specific organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

### 11.2 Further information

No component of this product present at levels greater than or equal to the 0.1% threshold (de minimis) is identified as a probable, possible, potential or confirmed carcinogen by IARC, ACGIH, NTP or OSHA. No data is available regarding the mutagenicity or teratogenicity of this product, nor is there available data that indicates that it causes adverse developmental or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Toxicity

This material is expected to have low acute toxicity to aquatic organisms.

### 12.2 Persistence and degradability

Inorganic substances are not biodegradable. Methods for the determination of biodegradability are not applicable to inorganic substances.

### 12.3 Bioaccumulation potential

This material will not bioaccumulate.

### 12.4 Mobility in soil

The mobility of this product in soil is high.

### 12.5 Results of PBT and vPvB assessment

No data available

### 12.6 Other effects

#### Additional ecological information

Do not allow material to run into surface waters, wastewater or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## SECTION 13 - DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

The generation of waste should be avoided or minimized whenever possible. Although this product is classified as non-hazardous under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261 this material and its container should be disposed of in a safe way as empty containers may contain product residue. Leave chemicals in original containers. No mixing with other waste. Handle unclean containers like the product itself. Incinerate in an approved facility. Do not incinerate closed container. Dispose of in accordance with the Directive 2008/98/EC as well as other national, federal, state/provincial and local laws and regulations.

**RCRA F-Series:** No listings above the reportable threshold (de minimis)

**RCRA U-Series:** No listings above the reportable threshold (de minimis)

## SECTION 14 - TRANSPORT INFORMATION

**Note:** Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

**NOT REGULATED FOR TRANSPORT**

## SECTION 15 - REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

#### U. S. Federal Regulations

**OSHA Hazard Communication Standard:** This material is not classified as hazardous in accordance with OSHA 29 CFR 1910-1200.

**OSHA Process Safety Management Standard:** This product is not regulated under OSHA PSM Standard 29 CFR 1910.119.

**EPA Risk Management Planning Standard:** This product is not regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

**EPA Federal Insecticide, Fungicide and Rodenticide Act:** This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.

**Toxic Substance Control Act (TSCA) Inventory:** All substances in this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

**Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b)) and 1310.4(f)(2)) and Chemical Code Number**  
No listings

**Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number:** No listings

**Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals:** No listings

#### **Superfund Amendments and Reauthorization Act (SARA)**

**SARA Section 311/312 Hazard Categories:** None known

**SARA 313 Information:** None of the components of this product exceed the threshold (de minimis) reporting requirements of Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

**SARA 302/304 Extremely Hazardous Substance:** None of the components of this product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

**SARA 302/304 Emergency Planning & Notification:** None of the components of this product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

**Comprehensive Response Compensation and Liability Act (CERCLA):** None of the components of this product exceed the threshold (de minimis) for hazardous wastes established under CERCLA.

#### **Clean Air Act (CAA)**

This product does not contain Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain Class 1 ozone depleters.

This product does not contain Class 2 ozone depleters.

#### **Clean Water Act (CWA)**

This product does not contain any Hazardous Substances designated under the CWA at concentrations greater than trace amounts (<20 ppm).

This product does not contain any Priority Pollutants.

This product does not contain any Toxic pollutants.

#### U.S. State Regulations

##### **California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986**

This product contains no chemical(s) known to the state of California to cause cancer birth defects or reproductive harm in concentrations that exceed the threshold (de minimis) reporting levels established under Proposition 65.

##### **Other U.S. State Inventories**

This does not contain any substances in concentrations that exceed the threshold (de minimis) reporting levels established by any State Hazardous Substance Inventories, Right-to-Know lists or Air Quality/Air Pollutants lists and/or Air Quality/ Air Pollutants list.

#### Canada

**WHMIS Hazard Classification:** No data available

**Canadian National Pollutant Release Inventory (NPRI):** This does not contain any substances in concentrations that exceed the threshold (de minimis) reporting levels established by the NPRI.

#### European Economic Community

**WGK, Germany (Water danger/protection):** No data available

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

## SECTION 16 - OTHER INFORMATION

### Hazardous Material Information System (HMIS)

|                     |   |
|---------------------|---|
| HEALTH              | 0 |
| FLAMMABILITY        | 0 |
| PHYSICAL HAZARD     | 0 |
| PERSONAL PROTECTION | A |

#### HMIS Hazard Rating Legend

0 = Minimal 1 = Slight 2 = Moderate

3 = Serious 4 = Severe

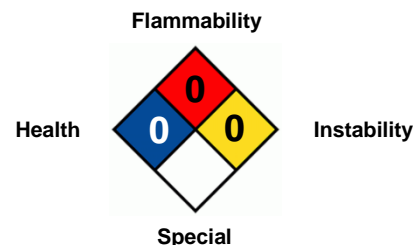
\* = Chronic Health Hazard

#### NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate

3 = High 4 = Extreme

### National Fire Protection Association (NFPA)



#### Abbreviation Key

|  |   |
|--|---|
| <p><b>ACGIH</b> American Conference of Governmental Industrial Hygienists</p> <p><b>ADR</b> Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)</p> <p><b>CAS</b> Chemical Abstract Services</p> <p><b>CFR</b> Code of Federal Regulations</p> <p><b>COC</b> Cleveland Open Cup</p> <p><b>DOT</b> Department of Transportation</p> <p><b>EC<sub>50</sub></b> Half maximal effective concentration</p> <p><b>EMS</b> Emergency Response Procedures for Ships Carrying</p> <p><b>EPA</b> Environmental Protection Agency</p> <p><b>ErC50</b> Reduction of Growth Rate</p> <p><b>ERG</b> Emergency Response Guide Book</p> <p><b>FDA</b> Food and Drug Administration</p> <p><b>GHS</b> Globally Harmonized System of Classification and Labelling of Chemicals (GHS)</p> <p><b>HCS</b> Hazard Communication Standard</p> <p><b>IARC</b> International Agency for Research on Cancer</p> <p><b>IATA</b> International Air Transport Association</p> <p><b>IC<sub>50</sub></b> Half Maximal Inhibitory Concentration</p> <p><b>ICAO</b> International Civil Aviation Organization</p> <p><b>IDLH</b> Immediately Dangerous to Life and Health</p> <p><b>IMDG</b> International Maritime Dangerous Goods</p> <p><b>IMO</b> International Maritime Organization</p> <p><b>LC<sub>50</sub></b> 50% Lethal Concentration</p> <p><b>LD<sub>50</sub></b> 50% Lethal Dose</p> | <p><b>LD<sub>Lo</sub></b> Lowest Lethal Dose</p> <p><b>mppcf</b> Millions of Particles Per Cubic Foot</p> <p><b>NA</b> North America</p> <p><b>NAERG</b> North American Emergency Response Guide Book</p> <p><b>NIOSH</b> National Institute for Occupational Safety &amp; Health</p> <p><b>NTP</b> National Toxicology Program</p> <p><b>OSHA</b> Occupational Safety and Health Administration</p> <p><b>PBT</b> Persistent, Bioaccumulating and Toxic</p> <p><b>PEL</b> Permissible exposure limit</p> <p><b>PMCC</b> Pensky-Martens Closed Cup</p> <p><b>ppm</b> Parts Per Million</p> <p><b>RCRA</b> Resource Conservation and Recovery Act</p> <p><b>RID</b> Dangerous Goods by Rail</p> <p><b>RQ</b> Reportable Quantity</p> <p><b>TCC/Tag</b> Tagliabue Closed Cup</p> <p><b>TLV</b> Threshold Limit Value</p> <p><b>TSCA</b> Toxic Substance Control Act</p> <p><b>TWA</b> Time-weighted Average</p> <p><b>UN</b> United Nations</p> <p><b>VOC</b> Volatile Organic Compounds</p> <p><b>vPvB</b> Very Persistent and Very Bioaccumulating</p> <p><b>WHMIS</b> Workplace Hazardous Materials Information System</p> |
|--|---|

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