

Rev Date: September 12, 2023

VITAL OXIDE

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Name	Vital Oxide RTU	Aqueous Oxidant HMIS Rating												
1.2 SDS No.	VO091223	<table border="1"> <tr> <td>H</td> <td>0</td> <td></td> </tr> <tr> <td>F</td> <td>0</td> <td></td> </tr> <tr> <td>R</td> <td>0</td> <td></td> </tr> <tr> <td>PE</td> <td>--</td> <td></td> </tr> </table>	H	0		F	0		R	0		PE	--	
H	0													
F	0													
R	0													
PE	--													
1.3 EPA Reg. No.	82972-1													
1.3 Manufacturer/Distributor	Vital Solutions, LLC 3755 Fiscal Ct. Ste. B West Palm Beach, FL 33404													
1.4 Phone Numbers:	(561) 848-1717													
1.5 Medical Emergency:	(800) 222-1222													

Section 2: Hazards Identification

2.1 GHS Classification: This material is not considered hazardous by the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

2.2 HMIS Rating: Health: 0 Flammability: 0 Reactivity: 0 PPE: None

2.3 Remarks For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.4 Emergency Overview: Colorless liquid with mild fresh odor. Avoid contact with eyes. Keep out of reach of children.

2.5 Potential Health Effects

- **Eye Contact:** Eye contact may cause mild eye irritation with discomfort.
- **Skin Contact:** Does NOT cause skin irritation and the product is NOT skin sensitizer.
- **Inhalation:** Does NOT cause any respiratory irritation. If consumer product accidentally contacts strong acids in restricted ventilation area, avoid breathing the vapors and allow adequate time for the vapors to disperse before re-entering the restricted area.
- **Ingestion:** Non-Toxic **Carcinogenicity Information:** IARC, NTP, OSHA, and ACGIH list none of the components present in this material at concentrations equal to or greater than 0.1% as carcinogens.

2.6 Hazard statements: Eye contact may cause mild eye irritation with discomfort.

2.7 Precautionary statements

- **prevention:** P234 Keep only in original container, or properly labeled second container
- **Precautionary statements – response:** P390 Absorb spillage to prevent waste.

Section 3: Composition / Information on Ingredients

Ingredients	CAS Number	Wt %
Oxychlorine Compounds	Mixture	0.200
n-Alkyl Dimethyl Benzyl Ammonium Chloride	68391-01-5	0.125
n-Alkyl Dimethyl Ethylbenzyl Ammonium Chloride	68956-79-6	0.125
Inert Ingredients	Mixture	99.55

At these concentrations none of the ingredients are known to pose any hazards to human health.

Section 4: First Aid Measures

- 4.1 Inhalation:** Does NOT cause any respiratory irritation. If consumer product accidentally contacts strong acids in restricted ventilation area, avoid breathing the vapors, and allow adequate time for the vapors to disperse before re-entering the restricted area.
- 4.2 Skin Contact:** Does NOT cause skin irritation.
- 4.3 Eye Contact:** In case of contact, flush eyes with plenty of water.
- 4.4 Ingestion:** Non-toxic. Give a glass of water.

Section 5: Fire Fighting Measures

- 5.1 Flammable Properties: Flash Point:** Not Available (Non Flammable)
- 5.2 Flammable Limits: Lower Flammable Limit:** Not Established
- 5.3 Burn Rate:** Unknown
- 5.4 Upper Flammable Limit:** Not Established
- 5.5 Flammability Classification:** Non-Flammable liquid
- 5.6 Auto ignition Temperature:** Not Established
- 5.7 Hazardous Combustion Products:** Thermal or other decomposition may yield chlorine dioxide or chlorine.
- 5.8 Extinguishing Media:** N/A (Non-Flammable liquid)
- 5.9 Additional Considerations:** None
- 5.10 FIRE FIGHTING INSTRUCTIONS:** Non-Flammable liquid
- 5.11 NFPA Rating:** Health: 0 Flammability: 0 Reactivity: 0 PPE: None

Section 6: Accidental Release Measures

- 6.1 Spill Clean Up**
No special cleanup measures are required for the consumer product. To avoid the possibility of "bleaching" the spill should be absorbed with paper towels, and the area rinsed with clean water.
- 6.2 Accidental Release Measures**
Spills are slippery and should be cleaned up promptly.

Section 7: Handling and Storage

- 7.1 Handling:** Keep away from heat and strong acids. Do not ingest. Keep container closed. Use only with adequate ventilation.
- 7.2 Storage:** Keep container tightly closed and sealed until ready for use. Keep container in a well-ventilated place. Do not store above 90°F (40°C) or near fire or open flame. Store large quantities in buildings to comply with OSHA 1910.106. Do not transfer contents to bottles or other unlabeled containers. Do not reuse empty containers. Keep out of reach of children.
- 7.3 Incompatible materials:** Strong acids
- 7.4 Special Packaging Materials:** None

Section 8: Exposure Control/ Personal Protection

- 8.1 Engineering Controls:** Use in adequately ventilated areas.
- 8.2 Personal Protective Equipment:**
- 8.3 Eye/Face Protection:** Not required for consumer product.
- 8.4 Skin Protection:** Not required for consumer product.
- 8.5 Respirators:** None required for normal use. If consumer product accidentally contacts strong acids in restricted ventilation area, Avoid breathing the vapors, and allow adequate time for the vapors to disperse before re-entering the restricted area.
- 8.6 Exposure Limits:**
- **Oxychlorine Compounds**
 - **n-Alkyl Dimethyl Ethylbenzyl Ammonium Chloride:**
 - PEL (OSHA): Not available PEL (OSHA): Not available
 - TLV (ACGIH): Not available TLV (ACGIH): Not available

• n-Alkyl Dimethyl Benzyl Ammonium Chloride:

PEL (OSHA): Not available

TLV (ACGIH): Not available

Section 9: Physical and Chemical Properties

Appearance:	Colorless liquid	Odor:	Mild-Fresh
Physical State:	Liquid	pH:	8 - 9
Boiling Point (°F):	212	Solubility in Water:	100%
Freezing Point (°F):	32	Vapor Pressure (mm Hg):	Not Available
Volatile Organic Compounds (VOC):	None	Evaporation Rate:	Less than Ether
Specific Gravity:	1.003 @ 68°F (20°C)	Density (lb/gal):	8.40 @ 68°F (20°C)

Section 10: Stability and Reactivity**10.1 Chemical Stability:** The product is stable.**10.2 Incompatibility with other Materials:** Strong acids**10.3 Conditions to avoid:** Contact with strong acids**10.4 Hazardous Polymerization:** Will not occur.**10.5 Hazardous Decomposition Products:** Thermal or other decomposition may yield chlorine dioxide or chlorine.**Section 11: Toxicological Information****11.1 TOXICITY TESTING**

- **Acute Inhalation** – Studies with Wistar Albino rats exposed to a respirable aerosol made from a solution of Vital Oxide at a level of 2.08 mg/l for four hours resulted in no deaths and no abnormal necropsy observations.
- **Eye Contact** – Studies with New Zealand white rabbits showed this product is a very mild ocular irritant; mild conjunctival irritation was observed, but cleared within 24 hours.
- **Skin Contact** – Study of dermal toxicity in New Zealand white rabbits showed the product to be non-toxic: Dermal LD₅₀> 5,000 mg/kg of body weight; Study of dermal irritation in New Zealand white rabbits showed the product is not a dermal irritant. In Dermal Sensitization studies, Vital Oxide was determined not to be a sensitizer.
- **Swallowing** - Acute oral toxicity in albino rats: Non-toxic LD₅₀>5,000 mg/kg of body weight.

11.2 EPA TOXICITY RATING – IV This is the lowest category on the scale and is designed for substances that are the least hazardous.**Section 12: Ecological Information****12.1 Environmental Hazards:** No data available.**12.2 Environmental Fate:** No data available.**Section 13: Disposal Considerations****13.1 Waste Disposal:** Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial and Local regulations.**Section 14: Transport Information****14.1 Shipping Information:** Not regulated by DOT, IMO/IMDG and IATA/ICAO for ground, air or ocean shipments.

Section 15: Regulatory Information

15.1 U.S. Federal Regulations:

- **TSCA:** All components appear in TSCA Inventory
- **OSHA:** Refer to Section 8 for exposure limits.

15.2 CERCLA SARA Hazard Category:

- **Section 311 and 312:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: None
- **Section 313:** This product contains following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: None.

15.3 State regulations: State Right to Know information is not provided.

15.4 California prop. 65 (no significant risk level): None

15.5 International Regulations:

15.6 Canadian WHMIS: Not controlled.

15.7 Canadian Environmental Protection Act (CEPA): Additional information available upon request.

15.8 EU Regulations: Additional information available upon request.

15.9 EPA/FIFRA: Registration number: 82972-1

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

Section 16: Other Information

The information is furnished without warranty, expressed, or implied, except that it is accurate to the best knowledge of Vital Solutions, LLC. The Data on this sheet related only to the specific material designed herein. Vital Solutions, LLC, assumes no legal responsibility for the use or reliance on this data.

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Revision Note:	0

End of SDS