

# SAFETY DATA SHEET

## Hortisan Concentrate

### Section 1: Identification of the Substance and Supplier

<b>Product name</b>	Hortisan Concentrate  Chlorine dioxide, aqueous solution
<b>Recommended use</b>	Anti-microbial
<b>Company details</b>	<b>Alpha Environmental</b> <b>16 Gladstone Road</b> <b>Richmond, Nelson</b> <b>Phone: (03) 544 4365</b> <b>Call Free: 0508 425 742</b> <b>Hours 8am – 5 pm, Mon – Fri</b>
<b>Emergency telephone</b>	<b>0800 764 766 (0800 POISON) 24 hours human health</b>
<b>Date of preparation</b>	<b>March 2017</b>

### Section 2: Hazards Identification

<b>Hazard classifications</b>	Not classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 However, may be irritating to respiratory system, skin, and eyes.
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### Section 3: Composition/Information on Ingredients

<b>Chemical name</b>	<b>CAS number</b>	<b>Concentration (%)</b>
Chlorine dioxide	10049-04-4	<1
Non hazardous proprietary products	N/A	>99

### Section 4: First Aid Measures

<b>Necessary first aid measures</b>	Get medical advice if feeling unwell.  IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  EYE CONTACT: In case of eye contact, immediately rinse eyes thoroughly with plenty of water. If wearing contact lenses, remove only after initial rinse, and continue rinsing eyes for at least 15 minutes. If irritation occurs or persists, get medical advice/attention.  IF ON SKIN: Gently wash with plenty of soap and water.
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	Remove/Take off immediately all contaminated clothing.
	IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash contaminated clothes with plenty of water before reuse.
	Collect spillage.
<b>Required instructions</b>	For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor.
<b>Notes for medical personnel</b>	May aggravate existing respiratory and skin conditions.
<b>Workplace facilities</b>	Emergency showers and eyewashes may be warranted depending on quantity and type of use.

### Section 5: Fire Fighting Measures

<b>Type of hazard</b>	Does not present a fire hazard.
<b>Fire hazard properties</b>	Not classified as flammable under HSNO. Avoid reducing agents.
<b>Regulatory requirements</b>	N/A
<b>Extinguishing media and methods</b>	Use water in large amounts, water spray. Do NOT use carbon dioxide, dry chemical, or halon.
<b>Hazchem code</b>	N/A
<b>Recommended protective clothing</b>	Protect from respiratory exposure. Wear full protective clothing and self-contained breathing apparatus (SCBA).

### Section 6: Accidental Release Measures

<b>Emergency procedures</b>	<p>Wear chemical resistant gloves and overalls, facemask or goggles.</p> <p>LARGE SPILLS: Isolate hazard area and deny entry to unnecessary or unprotected personnel. Keep combustibles away from spill. Ventilate area of spill or leak. Remove any gas present with a fine water spray. Stop leak if you can do it without risk. Wear a self-contained breathing apparatus. Contain spilled liquid with sand or inert absorber. Place in a disposal container. Although not regarded as ecotoxic to the aquatic environment, avoid runoff into storm sewers and ditches that lead to waterways.</p> <p>SMALL SPILL: Rinse with large amounts of water. Collect spillage.</p>

### Section 7: Handling and Storage

<b>Precautions for safe handling</b>	Wear appropriate protective clothing. Avoid prolonged contact with eyes, skin, and clothing. Avoid breathing vapours.
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	Wash hands thoroughly with soap and water after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area.
<b>Regulatory requirements</b>	Not classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001
<b>Handling practices</b>	Avoid breathing vapours and contact with eyes and skin. Keep containers adequately sealed during material transfer, transport, or when not in use. Rinse contaminated clothes with plenty of water.
<b>Conditions for safe storage</b>	Store in original container in a cool, dry, ventilated place away from direct heat or direct sunlight. Keep container sealed when not in use. Store locked up when not in use. Keep away from incompatible substances (see section 10).
<b>Store site requirements</b>	Store in a cool, dry, well-ventilated area.
<b>Packaging</b>	Store in original packaging.

### Section 8: Exposure Control/Personal Protection

<b>Workplace exposure standards</b>	Chlorine dioxide: TWA 0.1ppm (0.28mg/m <sup>3</sup> ).
<b>Application in the workplace</b>	Ensure adequate ventilation. Keep container sealed when not in use.
<b>Exposure standards outside the workplace</b>	No TEL or EEL is set for this substance.
<b>Personal protection</b>	Wear chemical resistant gloves, facemask or goggles. If ventilation insufficient, wear breathing protection.
<b>Engineering controls</b>	The health hazard risks of handling this material are dependent on many factors, including physical form, duration and frequency of process or task, and effectiveness of engineering controls. Site-specific risk assessments should be conducted to determine the feasibility and the appropriateness of all exposure control measures. Exposure controls for normal operating or routine procedures follow a tiered strategy. Engineering controls are the preferred means of long-term or permanent exposure control. If engineering controls are not feasible, appropriate use of personal protective equipment (PPE) may be considered as alternative control measures. Exposure controls for non-routine operations must be evaluated and addressed as part of the site-specific risk assessment.

### Section 9: Physical and Chemical Properties

Appearance	Pale yellow to yellow liquid with chlorine-like odour.
Boiling Point	100 deg C.
Melting/Softening point	Not determined.
Vapour Pressure	5mm Hg at 25 °C (ClO <sub>2</sub> ).
Specific Gravity	1.0 at 0°C.

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Solubility (H <sub>2</sub> O)	Soluble.
Percent Volatiles	100%.
Odour threshold	Chlorine dioxide - 0.1 part per million (ppm) parts of air.

#### Section 10: Stability and Reactivity

<b>Stability of the substance</b>	Stable under ambient conditions.
<b>Conditions to avoid</b>	Avoid contact with direct sunlight and excessive heat to reduce/avoid evolution of chlorine dioxide.
<b>Material to avoid</b>	Chlorine dioxide is corrosive to steel, and many other materials. Avoid contact with carbon monoxide, heat, mercury, phosphorus, potassium hydroxide, and sulphur. (When in concentrate form.)
<b>Hazardous decomposition products</b>	When chlorine dioxide gas is heated to decomposition, chlorine gas is produced. Chlorine gas creates hydrochloric acid when mixed with water or steam

#### Section 11: Toxicological Information

##### Acute effects for active ingredient only

DERMAL	Chlorine Dioxide 100ppm solution: LD50 (rat) >5000mg/kg.
INHALATION	Chlorine Dioxide 200ppm solution: LC50 (rat, 4-hour) >2.07mg/l.

#### Section 12: Environmental Information

##### Effects for active ingredient only

AQUATIC ENVIRONMENTAL FATE	Toxic to fish and aquatic organisms above 400mV ORP. No data available. Not considered persistent because of UV degradation.
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#### Section 13: Disposal Considerations

<b>Disposal information</b>	<p>Disposal</p> <p>Dispose of this product only by using according to the label, or at an approved landfill, or other approved facility. Although not regarded as ecotoxic to the aquatic environment, avoid contamination of any water source or the environment with product or empty container. However, small quantities (&lt;20 litres) may be flushed to the sewage system if well diluted with water.</p> <p>Container Disposal</p> <p>Triple rinse empty container. Burn in an appropriate incinerator, if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitable landfill</p>
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#### Section 14: Transport Information

<b>Relevant information</b>	Not classified as hazardous for transport. No UN No. allocated.
<b>Other requirements</b>	Check the Land Transport Rule Dangerous Goods 2005, Rule 45001/1 and NZS 5433 for land transport requirements, IMDG for sea transport, and IATA for air transport requirements.

#### Section 15: Regulatory Information

<b>Regulatory status</b>	Not classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.
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#### Section 16: Other Information

**Additional information**

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