

SAFETY DATA SHEET

Zerobac Concentrate

Page 1 of 5

Section 1: Identification of the Substance and Supplier

Product name	Zerobac Concentrate
	Chlorine dioxide, aqueous solution
Recommended use	Anti-microbial
Company details	Alpha Environmental 16 Gladstone Road Richmond, Nelson Phone: (03) 544 4365 Call Free: 0508 425 742 Hours 8am – 5 pm, Mon – Fri
Emergency telephone	0800 764 766 (0800 POISON) 24 hours human health
Date of preparation	July 2009

Section 2: Hazards Identification

Hazard classifications	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. Potential for SLIP Hazard on floors
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Section 3: Composition/Information on Ingredients

Chemical name	CAS number	Concentration (%)
Chlorine dioxide	10049-04-4	<1
Non hazardous proprietary products	N/A	>99
No active ingredients are present at concentrations greater than 1% by weight.		

Section 4: First Aid Measures

Necessary first aid measures	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.
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SAFETY DATA SHEET

Zerobac Concentrate

Page 2 of 5

Required instructions	IF ON SKIN: Gently wash with plenty of soap and water. 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.
	For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor.
Notes for medical personnel	May aggravate existing respiratory and skin conditions.
Workplace facilities	Emergency showers and eyewashes may be warranted depending on quantity and type of use.

Section 5: Fire Fighting Measures

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

Section 6: Accidental Release Measures

Emergency procedures	<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

Precautions for safe	Wear appropriate protective clothing. Avoid prolonged contact with eyes, skin, and
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SAFETY DATA SHEET

Zerobac Concentrate

Page 3 of 5

handling	clothing. Avoid breathing vapours. 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.
Regulatory requirements	Not classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001
Handling practices	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.
Conditions for safe storage	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).
Store site requirements	Store in a cool, dry, well-ventilated area.
Packaging	Store in original packaging.

Section 8: Exposure Control/Personal Protection

Workplace exposure standards	Chlorine dioxide: TWA 0.1ppm (0.28mg/m ³).
Application in the workplace	Ensure adequate ventilation. Keep container sealed when not in use.
Exposure standards outside the workplace	No TEL or EEL is set for this substance.
Personal protection	Wear chemical resistant gloves, facemask or goggles. If ventilation insufficient, wear breathing protection.
Engineering controls	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 ₂).
Specific Gravity	1.0 at 0°C.

SAFETY DATA SHEET

Zerobac Concentrate

Page 4 of 5

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

Section 10: Stability and Reactivity

Stability of the substance	Stable under ambient conditions.
Conditions to avoid	Avoid contact with direct sunlight and excessive heat to reduce/avoid evolution of chlorine dioxide.
Material to avoid	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.)
Hazardous decomposition products	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

Disposal information	<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 (<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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SAFETY DATA SHEET

Zerobac Concentrate

Page 5 of 5

Section 14: Transport Information

Relevant information	Not classified as hazardous for transport. No UN No. allocated.
Other requirements	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

Regulatory status	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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