

## V-CIDE 146

### Non-oxidising Biocide

**Classified as: Hazardous according to the EPA Hazardous Substances (Minimum Degrees of Hazard) Notice 2020.**

#### SECTION 1: SUBSTANCE AND SUPPLIER DETAILS

<b>Product Name:</b>	V-CIDE 146
<b>Supplier:</b>	Visentia Limited Unit 22 273 Neilson Street Onehunga Auckland 1061 New Zealand
<b>Telephone:</b>	+64 9 216 9824
<b>Recommended Use:</b>	Water Treatment Chemical
<b>In Case of Emergency Contact:</b>	0800 CHEMCALL (243 622)

#### SECTION 2: HAZARDS IDENTIFICATION

V-CIDE 146 is classified as a Dangerous Good for Transport.

V-CIDE 146 is classified as hazardous according to criteria in the EPA Hazardous Substances (Minimum Degrees of Hazards) Notice 2020.

Classified under the group standard "Water Treatment Chemicals (Acutely Toxic) Group Standard 2020".

**HSNO Approval Number:** HSR002685

**HSNO Classifications:**

- 6.1C (oral) – Substances that are acutely toxic (Toxic)
- 6.1D (dermal) - Substances that are acutely toxic - Harmful
- 6.1D (inhalation) – Substances that are acutely toxic - Harmful
- 6.5A – Substances that are respiratory sensitisers
- 6.5B – Substances that are contact sensitisers
- 6.8B – Substances that are suspected human reproductive or developmental toxicants
- 6.9B – Substances that are harmful to human target organs or systems – single
- 8.2B – Substances that are corrosive to dermal tissue (UN PGII)
- 8.3A – Substances that are corrosive to ocular tissue

**GHS Classification:**

- Acute toxicity (oral), Category 3
- Acute toxicity (dermal), Category 2
- Acute toxicity (inhalation), Category 4



Skin corrosion/irritation, Category 1B  
Serious eye damage/eye irritation, Category 1  
Respiratory sensitization, Category 1  
Skin sensitization, Category 1  
Reproductive toxicity, Category 2  
Toxicity (Single Exposure), Category 2  
Reproductive toxicity, Category 2

**Hazard Statements:**

H301 – Toxic if swallowed  
H312 – Harmful in contact with skin  
H332 – Harmful if inhaled  
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H317 – May cause an allergic skin reaction  
H361 – Suspected of damaging fertility or the unborn child  
H371 – May cause damage to organs  
H373 – May cause damage to organs through prolonged or repeated exposure  
H314 – Causes severe skin burns and eye damage  
H318 – Causes serious eye damage

**GHS Pictograms:**



**Signal Word:**

**DANGER**

**Prevention Statements:**

P101 – If medical advice is needed, have product container or label at hand.  
P102 – Keep out of reach of children.  
P103 – Read label before use.  
P201 – Obtain special instructions before use.  
P202 – Do not handle until all safety precautions have been read and understood.  
P260 – Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 – Wash skin thoroughly after handling.  
P270 – Do not eat, drink, or smoke when using this product.  
P271 – Use only outdoors or in a well-ventilated area.  
P272 – Contaminated work clothing should not be allowed out of the workplace.  
P280 – Wear protective gloves/protective clothing/eye protection/face protection.  
P281 – Use personal protective equipment as required.  
P284 – Wear respiratory protection.



<b>Response Statements:</b>	<p>P301 + P310 – IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.</p> <p>P301 + P330 + P331 – IF SWALLOWED: rinse mouth. Do NOT induce vomiting.</p> <p>P302 + P352 – IF ON SKIN: Wash with plenty of soap and water.</p> <p>P303 + P361 + P353 – IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P304 + P341 – IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308 + P313 – IF exposed or concerned: Get medical advice/attention.</p> <p>P310 – Immediately call a POISON CENTER or doctor/physician.</p> <p>P312 – Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P321 – Specific treatment (see ... on this label).</p> <p>P322 – Specific measures (see ... on this label).</p> <p>P330 – Rinse mouth.</p> <p>P333 + P313 – If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P342 + P311 – If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.</p> <p>P363 – Wash contaminated clothing before reuse.</p>
<b>Storage:</b>	<p>P405 – Store locked up.</p>
<b>Disposal:</b>	<p>P501 – Dispose of contents/ container to an approved waste disposal plant.</p>

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

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Main Component	CAS Number	Concentration
Glutaraldehyde	111-30-8	<=25.0%
Water	7732-18-5	>=72.5%
Methanol	67-56-1	<=2.5%

There are no additional ingredients present 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

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<b>Workplace Facilities Required:</b>	Eye wash and safety shower facilities should be provided.
<b>General Advice:</b>	First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.



<b>If Inhaled:</b>	Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration, if by mouth-to-mouth use rescuer protection (pocket mask etc). Call a poison control centre or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.
<b>In Contact with Eye:</b>	Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.
<b>In Contact with Skin:</b>	Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be immediately available.
<b>If Swallowed:</b>	If the person is fully alert and cooperative, have the person rinse mouth with plenty of water. In cases of ingestion have the person drink 4 to 10 ounces (120-300 mL) of water. Do not induce vomiting. Do not attempt mouth rinse if the person has respiratory distress, altered mental status, or nausea and vomiting. Call a physician and/or transport to emergency facility immediately.
<b>Most important symptoms and effects, both acute and delayed:</b>	Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.
<b>Advice to Doctor:</b>	May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants, and antitussives may be of help. Glutaraldehyde may transiently worsen reversible airways obstruction including asthma or reactive airways disease. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Maintain adequate ventilation and oxygenation of the patient. In cases where several ounces (60 - 100 ml) have been ingested, consider the use of ethanol and haemodialysis in the treatment. Consult standard literature for details of treatment. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol®) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol (EG), di- or triethylene glycol (DEG, TEG), ethylene glycol butyl ether (EGBE), or methanol intoxication if available. Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg intravenously, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, TEG or EGBE are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary oedema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. In severe poisoning, respiratory support with mechanical ventilation and positive end expiratory pressure may be required. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/oesophageal control if lavage is done. Probable mucosal damage may contraindicate the use of gastric lavage. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control centre or doctor, or going for treatment. Excessive exposure may aggravate pre-existing asthma and other respiratory disorders (e.g., emphysema, bronchitis, reactive airways dysfunction syndrome).



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**SECTION 5: FIRE FIGHTING MEASURES**

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<b>Fire/Explosion Hazard:</b>	This material will not burn until the water has evaporated. Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.
<b>Suitable Extinguishing Media:</b>	To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical, or foam.
<b>Precautions in Connection with Fire:</b>	Keep people away. Isolate fire and deny unnecessary entry.
<b>Advice for firefighters:</b>	To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical, or foam. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this SDS

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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An emergency response plan is required under Part 5 of the Health and Safety at Work (Hazardous Substances) Regulations 2017 when held in quantities greater than 200L.

<b>Precautions:</b>	Evacuate area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Only trained and properly protected personnel must be involved in clean-up operations. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.
<b>Suitable Protective Equipment:</b>	Avoid contacting spilled material, glutaraldehyde will be absorbed by most shoes. Always wear the correct protective equipment, consisting of splashproof mono-goggles, or both safety glasses with side shields and a wraparound full-face shield, appropriate gloves, and protective clothing. A self-contained breathing apparatus or respirator and absorbents may be necessary, depending on the size of the spill and the adequacy of ventilation. Small spills: Wear the correct protective equipment and cover the liquid with absorbent material. Collect and seal the material and the dirt that has absorbed the spilled material in polyethylene bags and place in a drum for transit to an approved disposal site. Rinse away the remaining spilled material with water to reduce odour and discharge the wash water into a municipal or industrial sewer. Large spills: In case of nasal and respiratory irritation, vacate the room immediately. Personnel cleaning up should be trained and equipped with a self-contained breathing apparatus, or an officially approved or certified full-face respirator equipped with an organic vapor cartridge, gloves, and clothing impervious to glutaraldehyde, including rubber boots or shoe protection. Deactivate with sodium bisulphite (2-3 parts (by weight) per part of active substance glutaraldehyde), collect the neutralized liquid and place in a drum for transit to an approved disposal site.
<b>Spill or Leak Procedures:</b>	Spills or discharge to natural waterways is likely to kill aquatic organisms. Prevent from entering soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
<b>Waste Disposal Methods:</b>	Dispose of as per Section 13.
<b>Emergency Preparation:</b>	Ensure there is appropriate and adequate personal protective equipment, trained personnel and clean up materials for management of accidental release.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for Safe Handling:** Keep out of reach of children. Keep away from heat, sparks and flame. Do not get in eyes, on skin, on clothing. Avoid breathing vapor. Do not swallow. Avoid prolonged or repeated contact with skin. Keep container closed. Use with adequate ventilation. Wear goggles, protective clothing and butyl or nitrile gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Containers, even those that have been emptied, can contain vapours. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Do not spray or aerosolize the undiluted form of the product. Full personal protective equipment (including skin covering and full-face SCBA respirator) is required for dilutions or mixtures of the product used in a spray application.

**Storage:** Do not store in: Aluminium. Carbon steel. Copper. Mild steel. Iron.

**Site Storage Requirements:** Site Signage will be required when quantities exceed 200L.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Workplace Exposure Standards NZ:**

**Control Parameters:**

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of Listing	Value/Notation
Glutaraldehyde	ACGIH	C	0.05 ppm
	ACGIH	C	DESN, RSEN
	NZOEL	WES-STEL	SEN
	NZOEL	WES-STEL	0.05 ppm
Methanol	ACGIH	TWA	200 ppm
	ACGIH	STEL	250 ppm
	ACGIH	TWA	SKIN
	ACGIH	STEL	SKIN
	NZOEL	WES-TWA	SKIN
	NZOEL	WES-STEL	SKIN
	NZOEL	WES-TWA	200 ppm
	NZOEL	WES-STEL	250 ppm

**Biological Occupational Exposure Limits:**

Component	CAS#	Control Parameter	Biological Specimen	Sampling Time	Max Conc.	Basis
Methanol	67-56-1	Methyl alcohol	Urine	End of shift	15 ppm	NZ BEI
		Methanol	Urine	End of shift - asap	15 ppm	ACGIH BEI

**Engineering Controls:** Eyewash facilities and safety showers should be provided in the work area where there is a risk of exposure to eyes and skin. Use in a well-ventilated area. If natural ventilation is insufficient consider engineering controls such as local exhaust ventilation to ensure workers are not exposed to levels exceeding the exposure standards.

**Personal Protective Equipment:** Avoid contact with the skin and eyes. Avoid inhaling mist/vapours/spray.



<b>Hand protection:</b>	Wear protective gloves that are resistant to the product, e.g., Butyl rubber, Nitrile/butadiene rubber ("nitrile" or "NBR"). Gloves should be elbow length. When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to AS/NZS 2161.10) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to AS/NZS 2161.10) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also consider all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
<b>Skin and body protection:</b>	Use protective overalls and apron. Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Use chemical protective clothing resistant to this material when there is any possibility of skin contact. Remove any contaminated clothing to avoid prolonged contact with the skin. Wash work clothes regularly. Refer to Australian and New Zealand Standard AS/NZS 4501 for occupational protective clothing.
<b>Eye protection:</b>	Use chemical safety goggles to protect eyes. When handling bulk quantities where there may be a risk of splashing, a face shield may also be used along with eye protection to protect the face. Refer to AS/NZS 1336 for suitable eye and face protection.
<b>Respiratory protection:</b>	Where there is inadequate ventilation and use results in the formation of mist/vapours/spray, use a respirator. Refer to AS/NZS 1715 and AS/NZS 1716 for suitable respiratory protection. A full-face respirator with an organic vapor cartridge and particulate pre-filter. cartridges (for protection against any liberated chlorine gas) is recommended. For operations such as spraying/misting and other conditions such as emergencies where the exposure guideline may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.
<b>Other information:</b>	PPE selected must be impervious to the substance. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating, drinking or smoking. Handle in accordance with safe industrial hygiene practices.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Description:</b>	Liquid	<b>Colour:</b>	Clear, colourless
<b>Odour:</b>	Fruity	<b>Odour Threshold:</b>	No data
<b>pH (25°C):</b>	3.0 – 5.0	<b>Solubility (water, 25°C):</b>	>1000 g/L
<b>Melting/Freezing point:</b>	-10 °C	<b>Boiling Point:</b>	101 °C
<b>Flammability:</b>	NA	<b>Flash Point:</b>	No data
<b>UEL/LEL:</b>	No data	<b>Vapour Pressure (20°C):</b>	0.27 hPa
<b>Decomposition Temp:</b>	No data	<b>Autoignition Temp:</b>	No data
<b>Relative Density:</b>	1.06	<b>Vapour Density (20°C):</b>	No data
<b>Partition Coefficient:</b>	No data	<b>Kinematic Viscosity (20°C):</b>	<15 cP
<b>n-octanol/water</b>			

## SECTION 10: STABILITY AND REACTIVITY

<b>Stability:</b>	Thermally stable at typical use temperatures.
<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.



<b>Conditions to Avoid:</b>	Active ingredient decomposes at elevated temperatures.
<b>Incompatibility:</b>	Avoid contact with amines, ammonia, strong acids, strong bases, strong oxidizers. Avoid contact with metals such as: aluminium, carbon steel, copper, iron, mild steel.
<b>Hazardous Decomposition:</b>	Decomposition products depend upon temperature, air supply and the presence of other materials.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Acute Exposure

**Acute Toxicity:** As product: Single dose oral LD50 has not been determined.

For the 50% aqueous solution:  
LD50, Rat, 200 mg/kg  
For the impurity: Methanol.  
LD50, Rat, > 5,000 mg/kg  
For the impurity: Methanol.  
Lethal Dose, Humans, 340 mg/kg estimated.

**Inhalation:** Vapor may cause severe irritation of the upper respiratory tract (nose and throat). Vapor from heated material or mist may cause serious adverse effects, even death. Case reports and medical surveys link asthma and respiratory irritation to glutaraldehyde exposure, primarily in medical personnel. Asthma-like symptoms may occur in people prone to respiratory disorders or other allergies. Asthma-like symptoms may include coughing, difficult breathing, and a feeling of tightness in the chest. Occasionally, breathing difficulties may be life threatening. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death.

For the impurity: Methanol.  
LC50, Rat, 4 Hour, 64000 ppm  
For the 50% aqueous solution:  
LC50, Rat, female, 4 Hour, dust/mist, 0.28 mg/l  
LC50, Rat, male, 4 Hour, dust/mist, 0.35 mg/l

**Ingestion:** Moderate toxicity if swallowed. Swallowing may result in irritation or burns of the mouth, throat, and gastrointestinal tract. Swallowing may result in gastrointestinal irritation or ulceration. Excessive exposure may cause: Headache. Dizziness. Anaesthetic effects. Drowsiness. Unconsciousness. Other central nervous system effects. Methanol, a component in this mixture, is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

**Skin Contact:** Brief contact may cause skin burns. Symptoms may include pain, severe local redness, and tissue damage.

**Eye Contact:** May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Vapor may cause eye irritation experienced as mild discomfort and redness.

**Sensitiser:** For the active ingredient(s):

Skin contact may cause an allergic skin reaction in a small proportion of individuals. Has caused allergic skin reactions when tested in guinea pigs. Has demonstrated the potential for contact allergy in mice. May cause allergic respiratory response in a small proportion of individuals.

### Chronic Exposure

**Mutagen, Carcinogen, or Reproductive Toxicant:**

**Carcinogenicity**





In a NTP chronic 2-year inhalation study on glutaraldehyde, no carcinogenicity was seen in rats or in mice. An increase in large granular lymphocytes in Fischer rats dosed with glutaraldehyde for two years was random or a secondary carcinogenic effect due to a modifying influence on the occurrence of this common neoplasm in this rat strain. For the solvent(s): Did not cause cancer in laboratory animals.

#### Teratogenicity

For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Methanol has caused birth defects in mice at doses nontoxic to the mother as well as slight behavioural effects in offspring of rats. Did not cause birth defects in laboratory animals.

#### Reproductive Toxicity

Contains component(s) which did not interfere with reproduction in animal studies.

#### Mutagenicity

For the component(s) tested: In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were predominantly negative.

#### Aspiration Hazard

Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

#### Specific Target Organ Systemic Toxicity:

Contains component(s) that may cause damage to organs. Route of Exposure: Oral. Target Organs: Eyes, Central nervous system.

Material is corrosive. Upper respiratory tract irritation or corrosivity may be expected.

Repeated skin contact may result in absorption of amounts which could cause death. May cause nausea and vomiting.

Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

Toxicity data is based on hazardous ingredient information and information in the EPA Chemical Classification and Identification Database.

## SECTION 12:

## ECOLOGICAL INFORMATION

#### Ecotoxicity:

##### Glutaraldehyde

###### Acute toxicity to fish

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50, Cyprinodon variegatus (sheepshead minnow), 96 Hour, 32 mg/l

###### Acute toxicity to aquatic invertebrates

LC50, copepod *Acartia tonsa*, semi-static test, 48 Hour, 3 mg/l

Acute toxicity to algae/aquatic plants

ErC50, *Desmodesmus subspicatus* (green algae), 72 Hour, 0.6 mg/l

NOEC, *Desmodesmus subspicatus* (green algae), 72 Hour, Growth rate inhibition, 0.025 mg/l

ErC50, *Skeletonema costatum* (marine diatom), Static, 72 Hour, 0.61 mg/l

NOEC, *Skeletonema costatum* (marine diatom), Static, 72 Hour, 0.071 mg/l

###### Toxicity to bacteria

EC50, activated sludge, > 50 mg/l, OECD 209 Test

###### Chronic toxicity to fish

NOEC, Rainbow trout (*Oncorhynchus mykiss*), semi-static test, 62 d, 1 mg/l

Chronic toxicity to aquatic invertebrates

NOEC, water flea *Daphnia magna*, flow-through test, 21 d, number of offspring, 0.12 mg/l

###### Toxicity to Above Ground Organisms



Material is moderately toxic to birds on an acute basis (LD50 between 51 and 500 mg/kg).

Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).  
oral LD50, *Anas platyrhynchos* (Mallard duck), 408 - 466 mg/kg  
dietary LC50, *Colinus virginianus* (Bobwhite quail), > 5,000 ppm  
dietary LC50, *Anas platyrhynchos* (Mallard duck), > 5,000 ppm

#### **Methanol**

##### Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), 96 Hour, 19,000 mg/l, Method Not Specified.

##### Acute toxicity to aquatic invertebrates

LC50, *Daphnia magna* (Water flea), 24 Hour, > 10,000 mg/l, Method Not Specified.

##### Toxicity to bacteria

IC50, activated sludge, 3 Hour, > 1,000 mg/l

#### **Persistence/degradability:**

#### **Glutaraldehyde**

##### Biodegradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

Biodegradation: 73 %

Exposure time: 9 d

Method: OECD Test Guideline 301A or Equivalent

10-day Window: Not applicable

Biodegradation: 73 %

Exposure time: 28 d

Method: OECD Test Guideline 306 or Equivalent

##### Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 2.74 Hour

Method: Estimated.

#### **Methanol**

##### Biodegradability

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

Biodegradation: 99 %

Exposure time: 28 d

Method: OECD Test Guideline 301D or Equivalent

Chemical Oxygen Demand: 1.49 mg/mg Dichromate

Biological oxygen demand (BOD): 72% after 5 days, 79% after 20 days

##### Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life:

#### **Bioaccumulation:**

#### **Glutaraldehyde**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -0.333 Measured

#### **Methanol**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -0.77 Measured

Bioconcentration factor (BCF): < 10 Fish Measured

#### **Mobility:**

#### **Glutaraldehyde**

Potential for mobility in soil is high (Koc between 50 and 150).



Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.  
Partition coefficient (Koc): 120 - 500 Estimated.

**Methanol**

Potential for mobility in soil is very high (Koc between 0 and 50).  
Partition coefficient (Koc): 0.44 Estimated.

**Results of PBT and vPvB Assessment****Glutaraldehyde**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).  
This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Methanol**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).  
This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Other Adverse Effects****Glutaraldehyde**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**Methanol**

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

**SECTION 13:****DISPOSAL CONSIDERATIONS****Disposal:**

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information.

Waste handling, treatment and disposal practices must be in compliance with the New Zealand Hazardous Substances (Disposal) Notice 2017. Additional local requirements may be applicable in accordance with planning controls under the Resource Management Act. Regulations concerning waste management may vary in different locations.

**Disposal of Packaging:**

Packaging may contain product residues and should be treated as hazardous. Where possible return to supplier for reuse/recycling. Dispose of packaging via an approved waste disposal contractor.

**SECTION 14:****TRANSPORT INFORMATION**

V-CIDE 146 is classified as a Dangerous Good for transport in accordance with NZS5433:2012, IMDG or IATA.

**Hazchem Code:**

2X

**Transportation Pictograms:****NZS5433:2012**

Proper Shipping Name: CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde)  
UN Number: UN 2922  
Class: 8 (6.1)  
Packing Group: II

**IMDG:**

Environmental Hazards: Glutaraldehyde  
Proper Shipping Name: CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde)  
UN Number: UN 2922  
Class: 8 (6.1)  
Packing Group: II

**IATA:**

Marine Pollutant: Glutaraldehyde  
Transport in bulk according to Annex I or II of MARPOL 73/78.  
Proper Shipping Name: CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde)  
UN Number: UN 2922  
Class: 8 (6.1)  
Packing Group: II  
Environmental Hazards: Glutaraldehyde

Ensure transportation methods prevent leakage from packages and collapsing loads.

**SECTION 15:****REGULATORY INFORMATION****Group Standard Allocation:**

Water Treatment Chemicals (Acutely Toxic) Group Standard 2020

**HSNO Approval Code:**

HSR002685

**HSNO Classifications:**

6.1C (oral), 6.1D (dermal), 6.1D (inhalation), 6.5A, 6.5B, 6.8B, 6.9B, 8.2B, 8.3A

**GHS Classification:**

Acute toxicity (oral), Category 3  
Acute toxicity (dermal), Category 2  
Acute toxicity (inhalation), Category 4  
Skin corrosion/irritation, Category 1B  
Serious eye damage/eye irritation, Category 1  
Respiratory sensitization, Category 1  
Skin sensitization, Category 1  
Reproductive toxicity, Category 2  
Toxicity (Single Exposure), Category 2  
Reproductive toxicity, Category 2

**This substance triggers:**

Compliance Certificate – NA  
Certified Handler – NA  
Quantity to be secured when unattended – 20L  
Emergency Response Plan – 200L  
Secondary Containment – 200L  
Signage – 200L



V-CIDE 146 does not require tracking. All workplace personnel handling this substance are required to be trained on the safe handling and PPE requirements for the hazards associated with this substance.

## SECTION 16: OTHER INFORMATION

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The information provided in this Safety Data Sheet relates only to the specific material designated herein. This Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including its use in conjunction with other products.

This substance is approved under HSNO for use as a water treatment chemical. All reasonable care has been taken to ensure that the information and advice contained herein are from sources believed to be reliable and to represent the most up-to-date knowledge available at the date given in Section 16. No liability is assumed for any damages related to the use or misuse of this substance.

All chemical materials may present unknown hazards as people have varying degrees of sensitivity to chemicals. Therefore, this product should be used with caution. The information herein is given in good faith, but no warranty, express or implied is made.

SDS Issued: 14/07/2022

Reason for Revision: New product SDS

References: European Chemical Agencies Database

EPA Guide: Assigning a Hazardous Substance to a Group Standard, 2014

**END OF SAFETY DATA SHEET**