

SAFETY DATA SHEET

STARCIDE®

Revision Date: 15-Nov-2018

Revision Number: 7

1. Identification

Product Name

Product Trade Name: STARCIDE®

Other Names

Synonyms: None

Hazardous Material Number: HB003388

Recommended Use

Recommended Use: Bactericide

Uses advised against: No information available

Company Name, Address and Contact Details

Manufacturer/Supplier: Halliburton New Zealand
136-140 Connett Road East,
Bell Block, New Plymouth
New Zealand
Telephone: +64 6-755 2405
Company Registration No.: 824207

E-mail Address: fdunexchem@halliburton.com

Emergency Telephone Number: +64 800 451719
Global Incident Response Access Code: 334305
Contract Number: 14012

New Zealand National Poisons Centre: 0800 764 766 (24 hours)

2. Hazards Identification

Statement of Hazardous Nature

Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulation 2001;
Not Classified as dangerous good according to NZS 5433:2012, UN, IMDG or IATA

Classification

6.1D (Oral) Substances that are acutely toxic - Harmful

6.3A Irritating to the skin

6.4A Irritating to the eye

Hazard and Precautionary Statements

Hazard Pictograms



Signal Word: Warning

Hazard Statements: H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary Statements

Prevention 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
 P104 - Read Safety Data Sheet before use.
 P264 - Wash face, hands and any exposed skin thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P280 - Wear protective gloves/eye protection/face protection

Response P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 P330 - Rinse mouth
 P331 - Do NOT induce vomiting
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P362 + P364 - Take off contaminated clothing and wash before reuse
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P337 + P313 - If eye irritation persists: Get medical advice/attention

Storage None

Disposal P501 - Dispose of contents/container to an approved incineration plant

Contains

Substances	CAS Number	Substance HSNO Classification
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	6.1D (Oral) 6.3A 6.4A

2.3. Other Hazards

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
 This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

3. Composition/Information on Ingredients

Substances	CAS Number	PERCENT (w/w)
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	60 - 100%

4. First Aid Measures

Requirements for First Aid or Medical Care

Inhalation If inhaled, move victim to fresh air and seek medical attention.
Eyes Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.
Skin In case of contact, immediately flush skin with plenty of soap and water for at least 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.
Ingestion Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Workplace Facilities Required

None

Relation to Health Effect

Most Important Symptoms/Effects

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. May cause allergic skin reaction. Harmful if swallowed. Harmful if inhaled. May cause damage to organs through prolonged or repeated exposure.

Medical Attention and Special Treatment

Notes to Physician

Treat symptomatically

5. Fire-fighting measures

Type of Hazard

Flammability Hazard

Non-flammable

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

HAZCHEM Code

Hazchem Code: 2X

Special Protective Equipment and Precautions for Fire Fighters

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

Special exposure hazards in a fire

Decomposition in fire may produce harmful gases.

6. Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation. Evacuate all persons from the area.

See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas. Consult local authorities.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

6.4. Reference to other sections

See Section 8 and 13 for additional information.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Avoid breathing mist. Ensure adequate ventilation. Do NOT consume food, drink, or tobacco in contaminated areas. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

Handling Practices

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Approved Handlers

This product does NOT require an approved handler.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container. Store away from oxidizers. Store away from acids. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 12 months. Keep Away From Food

Store Site Requirements

No special controls required

Packaging

No special packaging required

8. Exposure Controls/Personal Protection

Workplace Exposure Standards

Exposure Limits

Substances	CAS Number	New Zealand WES	ACGIH TLV-TWA
3, 3'-Methylene bis (5-methyl	66204-44-2	Not applicable	Not applicable

oxazolidine)			
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Engineering Controls

Engineering Controls Use in a well ventilated area.

Personal Protective Equipment (PPE)

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Organic vapor respirator.

Hand Protection Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. Butyl rubber gloves. (>= 0.7 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.

Skin Protection Wear impervious protective clothing, including boots, gloves, lab coat, apron, rain jacket, pants or coverall, as appropriate, to prevent skin contact.

Eye Protection Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions Eyewash fountains and safety showers must be easily accessible.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid **Color:** Colorless to slight yellow
Odor: Sweet amine **Odor Threshold:** No information available

<u>Property</u>	<u>Values</u>
Remarks/ - Method	
pH:	10 (0.15%)
Freezing Point / Range	No data available
Melting Point / Range	< -35 °C / -31 °F
Pour Point / Range	No data available
Boiling Point / Range	204 °C / 399.2 °F
Flash Point	> 100 °C / > 212 °F (PMCC)
Evaporation rate	No data available
Vapor Pressure	0.014 hPa
Vapor Density	No data available
Specific Gravity	1.049 - 1.069
Water Solubility	Soluble in water
Solubility in other solvents	benzene heptane
Partition coefficient: n-octanol/water	1.89
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	21 mPas @ 20°C
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

Molecular Weight 186.25
VOC Content (%) No data available

10. Stability and Reactivity

10.2. Chemical stability

Stable

10.4. Conditions to avoid

None anticipated

10.5. Incompatible materials

Strong oxidizers. Strong acids. Reducing agents.

10.6. Hazardous decomposition products

Formaldehyde. Oxides of nitrogen. Oxides of sulfur.

Hazardous Reactions**Hazardous Polymerization:** Will Not Occur**11. Toxicological Information****Health Effect from Likely Routes of Exposure****Acute Toxicity**

Inhalation	Harmful if inhaled. Causes severe respiratory irritation.
Eye Contact	Causes eye burns
Skin Contact	Causes severe burns. May cause an allergic skin reaction.
Ingestion	Harmful if swallowed. Causes burns of the mouth, throat and stomach.

Chronic Effects/Carcinogenicity

Prolonged or repeated exposure may cause damage to the upper respiratory tract. Formaldehyde, a suspected carcinogen, is released when heated.

Toxicity Data**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	900 mg/kg (Rat)	-	2 mg/L (Rat, 4 hr, aerosol)

Substances	CAS Number	Skin corrosion/irritation
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	Causes severe irritation and or burns (Rabbit)

Substances	CAS Number	Serious eye damage/irritation
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	Causes severe irritation and or burns (Rabbit)

Substances	CAS Number	Skin Sensitization
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	May cause sensitization by skin contact (guinea pig)

Substances	CAS Number	Respiratory Sensitization
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	No information available

Substances	CAS Number	Mutagenic Effects
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	Did not show carcinogenic effects in animal experiments

Substances	CAS Number	Reproductive toxicity

3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Substances	CAS Number	STOT - single exposure
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	No significant toxicity observed in animal studies at concentration requiring classification.
Substances	CAS Number	STOT - repeated exposure
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	Causes damage to organs through prolonged or repeated exposure: Gastrointestinal tract (GI) Respiratory system
Substances	CAS Number	Aspiration hazard
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Toxic to aquatic life.

Product Ecotoxicity Data

Product is not classified as hazardous to the environment.

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	EC50(72 h)=5.7 mg/L (Desmodesmus subspicatus) EC50(=)3.35 mg/L (Skeletonema costatum)	LC50(96 h)=135.21 mg/L (Scophthalmus maximus)	EC50: 44 mg/L (activated sludge)	EC50(48 h)=37.9 mg/L (Daphnia magna) EC50(48 h)=4.1 mg/L (Acartia tonsa) NOEC(21 d)=1.3 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	Readily biodegradable (69.4% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	Log Pow=-0.11

12.4. Mobility in soil

Substances	CAS Number	Mobility
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	No information available

Ecotoxicity Hazard Statements

None known

12.6. Other adverse effects

Does not contain any organically bound halogen. May not increase the AOX value when discharged from treatment plants or into natural waters.

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations

13.1. Waste treatment methods

Disposal methods

Disposal should be made in accordance with federal, state, and local regulations. Incineration recommended in approved incinerator according to federal, state, and local regulations. Substance should NOT be deposited into a sewage facility.

Contaminated Packaging

Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating

packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

14. Transport Information

NZ 5433.1999

UN Number UN2735
UN proper shipping name: Amines, Liquid, Corrosive, N.O.S. (Contains N, N' -Methylenebis[5-methyl oxazolidine])
Transport Hazard Class(es): 8
Packing Group: III
Environmental Hazards: Not applicable

IMDG/IMO

UN Number UN2735
UN proper shipping name: Amines, Liquid, Corrosive, N.O.S. (Contains N, N' -Methylenebis[5-methyl oxazolidine])
Transport Hazard Class(es): 8
Packing Group: III
Environmental Hazards: Not applicable
EMS: EmS F-A, S-B

IATA/ICAO

UN Number UN2735
UN proper shipping name: Amines, Liquid, Corrosive, N.O.S. (Contains N, N' -Methylenebis[5-methyl oxazolidine])
Transport Hazard Class(es): 8
Packing Group: III
Environmental Hazards: Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Exempt

Special Precautions for User None

15. Regulatory Information

New Zealand Inventory of Chemicals All components are listed on the NZIoC or are subject to a relevant exemption, permit, or assessment certificate.

HSNO Approval Number HSR003710

Group Name Not Applicable

HSNO Controls Refer to the NZ EPA website for more information: <http://www.epa.govt.nz>

Approved Handlers Not Applicable

Poisons Schedule: None Allocated

16. Other information

Additional information For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms used in the safety data sheet

bw – body weight

CAS – Chemical Abstracts Service

CLP – REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Classification, Labelling and Packaging of substances and mixtures

EC – European Commission

EC10 – Effective Concentration 10%

EC50 – Effective Concentration 50%

EEC – European Economic Community

ErC50 – Effective Concentration growth rate 50%

IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL0 – Lethal Loading 0%
LL50 – Lethal Loading 50%
MARPOL – International Convention for the Prevention of Pollution from Ships
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NOEC – No Observed Effect Concentration
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PBT – Persistent Bioaccumulative and Toxic
PC – Chemical Product category
PEL – Permissible Exposure Limit
ppm – parts per million
PROC – Process category
REACH – REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL – Short Term Exposure Limit
SU – Sector of Use category
TWA – Time-Weighted Average
UN – United Nations
VOC – Volatile Organic Carbon
vPvB – very Persistent and very Bioaccumulative
VLA-ED - time-weighted average values for a whole work shift [Spain valores límite ambientales para la exposición diaria]
NDS - najwyższe dopuszczalne stężenie na stanowisku pracy
SZW - Netherlands Ministry of Social Affairs and Employment
ADR - The European Agreement concerning the International Carriage of Dangerous Goods by Road
AS/NZS 1715 - New Zealand Standard on Selection, use and maintenance of respiratory protective equipment
C - Celsius
EN 149 - European standard on filtering halfmasks to protect against particles
EN 374 - European standard on Protective gloves against chemicals and micro-organisms
FFP - Filtering Facepieces
h - hour
IATA/ICAO - International Air Transport Association / International Civil Aviation Organization
IMDG/IMO - International Maritime Dangerous Goods / International Maritime Organization
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
NDS - OEL-TWA [Poland najwyższe dopuszczalne stężenie na stanowisku pracy]
R/H-phrases - Risk/Hazard-phrases
RID - The European Agreement concerning the International Carriage of Dangerous Goods by Rail
UK - United Kingdom
w/w - weight/weight
VLA-EC - short-time excursion limits [Spain valores límite ambientales para la exposición de corta duración]
MAK - Maximum Workplace Concentration
d - day

Key literature references and sources for data

www.ChemADVISOR.com/
NZ CCID

Revision Date: 15-Nov-2018

Revision Note

SDS sections updated:

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Disclaimer Statement

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End of Safety Data Sheet