

SAFETY DATA SHEET

Product Trade Name:
STARCIDE®

Revision Date:
15-Nov-2018

Revision Number:
7

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Trade Name:
STARCIDE®

Synonyms

None

Chemical Family

Oxazolidine

Internal ID Code

HB003388

Recommended use and restrictions on use

Application

Bactericide

Uses advised against

No information available

Manufacturer's Name and Contact Details

Manufacturer/Supplier

Halliburton Energy Services

14th Floor, CitiBank Tower, Al-Qutayat Street

Dubai, UAE

Telephone Number : +971 43036666

Additional Information

Prepared By

Chemical Stewardship

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Emergency Telephone Number

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Global Incident Response Access Code: 334305

Contract Number: 14012

2. HAZARDS IDENTIFICATION

Classification

Acute Oral Toxicity	Category 4 - H302
Acute Inhalation Toxicity - Vapors	Category 4 - H332
Skin Corrosion / Irritation	Category 1 - H314
Serious Eye Damage / Eye Irritation	Category 1 - H318
Skin Sensitization	Category 1 - H317
Specific Target Organ Toxicity - (Repeated Exposure)	Category 2 - H373
Acute Aquatic Toxicity	Category 2 - H401
Chronic Aquatic Toxicity	Category 3 - H373

Hazard Pictograms



Signal Word

Danger

Hazard Statements

- H302 - Harmful if swallowed
- H314 - Causes severe skin burns and eye damage
- H317 - May cause an allergic skin reaction
- H318 - Causes serious eye damage
- H332 - Harmful if inhaled
- H373 - May cause damage to organs through prolonged or repeated exposure
- H401 - Toxic to aquatic life
- H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements

Prevention

- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P271 - Use only outdoors or in a well-ventilated area
- P272 - Contaminated work clothing should not be allowed out of the workplace
- P273 - Avoid release to the environment
- P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

- P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P363 - Wash contaminated clothing before reuse
- P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P310 - Immediately call a POISON CENTER or doctor/physician
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Storage

- P405 - Store locked up

Disposal

- P501 - Dispose of contents/container to an approved waste disposal plant

Contains

Substances

3, 3'-Methylene bis (5-methyl oxazolidine)

CAS Number

66204-44-2

Additional Information

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)	GHS Classification
3, 3'-Methylene bis (5-methyl oxazolidine)	66204-44-2	60 - 100%	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Corr. 1C (H314) Eye Corr. 1 (H318) Skin Sens. 1 (H317)

			STOT RE 2 (H373) Aquatic Acute 2 (H401) Aquatic Chronic 3 (H412)
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4. FIRST AID MEASURES

First-aid Measures

Inhalation

If inhaled, move victim to fresh air and seek 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.

Eyes

Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.

Ingestion

Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

Most important symptoms and effects, both acute and delayed

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.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

Specific hazards arising from the chemical

Decomposition in fire may produce harmful gases.

Special protective actions for fire-fighters

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

6. ACCIDENTAL RELEASE MEASURES

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.

Environmental Precautions

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

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.

Additional Information

See Section 8 and 13 for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling

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.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Appropriate engineering controls

Use in a well ventilated area.

Individual protection measures, such as 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:

Liquid

Color

Colorless to slight yellow

Odor:

Sweet amine

Odor Threshold:

No information available

pH:

10 (0.15%)

Specific Gravity: 1.049 - 1.069

Freezing Point/Range (°C):

No information available

Pour Point/Range (C):

No information available

Boiling Point/Range (C):

116

Flash Point/Range (°C):

No information available

Flash Point Method:

TCC

Flammability Limits in Air - Lower (%):

No information available

Flammability Limits in Air - Upper (%):

No information available

Autoignition Temperature (°C):

No information available

Evaporation Rate (Butyl Acetate=1):

No information available

Vapor Pressure @ 20 C (mmHg):

< 1

Vapor Density (Air=1):

No information available

Water Solubility

Soluble in water

Decomposition Temperature (C):

No information available

Viscosity, Dynamic @ 20 C (centipoise):

No information available

Viscosity, Kinematic @ 20 C (centistokes):

No information available

Partition Coefficient/n-Octanol/Water:

1.89

Molecular Weight (g/mole):

No information available

10. STABILITY AND REACTIVITY

Reactivity

Not expected to be reactive.

Chemical Stability

Stable

Possibility of hazardous reactions

Will Not Occur

Conditions to Avoid

None anticipated

Incompatible materials

Strong oxidizers. Strong acids. Reducing agents.

Hazardous decomposition products

Formaldehyde. Oxides of nitrogen. Oxides of sulfur.

Additional Guidelines

Not Applicable

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects**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.

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

Toxicity

Ecotoxicity effects Toxic to aquatic life.

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)

Persistence and degradability

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

Bioaccumulation potential

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

Mobility in soil

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

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.

13. DISPOSAL CONSIDERATIONS

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.

Other Information

No information available

14. TRANSPORT INFORMATION

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

Special Precautions for User

None

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

Exempt

15. REGULATORY INFORMATION

Regulatory Information

This SDS was prepared in accordance with United Nations "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)" and its revisions.

16. OTHER INFORMATION

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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End of Safety Data Sheet