

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

BE-4 BACTERICIDE

Revision Date: 20-Dec-2012

Revision Number: 11

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

Product Identifier

Product Name

BE-4 BACTERICIDE

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use

Biocide

Uses Advised Against

No information available

Details of the supplier of the safety data sheet

Halliburton Energy Services
Halliburton House, Howemoss Place
Kirkhill Industrial Estate
Dyce
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United Kingdom

Emergency Phone Number: +44 1224 795277 or +1 281 575 5000

www.halliburton.com

For further information, please contact

E-Mail address:

fdunexchem@halliburton.com

Emergency telephone number

+44 1224 795277 or +1 281 575 5000

Emergency telephone §45 - (EC)1272/2008

Europe	112
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO): + 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Spain	Poison Information Service (ES): +34 91 562 04 20
United Kingdom	NHS Direct (UK): +44 0845 46 47

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute Oral Toxicity	Category 4- (H302)
Acute Inhalation Toxicity - Dusts and Mists	Category 2- (H330)
Skin Sensitization	Category 1- (H317)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases mentioned in this Section, see Section 16

2. HAZARDS IDENTIFICATION

Classification	T - Toxic.
Risk Phrases	R22 Harmful if swallowed. R23 Toxic by inhalation. R43 May cause sensitization by skin contact.

Label Elements

Hazard Pictograms



Signal Word

Danger

Hazard Statements

H330 - Fatal if inhaled
H302 - Harmful if swallowed
H317 - May cause an allergic skin reaction

Contains

Substances

Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine

CAS Number

4719-04-4

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P330 - Rinse mouth
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P363 - Wash contaminated clothing before reuse

Other Hazards

None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	EINECS	CAS Number	PERCENT	EEC Classification	EU - CLP Substance Classification	REACH No.
Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine	225-208-0	4719-04-4	60 - 100%	Xn; R22-23 R43	Acute Tox. 2 (H330) Acute Tox. 4 (H302) Skin Sens. 1 (H317)	No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of first aid measures

Inhalation

If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

4. FIRST AID MEASURES

Eyes	In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.
Skin	In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and laundry before reuse.
Ingestion	Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Most Important symptoms and effects, both acute and delayed

May cause eye, skin, and respiratory irritation. May cause headache and nausea.

Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically
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5. FIREFIGHTING MEASURES

Extinguishing media**Suitable Extinguishing Media**

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

Special hazards arising from the substance or mixture**Special Exposure Hazards**

Decomposition in fire may produce toxic gases.

Advice for firefighters**Special Protective Equipment 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.

See Section 12 for additional information

Environmental precautions

Prevent from entering sewers, waterways, or low areas.

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.

Reference to other sections

See Section 12 for additional information.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Conditions for safe storage, including any incompatibilities

Store away from acids. Store away from oxidizers. Store away from direct sunlight. Keep container closed when not in use.

Specific End Use(s)**Exposure Scenario**

No information available

Other Guidelines

No information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Substances	EU	UK OEL	Netherlands	France OEL	Germany MAK/TRK
Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Substances	Italy	Poland	Hungary	Czech Republic	Denmark
Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

Exposure controls

Engineering Controls Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Personal protective equipment

Respiratory Protection Organic vapor respirator.

Hand Protection Impervious rubber gloves.

Skin Protection Rubber apron.

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

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

Environmental Exposure Controls No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State: Liquid

Odor: Amine

Color: Clear light yellow

Odor Threshold: No information available

Property

Remarks/ Method

Values

pH:	11
Melting Point/Range	No data available
Freezing Point/Range (C):	-35°C
Boiling Point/Range	No data available
Flash Point	> 100°C
PMCC	
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	1.16
Water Solubility	Soluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other information

VOC Content (%) No data available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable

Chemical Stability

Stable

Possibility of Hazardous Reactions

10. STABILITY AND REACTIVITY

Will Not Occur

Conditions to Avoid

Keep away from heat, sparks and flame. Avoid contact with metals such as aluminum, tin, lead, brass, bronze, copper, and zinc.

Incompatible Materials

Strong oxidizers. Strong acids.

Hazardous Decomposition Products

Oxides of nitrogen. Formaldehyde. Acetic acid. Carbon monoxide and carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity

Inhalation

Causes severe respiratory irritation.

Eye Contact

Causes severe eye irritation May cause eye burns.

Skin Contact

Causes severe skin irritation. May cause skin burns. May cause an allergic skin reaction.

Ingestion

Causes burns of the mouth, throat and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 1% are chronic health hazards.

Substances	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine	LD50: 763 mg/kg	LD50: > 2000 mg/kg	LC50: 0.371 mg/l/4h

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity Effects

Substances	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Hexahydro-1,3,5-tris(2-hydroxyethyl)-s-triazine	No information available	No information available	No information available	No information available

Persistence and degradability

Biodegradable.

Bioaccumulative potential

Does not bioaccumulate

Mobility in soil

No information available

Results of PBT and vPvB assessment

No information available.

Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

13. DISPOSAL CONSIDERATIONS

Disposal Method Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

IMDG/IMO

UN Number: UN2810,
UN Proper Shipping Name: Toxic Liquid, Organic, N.O.S.
Transport Hazard Class(es): , 6.1
Packing Group: , II
EMS: EmS F-A, S-A

RID

UN Number: UN2810,
UN Proper Shipping Name: Toxic Liquid, Organic, N.O.S.
Transport Hazard Class(es): , 6.1
Packing Group: , II

ADR

UN Number: UN2810,
UN Proper Shipping Name: Toxic Liquid, Organic, N.O.S.
Transport Hazard Class(es): , 6.1
Packing Group: , II

IATA/ICAO

UN Number: UN2810,
UN Proper Shipping Name: Toxic Liquid, Organic, N.O.S.
Transport Hazard Class(es): , 6.1
Packing Group: , II

Special Precautions for User None
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories

EINECS Inventory This product, and all its components, complies with EINECS
US TSCA Inventory All components listed on inventory or are exempt.
Canadian DSL Inventory All components listed on inventory or are exempt.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

Germany, Water Endangering Classes (WGK) WGK 2: Hazard to waters.

Chemical Safety Assessment
 No information available

16. OTHER INFORMATION

Full text of R-phrases referred to under Sections 2 and 3

16. OTHER INFORMATION

R22 Harmful if swallowed.

R23 Toxic by inhalation.

R43 May cause sensitization by skin contact.

Key literature references and sources for datawww.ChemADVISOR.com/**Revision Date:** 20-Dec-2012**Revision Note** Not applicable**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer Statement**

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End of Safety Data Sheet