HALLIBURTON

SAFETY DATA SHEET

NO-SULF®

Revision Date: 01-Oct-2015 **Revision Number:** 12

1. Product Identifier & Identity for the Chemical

Statement of Hazardous Nature Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Dangerous Goods according to the criteria of ADG.

1.1. Product Identifier

Product Name NO-SULF®

Other means of Identification

Synonyms: None

Product Code: HM003706

Recommended use of the chemical and restrictions on use

Recommended Use Hydrogen Sulfide Scavenger

Uses Advised Against No information available

Supplier's name, address and phone number

Manufacturer/Supplier Halliburton Australia Pty. Ltd.
15 Marriott Road
Jandakot
WA 6164
Australia

ACN Number: 009 000 775
Telephone Number: + 61 1 800 686 951
Fax Number: 61 (08) 9455 5300

E-Mail address: fdunexchem@halliburton.com

Emergency phone number

+ 61 1 800 686 951

Australian Poisons Information Centre

24 Hour Service: - 13 11 26

Police or Fire Brigade: - 000 (exchange): - 1100

2. Hazard Identification

Statement of Hazardous Nature Hazardous according to the criteria of the 3rd Revised Edition of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS), Dangerous Goods according to the criteria of ADG.

Classification of the hazardous chemical

Acute Aquatic Toxicity	Category 1 - H400
Chronic Aquatic Toxicity	Category 1 - H410

Label elements, including precautionary statements

Hazard Pictograms

Signal Word Warning

Hazard Statements
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention P273 - Avoid release to the environment

Response P391 - Collect spillage

Storage None

Disposal P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains

Substances	**CAS Number**
Zinc carbonate	3486-35-9

Other hazards which do not result in classification
None known

Australia Classification
For the full text of the H-phrases mentioned in this Section, see Section 16

Classification N - Dangerous For The Environment.

Risk Phrases

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Australia
Zinc carbonate	3486-35-9	60 - 100%	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

4. First aid measures

Description of necessary first aid measures

Inhalation If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Eyes In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Skin Wash with soap and water. Get medical attention if irritation persists.

Ingestion If swallowed, induce vomiting immediately by giving two glasses of water and sticking fingers down throat; never give anything to an unconscious person. Get

medical attention.

Symptoms caused by exposure
No significant hazards expected.

Medical Attention and Special Treatment
Notes to Physician Treat symptomatically

5. Fire Fighting Measures

Suitable extinguishing equipment
Suitable Extinguishing Media
All standard fire fighting media
Extinguishing media which must not be used for safety reasons
None known.

Specific hazards arising from the chemical
Special Exposure Hazards
Decomposition in fire may produce harmful gases.

Special protective equipment and precautions for fire fighters
Special Protective Equipment for Fire-Fighters
Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Use appropriate protective equipment. Avoid creating and breathing dust.

6.2. Environmental precautions
Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up
Scoop up and remove.

7. Handling and storage

7.1. Precautions for Safe Handling
Handling Precautions
Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust.
Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities
Storage Information
Store away from acids. Store in a cool, dry location. Keep container closed when not in use.
Other Guidelines
No information available

8. Exposure Controls/Personal Protection

Control parameters - exposure standards, biological monitoring
Exposure Limits

Substances	CAS Number	Australia NOHSC	ACGIH TLV-TWA
Zinc carbonate	3486-35-9	Not applicable	Not applicable

Appropriate engineering controls
Engineering Controls Use in a well ventilated area. Local exhaust ventilation should be used in areas without

good cross ventilation.

Personal protective equipment (PPE)

Respiratory Protection	Dust/mist respirator. (N95, P2/P3)
Hand Protection	Normal work gloves.
Skin Protection	Normal work coveralls.
Eye Protection	Wear safety glasses or goggles to protect against exposure.
Other Precautions	None known.
Environmental Exposure Controls	No information available

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State:	Solid	**Color:**	White
Odor:	Odorless	**Odor Threshold:**	No information available

Property Remarks/ - Method	Values
pH:	No data available
Freezing Point/Range	No data available
Melting Point/Range	No data available
Boiling Point/Range	No data available
Flash Point	No data available
Evaporation rate	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	3.5
Water Solubility	Partly soluble
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

9.2. Other information

VOC Content (%)	0
Bulk Density	37 lbs/ft3

10. Stability and Reactivity

10.1. Reactivity
Not expected to be reactive.
10.2. Chemical Stability
Stable
10.3. Possibility of Hazardous Reactions
Will Not Occur
10.4. Conditions to Avoid
None anticipated
10.5. Incompatible Materials
Strong acids.
10.6. Hazardous Decomposition Products
Zinc oxide.

11. Toxicological Information

Information on routes of exposure

Principle Route of Exposure	Eye or skin contact, inhalation.

Sympotoms related to exposure

Most Important Symptoms/Effects
No significant hazards expected.

Numerical measures of toxicity

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc carbonate	3486-35-9	> 5000 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rat) (similar substance)	> 5.7 mg/L air (Rat, dust, 4h) (similar substance)

Immediate, delayed and chronic health effects from exposure

Inhalation May cause respiratory irritation.
Eye Contact May cause mild eye irritation.
Skin Contact May cause mild skin irritation.
Ingestion May cause stomach discomfort.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

Exposure Levels
No data available

Interactive effects
None known.

Data limitations
No data available

Substances	CAS Number	Skin corrosion/irritation
Zinc carbonate	3486-35-9	Non-irritating to the skin (Rabbit) (similar substances)

Substances	CAS Number	Eye damage/irritation
Zinc carbonate	3486-35-9	Non-irritating to the eye (Rabbit) (similar substances)

Substances	CAS Number	Skin Sensitization
Zinc carbonate	3486-35-9	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

Substances	CAS Number	Respiratory Sensitization
Zinc carbonate	3486-35-9	No information available

Substances	CAS Number	Mutagenic Effects
Zinc carbonate	3486-35-9	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Zinc carbonate	3486-35-9	No information available.

Substances	CAS Number	Reproductive toxicity
Zinc carbonate	3486-35-9	When tested at maternally toxic doses, no adverse effects on fertility, teratogenicity, or development were observed in rats, or on teratogenicity in rabbits Animal testing did not show any effects on fertility. (similar substances)

Substances	CAS Number	STOT - single exposure
Zinc carbonate	3486-35-9	No data of sufficient quality are available.

Substances	CAS Number	STOT - repeated exposure
Zinc carbonate	3486-35-9	No data of sufficient quality are available.

Substances	CAS Number	Aspiration hazard
Zinc carbonate	3486-35-9	Not applicable

12. Ecological Information

Ecotoxicity

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Zinc carbonate	3486-35-9	IC50(72h): 0.15 mg/L (Pseudokirchnerella subcapitata) (similar substance)	LC50(96h): 0.439 mg/L (Cottus bairdii) (similar substance) NOEC(30d): 0.172 mg/L (Cottus bairdii) (similar substance)	IC50(4h): 0.35 mg/L (activated sludge of a predominantly domestic sewage) (similar substance)	EC50(48h): 0.416 mg/L (Ceriodaphnia dubia) (similar substance) NOEC(7d): 0.025 mg/L (Ceriodaphnia dubia) (similar substance) NOEC(21d): 0.1 mg/L (Daphnia magna) (similar substance)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Zinc carbonate	3486-35-9	The methods for determining biodegradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Zinc carbonate	3486-35-9	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Zinc carbonate	3486-35-9	No information available

12.6. Other adverse effects

Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

13. Disposal Considerations

Safe handling and disposal methods

Bury in a licensed landfill according to federal, state, and local regulations.

Disposal of any contaminated packaging

Follow all applicable national or local regulations.

Environmental regulations

Not applicable

14. Transport Information

Transportation Information

UN Number: UN3077
UN Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (zinc Oxide)
Transport Hazard Class(es): 9
Packing Group: III
Environmental Hazards: Marine Pollutant

Special precautions during transport

None

HazChem Code
None Allocated

15. Regulatory Information

Safety, health and environmental regulations specific for the product

International Inventories

Australian AICS Inventory	All components listed on inventory or are exempt.
New Zealand Inventory of Chemicals	All components listed on inventory or are exempt.
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.

Poisons Schedule number
None Allocated

16. Other information

Date of preparation or review

Revision Date: 01-Oct-2015

Revision Note
SDS sections updated: 2 14

Full text of R-phrases referred to under Sections 2 and 3
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of H-Statements referred to under sections 2 and 3
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

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 abreviations or acronyms used
bw – body weight
CAS – Chemical Abstracts Service
EC50 – Effective Concentration 50%
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
NOEC – No Observed Effect Concentration
OEL – Occupational Exposure Limit
PBT – Persistent Bioaccumulative and Toxic
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
vPvB – very Persistent and very Bioaccumulative
h - hour

mg/m^3 - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
w/w - weight/weight
d - day

Key literature references and sources for data
www.ChemADVISOR.com/

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End of Safety Data Sheet