HALLIBURTON

SAFETY DATA SHEET

AMMONIUM SULFATE, SATURATED SOLUTION (11301)

Revision Date: 28-Dec-2015 Revision Number: 9

1. Product Identifier & Identity for the Chemical

Statement of Hazardous Nature Non-Hazardous according to the criteria of the 3rd Revised Edition of the Globally

Harmonised System of Classification and Labelling of Chemicals (GHS), Non-Dangerous

Goods according to the criteria of ADG.

1.1. Product Identifier

Product Name AMMONIUM SULFATE, SATURATED SOLUTION (11301)

Other means of Identification

Synonyms: None Product Code: HM003971

Recommended use of the chemical and restrictions on use

Recommended Use Reagent

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 Non-Hazardous according to the criteria of the 3rd Revised Edition of the Globally

Harmonised System of Classification and Labelling of Chemicals (GHS), Non-Dangerous

Goods according to the criteria of ADG.

Classification of the hazardous chemical

Not classified

Label elements, including precautionary statements

Hazard Pictograms

Signal Word Not Hazardous

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Hazard Statements Not Classified

Precautionary Statements

None Prevention Response None Storage None

Contains

Disposal

Substances CAS Number

None

Contains no hazardous substances in concentrations above

cut-off values according to the competent authority

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 Not Classified

Risk Phrases None

3. Composition/information on Ingredients

NA

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Australia
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	60 - 100%	Not Applicable

4. First aid measures

Description of necessary first aid measures

If inhaled, move victim to fresh air and seek medical attention. Inhalation

In case of contact, or suspected contact, immediately flush eyes with plenty of **Eyes**

water for at least 15 minutes and get medical attention immediately after flushing. In case of contact, immediately flush skin with plenty of soap and water for at least

Skin

15 minutes. Get medical attention. Remove contaminated clothing and launder

before reuse.

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

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

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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

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6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment.

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

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.

7. Handling and storage

7.1. Precautions for Safe Handling

Handling Precautions

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.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store away from oxidizers. 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

Exposure Limits				
Substances	CAS Number	Australia NOHSC	ACGIH TLV-TWA	
Contains no hazardous substances in	NA	Not applicable	Not applicable	
concentrations above cut-off values according to				
the competent authority				

Appropriate engineering controls

Engineering Controls Local exhaust ventilation should be used in areas without good cross ventilation.

Personal protective equipment (PPE)

Respiratory Protection Ammonia respirator. In high concentrations, supplied air respirator or a self-contained

breathing apparatus. Impervious rubber gloves.

Hand Protection 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.

No information available **Environmental Exposure Controls**

9. Physical and Chemical Properties

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9.1. Information on basic physical and chemical properties

Physical State: Liquid Clear colorless

Odor Threshold: No information available Odor: Mild ammonia

Property Values

Remarks/ - Method

5.5 pH:

No data available Freezing Point/Range Melting Point/Range No data available **Boiling Point/Range** No data available **Flash Point** No data available **Evaporation rate** No data available No data available **Vapor Pressure Vapor Density** No data available **Specific Gravity** No data available 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

9.2. Other information

VOC Content (%) No data available

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 oxidizers.

10.6. <u>Hazardous Decomposition Products</u>

Ammonia. Oxides of sulfur. Oxides of nitrogen. Carbon monoxide and carbon dioxide.

11. Toxicological Information

Information on routes of exposure

Eye or skin contact, inhalation. **Principle Route of Exposure**

Symptoms 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
Contains no hazardous substances in concentrations above	NA	No data available	No data available	No data available
cut-off values according to the competent				

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authority

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Immediate, delayed and chronic health effects from exposure

Inhalation None known.

Eye ContactNon-irritating to rabbit's eye
Skin Contact
Not irritating to skin in rabbits.

Ingestion None known.

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

12. Ecological Information

Ecotoxicity

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish		Toxicity to Invertebrates
				Microorganisms	
Contains no	NA	No information available	No information available	No information available	No information available
hazardous substances					
in concentrations					
above cut-off values					
according to the					
competent authority					

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Contains no hazardous substances in	NA	No information available
concentrations above cut-off values according to		
the competent authority		

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Contains no hazardous substances in	NA	No information available
concentrations above cut-off values according to		
the competent authority		

12.4. Mobility in soil

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Substances	CAS Number	Mobility
Contains no hazardous substances in concentrations	NA	No information available
above cut-off values according to the competent authority		

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

Disposal should be made in accordance with 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: Not restricted **UN Proper Shipping Name:** Not restricted Transport Hazard Class(es): Not applicable **Packing Group:** Not applicable **Environmental Hazards:** Not applicable

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 are listed on the AICS or are subject to a relevant exemption, permit, or

assessment certificate.

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

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

International Agreements

Montreal Protocol - Ozone Depleting Substances: Does not apply **Stolkhom Convention - Persistent Organic Pollutants:** Does not apply **Rotterdam Convention - Prior Informed Consent:** Does not apply **Basel Convention - Hazardous Waste:** Does not apply

16. Other information

Date of preparation or review

Revision Date: 28-Dec-2015

Revision Note

SDS sections updated: 2

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

None

Full text of H-Statements referred to under sections 2 and 3

None

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

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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/m3 - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

w/w - weight/weight

d - day

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Safety Data Sheet