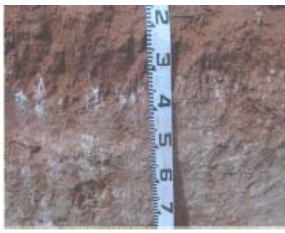
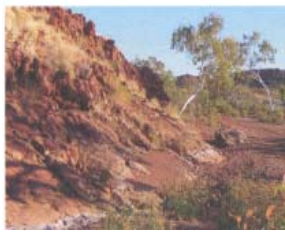
WARRO JOINT VENTURE





WARRO GAS FIELD

WARRO-4 WELL

ENVIRONMENT PLAN BRIDGING DOCUMENT NO 1 FOR

ADDITIONAL CHEMICALS FOR SUSPENSION FOR EWT OPERATIONS FOR WARRO-4

Document number	Revision	Date of revision
WJV-W4-EWT-PL-34	0	8 July 2016

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1 INTRODUCTION

1.1 BACKGROUND

This Bridging Document is being issued as an addendum to update the Warro Gas Field Warro-4 Environment Plan (WJV-W4-EWT-PL-25 Rev 3) – the "EP".

Approvals from the DMP for the EP and associated Oil Spill Contingency Plan (WJV-W4-EWT-PL-26 Rev1) were received on 2nd June 2016.

This EP Bridging Document (WJV-W4-EWT-PL-34) covers a change being requested to cover alternative chemicals that are to be used during the well suspension activities to end the Warro-4 Well Test operations.

Following work performed by Nalco Champion in relation to suspension fluids for Warro-5 and Warro-6, Latent have determined that the same fluid should be used on Warro-4 to replace the suspension fluid referenced in the original Warro-4 EP.

This same suspension fluid and the chemicals have already recently been approved for Warro-5 and Warro-6.

The chemicals proposed present no specific environmental risks and their use will be managed in accordance with the existing systems and processes in the EP covering the other fluids and chemicals and risks already identified.

This document covers the modified chemical disclosure for the suspension fluid.

1.2 CONTACT DETAILS

Contact details for this activity are:

Stephen Keenihan

Latent Petroleum Pty Ltd

1008 Hay Street, Perth WA 6000

2 PROJECT DESCRIPTION

2.1 OVERVIEW

The Warro Gas Field is located approximately 200km north of Perth, 60km east of Jurien Bay and 55km north of the Dandaragan township. See Figure 1.

The DMP granted Retention Leases RL-6 and RL-7 in December 2014.

The project is located within RL-7 on Freehold Land (Lot 10323). This freehold land is predominantly cleared agricultural land with isolated patches of native vegetation and the WJV has a lease with the landowner and an agreement in place for the proposed activity.

Warro-4 well is located >630m west and approximately 1.5km north of the closest approaches of the Watheroo National Park respectively. The location of the Warro-4 well is presented in Figure 2 and the coordinates provided in Table 1.

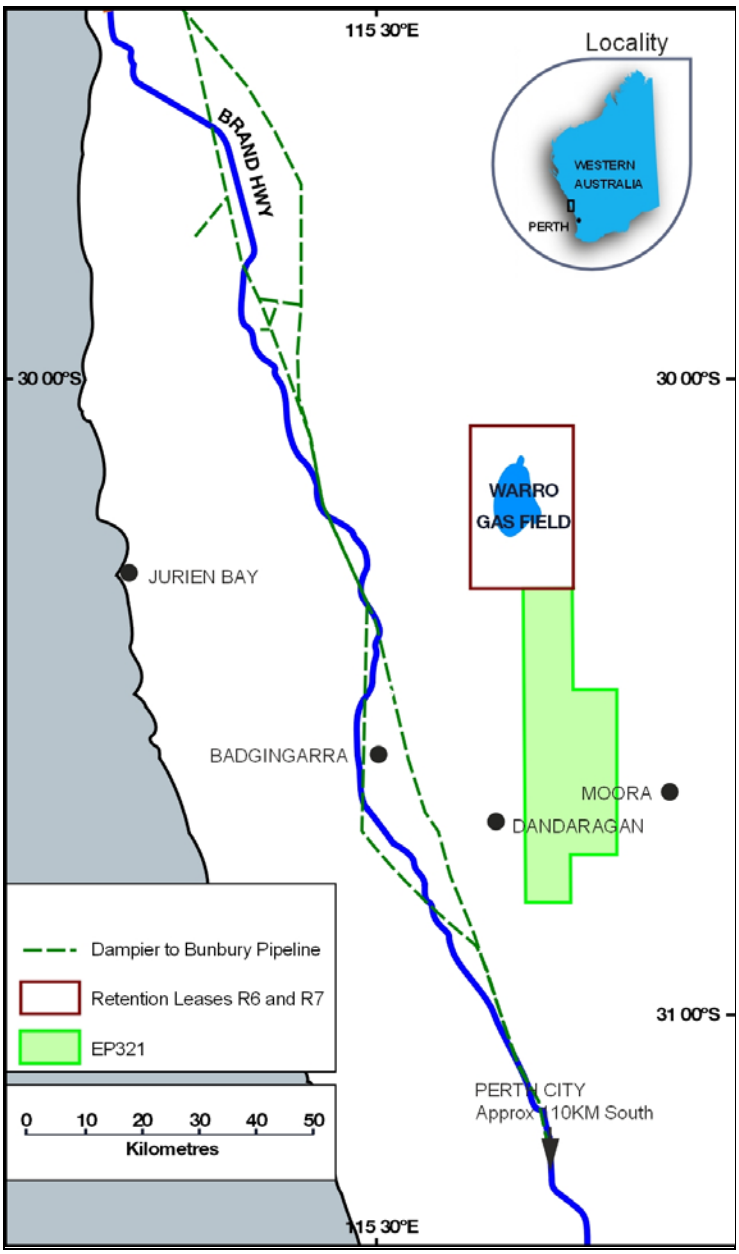

Figure 1 - Location of the Warro Gas Field

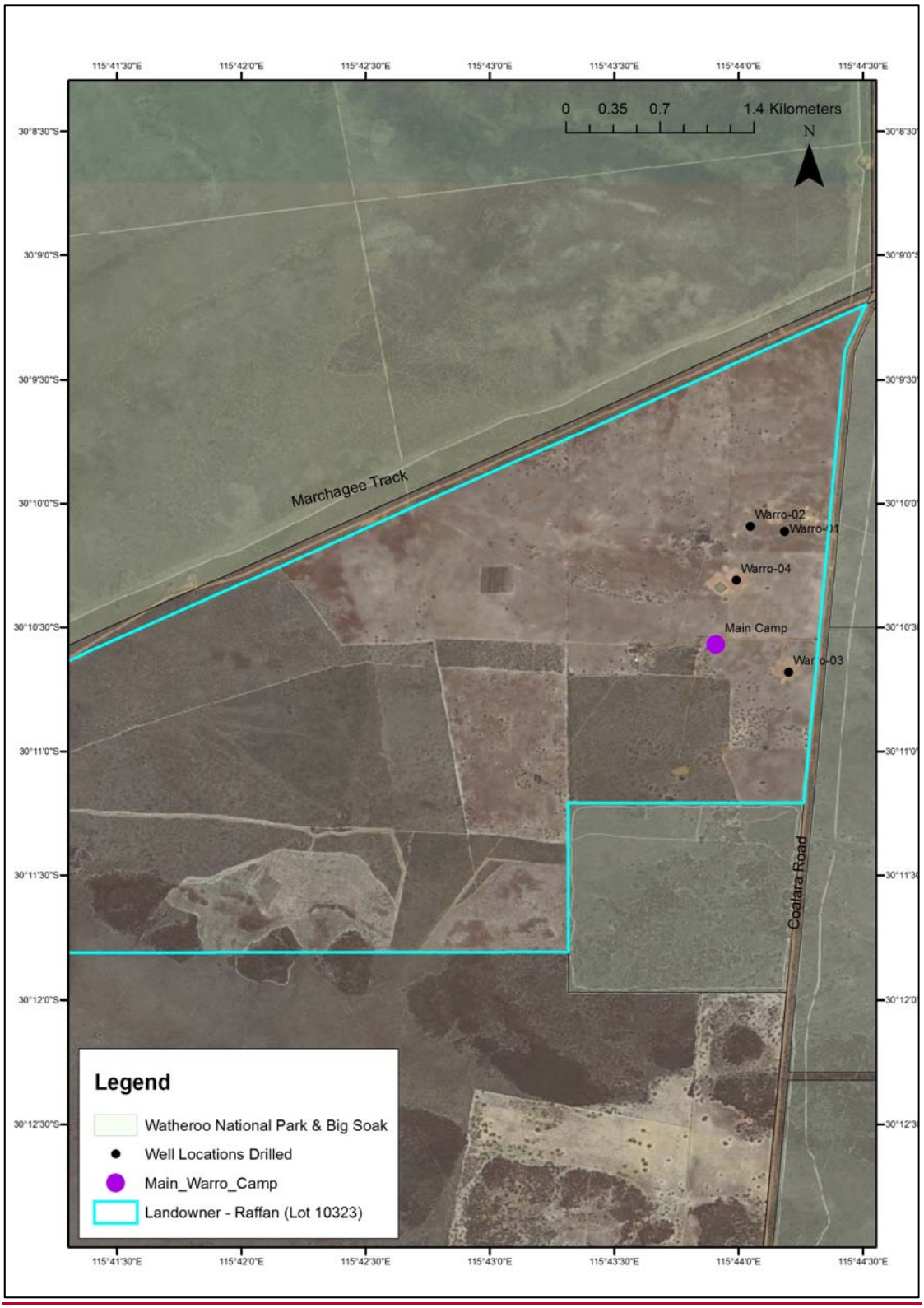

Figure 2 - Location of Warro-4

Well	Easting	Northing	Latitude	Longitude
Warro-4	378023.4	6661499.3	30° 10’ 18.49” S	115° 43’ 59.42” E

Table 1 - Well Location Coordinates

2.2 WELL PLAN

The recent Warro-4 well testing operations commenced on 22 June 2016. Those operations are nearing completion and the next phase will be to suspend the well.

2.3 WELL OBJECTIVES

Warro-4 is an exploration well designed to evaluate the Late-Middle Jurassic sandstone reservoir target within the Yarragadee Formation.

3 TREATMENT METHODOLOGY

Latent propose to circulate a weighted inhibited fluid into the well prior to installing the Back Pressure Valve ("BPV") in the tubing hanger during the well suspension operations. This process will be conducted by SGS, currently on site for the EWT using equipment (pumps and tanks) also on site for the EWT.

The chemicals will be mixed on site with bore water in a 500 bbl tank to create the inhibited fluid. The inhibited fluid will then be circulated into the well and any existing water in the wellbore from the well test will be returned to the 1mm HDPE lined on the Warro-6 location via the polypipe that has been already used during the well test to transport well test water from the Warro-4 site to Warro-6.

The volumes of chemicals to be mixed are extremely small – total 8 litres of 7408 oxygen scavenger and 75 litres of EC6733A biocide.

The sodium chloride (salt) will be mixed in the Newpark facilities in Perth and be transported to site in liquid form where it will also be mixed into the 500 bbl tank.

The chemicals will be stored in bunds on site and handled in accordance with the MSDS.

This activity is scheduled to occur during the second half of July 2016 and will take approximately two days. The use of inhibition fluid is a one-off activity during well suspension.

4 ENVIRONMENTAL IMPACTS

The primary environmental risks related to use of the fluids and chemicals are related to contamination of soil or near-surface water systems.

These risks have been identified in the EP and the existing measures implemented cover these additional materials being proposed:

- fluids are returned to lined sump or turkeys nest (1mm HDPE)
- sump / turkeys nest is maintained with a 300mm freeboard to prevent overflow
- chemicals stored on site in compliance with relevant Australian Standard and the respective MSDS
- baseline survey performed with water and soil samples taken and stored
- regular monitoring of surrounding water bores
- spills will be handled in accordance with the approved Oil Spill Contingency Plan which covers response to spills on site including chemicals and fluids
- rehabilitation in accordance with the EP with testing undertaken on fluids and cuttings to determine appropriate method of disposal (if required). If offsite disposal is required it will be to a licensed facility
- substances used during well operations are disclosed in accordance with Regulation 15(9) of the Petroleum and Geothermal Energy Resources (Environment) Regulations 2012 (WA) and Chemical Disclosure Guideline - see Appendix 1 and 2 for MSDS and Chemical Disclosure of the additional chemicals.

5 SUMMARY

The modification to the EP to use these alternative chemicals results in no increased environmental risk and risk is assessed as being to ALARP. The same chemicals have already been approved for use in the WQarro-5 and Warro-6 suspension operations.

Latent confirm that apart from these changes the Warro-4 operations will be conducted in full compliance with the approved Environmental Plan and that all chemicals have been disclosed.

Appendix 1 – MSDS

SAFETY DATA SHEET

NALCO® 7408

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	NALCO® 7408
Other means of identification	:	Not applicable.
Recommended use	:	CHLORINE AND OXYGEN SCAVENGER
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Australia 2 Drake Avenue Macquarie Park NSW 2113 Australia A.B.N. 59 000 449 990 TEL: +61 2 8870 8100 FAX: +61 2 8870 8680
Emergency telephone number	:	1800 205 506 International: +65 6542 9595 Free call: +800 2537 8747
Issuing date	:	28.12.2014

Section: 2. HAZARDS IDENTIFICATION

Hazard classification

HARMFUL

This product is classified as hazardous according to Safe Work Australia. This product is classified as a dangerous good according to national and/or international regulations.

R-phrase(s)

Harmful if swallowed.

Contact with acids liberates toxic gas.

S-phrase(s)

Keep container tightly closed.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

This material and its container must be disposed of as hazardous waste.

Other hazards which do not result in classification

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Sodium Bisulfite	7631-90-5	30 - 60

The balance of the substances in this product are not classified as hazardous or are present below hazard cut-off limits

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Contact the Poison's Information Centre (eg Australia 13 1126; New Zealand 0800 764 766). Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Exposure to decomposition products may be a hazard to health.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Hazchem Code	:	2X

Section: 6. ACCIDENTAL RELEASE MEASURES

INITIAL EMERGENCY RESPONSE GUIDE NO	:	37
Personal precautions, protective equipment and emergency procedures	:	Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.

Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not ingest.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Suitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: HDPE (high density polyethylene), Brass, Neoprene, Polyurethane, EPDM, Polypropylene, Polyethylene, PVC, Chlorosulfonated polyethylene rubber, Fluoroelastomer, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.
Unsuitable material	:	The following compatibility data is suggested based on similar product data and/or industry experience: Stainless Steel 304, Buna-N, Epoxy phenolic resin, 100% phenolic resin liner

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Sodium Bisulfite	7631-90-5	TWA	5 mg/m3	AU OEL
Sodium Bisulfite	7631-90-5	WES-TWA	5 mg/m3	NZ OEL
Sodium Bisulfite	7631-90-5	TWA	5 mg/m3	ACGIH
		TWA	5 mg/m3	NIOSH REL

Engineering measures	:	Effective exhaust ventilation system Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection	:	Safety glasses
Hand protection	:	Wear the following personal protective equipment: Standard glove type. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Liquid
Colour	:	clear
Odour	:	Pungent
Flash point	:	does not flash
pH	:	4.1, 1 % Method: ASTM E 70
Odour Threshold	:	no data available
Melting point/freezing point	:	FREEZING POINT: 1.1 °C
Initial boiling point and boiling range	:	104 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	32 mm Hg (25 °C)
Relative vapour density	:	2.2 (Air = 1)
Relative density	:	1.37 (25 °C)
Density	:	1.36 g/cm3 11.38 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition temperature	:	no data available
Viscosity, dynamic	:	2.8 mPa.s (25 °C)
Viscosity, kinematic	:	no data available
VOC	:	0 % 0 g/l

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	None known.
Incompatible materials	:	Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Contact with strong acids (e.g. sulfuric, phosphoric, nitric,

		hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors. SO2 may react with vapors from neutralizing amines and may produce a visible cloud of amine salt particles.
Hazardous decomposition products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulphur oxides Oxides of phosphorus

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Harmful if swallowed.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	Vomiting No information available.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	no data available
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available

Carcinogenicity	:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive effects	:	No toxicity to reproduction
Germ cell mutagenicity	:	Contains no ingredient listed as a mutagen
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	No aspiration toxicity classification

Components

Acute oral toxicity	:	Sodium Bisulfite LD50 rat: > 2,000 mg/kg

Components

Acute inhalation toxicity	:	Sodium Bisulfite LC50 rat: 5.5 mg/l Exposure time: 4 h

Components

Acute dermal toxicity	:	Sodium Bisulfite LD50 rat: > 2,000 mg/kg

HUMAN HAZARD CHARACTERIZATION
Based on our hazard characterization, the potential human hazard is: Moderate

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	This product has no known ecotoxicological effects.

Product

Toxicity to fish	:	LC50 Oncorhynchus mykiss (rainbow trout): > 100 mg/l Exposure time: 96 hrs Test substance: Product LC50 Gambusia affinis (Mosquito fish): 240 mg/l Exposure time: 96 hrs Test substance: Active Substance
Toxicity to daphnia and other aquatic invertebrates	:	LC50 Daphnia magna (Water flea): 275 mg/l Exposure time: 48 hrs Test substance: Product LC50 Daphnia magna (Water flea): 119 mg/l Exposure time: 48 hrs Test substance: Active Substance

Toxicity to algae	:	no data available
Toxicity to fish (Chronic toxicity)	:	EC25 / IC25: 382 mg/l Exposure time: 7 Days Species: Fathead Minnow Test substance: Product LOEC: 500 mg/l Exposure time: 7 Days Species: Fathead Minnow Test substance: Product NOEC: 250 mg/l Exposure time: 7 Days Species: Fathead Minnow Test substance: Product
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	LOEC: 500 mg/l Exposure time: 7 Days Species: Ceriodaphnia dubia Test substance: Product Test Type: 3 Brood EC25 / IC25: 277 mg/l Exposure time: 7 Days Species: Ceriodaphnia dubia Test substance: Product Test Type: 3 Brood NOEC: 250 mg/l Exposure time: 7 Days Species: Ceriodaphnia dubia Test substance: Product Test Type: 3 Brood

Persistence and degradability

Greater than 95% of this product consists of inorganic substances for which a biodegradation value is not applicable.

Chemical Oxygen Demand (COD): 85,000 mg/l

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION
Based on our hazard characterization, the potential environmental hazard is: Low

Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport

Proper shipping name	:	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical name(s):	:	Sodium Bisulfite
UN/ID No.	:	UN 2693
Transport hazard class(es)	:	8
Packing group	:	III
IERG No	:	37
Hazchem Code	:	2X

Special precautions for user : Dangerous goods of Class 8 (Acids) are incompatible in a placard load with any of the following:
Class 1 Explosives
Class 4.3 Dangerous when wet substances
Class 5.1 Oxidising agents
Class 5.2 Organic peroxides
Class 6 Cyanides only
Class 7 Radioactive substances
and are incompatible with food or food packaging in any quantity.

Air transport (IATA)

UN/ID No.	:	UN 2693
Proper shipping name	:	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical name(s)	:	Sodium Bisulfite
Transport hazard class(es)	:	8
Packing group	:	III

Sea transport (IMDG/IMO)

UN/ID No.	:	UN 2693
Proper shipping name	:	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
Technical name(s)	:	Sodium Bisulfite

Transport hazard class(es) : 8
Packing group : III

Section: 15. REGULATORY INFORMATION

Standard for the Uniform Scheduling of Medicines and Poisons : No poison schedule number allocated

FOOD AND DRUG ADMINISTRATION (FDA) Federal Food, Drug and Cosmetic Act :
When use situations necessitate compliance with FDA regulations, this product is acceptable under : 21 CFR 173.310 Boiler Water Additives, 21 CFR 176.170 Components of paper and paperboard in contact with aqueous and fatty foods and 21 CFR 176.180 Components of paper and paperboard in contact with dry foods.

Limitations: no more than required to produce intended technical effect. Steam produced may be used in contact with any food type, defined under 21 CFR 170.3, which includes milk or milk products.
INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

AUSTRALIA
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

EUROPE
The substances in this preparation have been reviewed for compliance with the EINECS or ELINCS inventories.

JAPAN
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

KOREA
All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

NEW ZEALAND
All substances in this product comply with the Hazardous Substances and New Organisms (HSNO) Act 1996,and are listed on or are exempt from the New Zealand Inventory of Chemicals.

PHILIPPINES
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

Section: 16. OTHER INFORMATION

REFERENCES

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version),
Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH,
(TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Revision Date	:	28.12.2014
Date of first issue	:	29.10.2014
Version Number	:	1.10
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the MSDS.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

For additional copies of an MSDS visit www.nalco.com and request access.

SAFETY DATA SHEET

NALCO® EC6733A

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	NALCO® EC6733A
Other means of identification	:	Not applicable.
Recommended use	:	BIOCIDE
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Australia 2 Drake Avenue Macquarie Park NSW 2113 Australia A.B.N. 59 000 449 990 TEL: +61 2 8870 8100 FAX: +61 2 8870 8680
Emergency telephone number	:	1800 205 506 International: +65 6542 9595 Free call: +800 2537 8747
Issuing date	:	28.12.2014

Section: 2. HAZARDS IDENTIFICATION

Hazard classification

Toxic

This product is classified as hazardous according to Safe Work Australia. This product is classified as a dangerous good according to national and/or international regulations.

R-phrase(s)

Harmful if swallowed.

Also toxic by inhalation.

Irritating to skin.

Risk of serious damage to eyes.

May cause sensitization by skin contact.

May cause cancer.

May cause harm to the unborn child.

S-phrase(s)

Avoid exposure - obtain special instructions before use.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

This material and its container must be disposed of in a safe way.

Wear suitable protective clothing, gloves and eye/face protection.

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Other hazards which do not result in classification

None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Tetrakis(hydroxymethyl) phosphonium sulfate	55566-30-8	60 - 100
Benzyl-(C12-C16 Linear Alkyl)-Dimethyl-Ammonium Chloride	68424-85-1	1 - 10
Formaldehyde	50-00-0	0.1 - 1
The balance of the substances in this product are not classified as hazardous or are present below hazard cut-off limits		

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
In case of skin contact	:	Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
If swallowed	:	Contact the Poison's Information Centre (eg Australia 13 1126; New Zealand 0800 764 766). Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	:	Remove to fresh air. Treat symptomatically. Get medical attention immediately.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing	:	None known.

media

Specific hazards during firefighting	:	Fire Hazard Keep away from heat and sources of ignition. Flash back possible over considerable distance.
Hazardous combustion products	:	Carbon oxides
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.
Hazchem Code	:	2X

Section: 6. ACCIDENTAL RELEASE MEASURES

INITIAL EMERGENCY RESPONSE GUIDE NO	:	36
Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Eliminate all ignition sources if safe to do so. Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Avoid contact with skin and eyes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Do not ingest. Keep away from fire, sparks and heated surfaces. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Use only with adequate ventilation.
Conditions for safe storage	:	Keep away from heat and sources of ignition. Keep away from oxidizing agents. Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Suitable material	:	Keep in properly labelled containers.
Unsuitable material	:	not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Tetrakis(hydroxymethyl) phosphonium sulfate	55566-30-8	TWA	2 mg/m3	ACGIH
Formaldehyde	50-00-0	TWA	1 ppm 1.2 mg/m3	AU OEL
		VLE	2 ppm 2.5 mg/m3	AU OEL
Formaldehyde	50-00-0	WES-TWA	0.5 ppm	NZ OEL
		WES-TWA	0.33 ppm	NZ OEL
		WES-Ceiling	1 ppm	NZ OEL
Formaldehyde	50-00-0	Ceiling	0.3 ppm	ACGIH
		TWA	0.016 ppm	NIOSH REL
		Ceiling	0.1 ppm	NIOSH REL
		TWA	0.016 ppm	NIOSH REL
		Ceiling	0.1 ppm	NIOSH REL

Engineering measures : Effective exhaust ventilation system Maintain air concentrations below occupational exposure standards.

Personal protective equipment

Eye protection : Safety goggles
Face-shield

Hand protection : Wear the following personal protective equipment:
Standard glove type.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Wear suitable protective clothing.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

HUMAN EXPOSURE CHARACTERIZATION :
Based on our recommended product application and personal protective equipment, the potential human exposure is: Low

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : clear

Odour	:	Pungent
Flash point	:	74 °C
pH	:	4.0 - 4.5, 100 %
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	105 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	17 kPa (37.8 °C)
Relative vapour density	:	no data available
Relative density	:	1.32 (19 °C)
Density	:	10.3 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition temperature	:	no data available
Viscosity, dynamic	:	33 mPa.s (19 °C)
Viscosity, kinematic	:	no data available
VOC	:	no data available

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors. Strong acids Strong Bases Reducing agents
Hazardous decomposition products	:	Carbon oxides

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of	:	Inhalation, Eye contact, Skin contact

exposure

Potential Health Effects

Eyes	:	Causes serious eye damage.
Skin	:	Causes skin irritation. May cause allergic skin reaction.
Ingestion	:	Harmful if swallowed.
Inhalation	:	Toxic if inhaled. Causes respiratory tract irritation.
Chronic Exposure	:	May cause cancer by inhalation. May damage the unborn child.

Experience with human exposure

Eye contact	:	Redness, Pain, Corrosion
Skin contact	:	Redness, Irritation, Allergic reactions
Ingestion	:	Vomiting, Abdominal pain
Inhalation	:	Respiratory irritation, Cough

Toxicity

Product

Acute oral toxicity	:	LD50 rat: 575 mg/kg Test substance: 75% Active Ingredient
Acute inhalation toxicity	:	LC50 rat: 0.591 mg/l Exposure time: 4 hrs Test substance: 75% Active Ingredient
Acute dermal toxicity	:	LD50 rat: > 2,000 mg/kg Test substance: 75% Active Ingredient
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	Formaldehyde has been classified as a probable carcinogen to humans (Group 2A) by the International Agency for Research on Cancer (IARC), based on sufficient animal evidence and limited human data. The EPA's Integrated Risk Information System (IRIS) classifies formaldehyde as a probable human carcinogen (B1), based on sufficient animal evidence and limited human data. The American Conference of Governmental Industrial Hygienists (ACGIH) categorizes formaldehyde as a probable human carcinogen (A2), based on sufficient animal evidence and limited human data. Newly classified by the International Agency for Research on Cancer

		(IARC) from Group 2A (probably carcinogenic in humans) to Group 1 (carcinogenic in humans).
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	This material is not a teratogen, at low dose levels of 6 or 18 mg/kg/day for rabbits and 15 or 30 mg/kg/day for rats. At a high dose level of 60 mg/kg/day, both species showed fetal toxicity.
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	No aspiration toxicity classification

HUMAN HAZARD CHARACTERIZATION
Based on our hazard characterization, the potential human hazard is: High

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	Very toxic to aquatic life.

Product

Toxicity to fish	:	LC50 Lepomis macrochirus (Bluegill sunfish): 93 mg/l Exposure time: 96 hrs Test substance: 75% Active Ingredient LC50 Oncorhynchus mykiss (rainbow trout): 119 mg/l Exposure time: 96 hrs Test substance: 75% Active Ingredient
Toxicity to daphnia and other aquatic invertebrates	:	EC50 Daphnia magna (Water flea): 19.4 mg/l Exposure time: 48 hrs Test substance: 75% Active Ingredient
Toxicity to algae	:	LC50 Green Algae (Pseudokirchneriella subcapitata, previously Selenastrum capricornutum): 0.20 mg/l Exposure time: 96 hrs Test substance: 75% Active Ingredient
Toxicity to bacteria	:	EC50 Bacteria: 24 mg/l Exposure time: 3 hrs Test substance: 75% Active Ingredient

Persistence and degradability

The organic portion of this preparation is expected to be readily biodegradable.

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the

defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air	:	<5%
Water	:	30 - 50%
Soil	:	50 - 70%

The portion in water is expected to be soluble or dispersible.

Bioaccumulative potential

This preparation or material is not expected to bioaccumulate.

Other information

no data available

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION
Based on our hazard characterization, the potential environmental hazard is: High

Section: 13. DISPOSAL CONSIDERATIONS

Disposal methods	:	The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport

Proper shipping name	:	TOXIC LIQUID, ORGANIC, N.O.S.
Technical name(s):	:	Tetrakis(hydroxymethyl) phosphonium sulfate
UN/ID No.	:	UN 2810
Transport hazard class(es)	:	6.1
Packing group	:	III
IERG No	:	36
Hazchem Code	:	2X
Special precautions for user	:	Dangerous goods of Class 6 (Toxic and Infectious Substances) and fire risk substances and combustible liquids are incompatible in a placard load of the following: Class 1 Explosives Class 3 Nitromethane only Class 5.1 Oxidising agents Class 5.2 Organic peroxides and are incompatible with food or food packaging in any quantity.

Air transport (IATA)

UN/ID No.	:	UN 2810
Proper shipping name	:	TOXIC LIQUID, ORGANIC, N.O.S.
Technical name(s)	:	Tetrakis(hydroxymethyl) phosphonium sulfate
Transport hazard class(es)	:	6.1
Packing group	:	III

Sea transport (IMDG/IMO)

UN/ID No.	:	UN 2810
Proper shipping name	:	TOXIC LIQUID, ORGANIC, N.O.S.
Technical name(s)	:	Tetrakis(hydroxymethyl) phosphonium sulfate
Transport hazard class(es)	:	6.1
Packing group	:	III
Marine pollutant	:	Benzyl-(C12-C16 Linear Alkyl)-Dimethyl-Ammonium Chloride

Section: 15. REGULATORY INFORMATION

Standard for the Uniform Scheduling of Medicines and Poisons : Schedule 6

INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)
This product has not been evaluated for Chemical Inventory regulations and may contain substances not found on Inventory Lists such as TSCA, EINECS, DSL, etc.. This product should be used under the applicable Research and Development provisions of local notification regulations.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)
This product contains substance(s) which are found on the Non-Domestic Substances List (NDSL), or are not in compliance with other Canadian Acts.

AUSTRALIA
All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

CHINA
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

EUROPE
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

JAPAN
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

KOREA
All substances in this product comply with the Toxic Chemical Control Law (TCCL) and are listed on the Existing Chemicals List (ECL)

PHILIPPINES
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

Section: 16. OTHER INFORMATION

REFERENCES

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS™ CD-ROM Version),
Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH,
(TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS™ CD-ROM Version), Micromedex, Inc., Englewood, CO.

Revision Date	:	28.12.2014
Version Number	:	1.4
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the MSDS.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

For additional copies of an MSDS visit www.nalco.com and request access.

RHEOCHEM

MATERIAL SAFETY DATA SHEET

Product Name **SALT**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name	**RHEOCHEM LTD**
Address	11 Alacrity Place, Henderson, WA, AUSTRALIA, 6166
Telephone	+61 8 9410 8200
Fax	+61 8 9410 8299
Emergency	1800 127 406 (Australia); 011 64 3 3530199 (International)
Web Site	http://www.rheochem.com.au/
Synonym(s)	FLOSSY SALT • HALITE • NACL • SALT • SODIUM CHLORIDE
Use(s)	CHLORIDE SOURCE • DRILLING FLUID ADDITIVE
SDS Date	01 Nov 2010

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No.	None Allocated	**DG Class**	None Allocated	**Subsidiary Risk(s)**	None Allocated
Packing Group	None Allocated	**Hazchem Code**	None Allocated		

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
SODIUM CHLORIDE	Na-Cl	7647-14-5	>98%
INORGANIC SALTS	Not Available	Not Available	<0.8%
WATER	H2O	7732-18-5	<0.8%

4. FIRST AID MEASURES

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	Due to product form / nature of use, an inhalation hazard is not anticipated.
Skin	Exposure is considered unlikely. Skin irritation is not anticipated.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
Advice to Doctor	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammability	Non flammable.
Fire and Explosion	No fire or explosion hazard exists.
Extinguishing	Prevent contamination of drains or waterways.
Hazchem Code	None Allocated

6. ACCIDENTAL RELEASE MEASURES

Spillage If spilt/ packages damaged, collect for later disposal or reuse.

7. STORAGE AND HANDLING

Storage Store in a cool, dry, well ventilated area, removed from oxidising agents, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills.

Handling Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Stds No exposure standard(s) allocated.

Biological Limits No biological limit allocated.

Engineering Controls Avoid inhalation. Use in well ventilated areas.

PPE Personal Protective Equipment is not required under normal conditions of use.When using large quantities or where heavy contamination is likely, wear: dust-proof goggles and rubber or PVC gloves. At high dust levels, wear: a Class P1 (Particulate) respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	TRANSLUCENT TO WHITE GRANULES OR POWDER	**Solubility (water)**	357 g/L
Odour	SLIGHT ODOUR	**Specific Gravity**	2.163
pH	7 (1% Solution)	**% Volatiles**	NOT AVAILABLE
Vapour Pressure	NOT AVAILABLE	**Flammability**	NON FLAMMABLE
Vapour Density	NOT AVAILABLE	**Flash Point**	NOT RELEVANT
Boiling Point	1413°C	**Upper Explosion Limit**	NOT RELEVANT
Melting Point	801°C	**Lower Explosion Limit**	NOT RELEVANT
Evaporation Rate	NOT AVAILABLE		

10. STABILITY AND REACTIVITY

Chemical Stability Stable under recommended conditions of storage.

Conditions to Avoid Avoid heat, sparks, open flames and other ignition sources.

Material to Avoid Incompatible with oxidising agents (eg. hypochlorites). Avoid contact with strong oxidising agents, bromium trifluoride, lithium and acids.

Hazardous Decomposition Products May evolve toxic gases if heated to decomposition.

Hazardous Reactions Polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary Non toxic. Under normal conditions of use, adverse health effects are not anticipated. This product is used in trace amounts as a food additive, however the concentrated product is not suitable for ingestion.

Eye Low irritant. Contact may result in irritation, lacrimation and redness.

Inhalation Low irritant. Over exposure to dust may result in irritation of the nose and throat, coughing, nausea and headache.

Skin Low irritant. Prolonged or repeated contact may result in mild irritation.

Ingestion Non toxic when used as a food additive. However, the concentrate should not be consumed undiluted. Ingestion may result in gastrointestinal irritation, nausea and vomiting.

Toxicity Data SODIUM CHLORIDE (7647-14-5)
LC50 (Inhalation): > 42000 mg/m3/1 hour (rat)
LD50 (Ingestion): 3000 mg/kg (rat)
LD50 (Intraperitoneal): 2602 mg/kg (mouse)

LD50 (Intravenous): 645 mg/kg (mouse)
LD50 (Skin): > 10000 mg/kg (rabbit)
LD50 (Subcutaneous): 3000 mg/kg (mouse)
LDLo (Ingestion): 8000 mg/kg (rabbit)
LDLo (Intravenous): 300 mg/kg (guinea pig)
LDLo (Subcutaneous): 2160 mg/kg (guinea pig)
TDLo (Ingestion): 12357 mg/kg (human)

12. ECOLOGICAL INFORMATION

Environment This product is not anticipated to cause adverse effects to animal or plant life if released to the environment in small quantities. Not expected to bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Waste Disposal No special precautions are required for the disposal of this product.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

Shipping Name	None Allocated				
UN No.	None Allocated	**DG Class**	None Allocated	**Subsidiary Risk(s)**	None Allocated
Packing Group	None Allocated	**Hazchem Code**	None Allocated		

15. REGULATORY INFORMATION

Poison Schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information

ABBREVIATIONS:
ACGIH - American Conference of Industrial Hygienists.
ADG - Australian Dangerous Goods.
BEI - Biological Exposure Indice(s).
CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.
CNS - Central Nervous System.
EC No - European Community Number.
HSNO - Hazardous Substances and New Organisms.
IARC - International Agency for Research on Cancer.
mg/m3 - Milligrams per Cubic Metre.
NOS - Not Otherwise Specified.
pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm - Parts Per Million.
RTECS - Registry of Toxic Effects of Chemical Substances.
STEL - Short Term Exposure Limit.
SWA - Safe Work Australia.
TWA - Time Weighted Average.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Report Status This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ('SDS').

Product Name **SALT**

It is based on information concerning the product which has been provided to RMT by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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SDS Date 01 Nov 2010

End of Report

Appendix 2 – Chemical Disclosure

DMP CHEMICAL DISCLOSURE REPORTING TEMPLATE

A. SYSTEM DETAILS:

OPERATOR:	Latent Petroleum
PROJECT / WELL:	Warro-4
SYSTEM:	Inhibited Fluid for Suspension
TOTAL VOLUME OF SYSTEM:	500 bbls (79.5 m^3)

B. PRODUCT LIST

Trade Name	Supplier	Purpose	Product in System Fluid (%)	Toxicity and Ecotoxicity Information	MSDS attached
Water	Latent Petroleum	Base Fluid / Water	95.69%		NA
EC6733A	Nalco Champion	Biocide	0.3%	Acute toxicity: *Component 1* LD50 (Oral) 575 mg/kg Fish LC50(96hr): 72 mg/L (Scophthalmus maximus) Crustacean LC50(48hr): 0.6 mg/L (Acartia tonsa) Algae EC50(72hr): 0.16 mg/L (Skeletonema costatum) *Component 2* Fish LC50(96hr): 611 mg/L (Scophthalmus maximus) Crustacean LC50(48hr): 38.0 mg/L (Acartia tonsa) Algae EC50(72hr): 4.1 mg/L (Skeletonema costatum) *Component 3* Fish LC50(96hr):1.7mg/L (Scophthalmus maximus) Crustacean LC50(48hr): 0.4 mg/L (Acartia tonsa) Algae EC50(72hr):0.26 mg/L (Skeletonema costatum) Chronic toxicity: *Component 1* Skin sensitizer. Reproductive toxicant to rabbits/rats at 60mg/kg/day. *Component 2* iA Group 2A carcinogen (IARC) Biodegradation / bioaccumulation: *Component 1* Log Pow: 0 Biodegradation half-life (28d) 61% (OECD, 306) *Component 2* Log Pow: <0 Biodegradation (28d) 83% (OECD 306) *Component 3* Log Pow:0.1-1.9, Biodegradation (28d): 60% (OECD 306)	Yes

Sodium Chloride	Newpark	Weighting agent	4.00%	Acute Toxicity: LC50 (Inhalation): > 42000 mg/m3/1 hour (rat) LD50 (Ingestion): 3000 mg/kg (rat) LD50 (Skin): > 10000 mg/kg (rabbit) Ecotoxicity: LC50 (water flea) is 2122 mg/L/48 hours; LC50 (fathead minnow) is 6.57 g/L/96 hours. This product is not anticipated to cause adverse effects to animal or plant life if released to the environment in small quantities. Not expected to bioaccumulate Biodegradation/Bioaccumulation: Biodegradability does not pertain to inorganic substances. Does not bioaccumulate.	Yes
Nalco 7408	Nalco Champion	Oxygen Scavenger	0.01%	Acute toxicity: *Component 1* PLONOR LD50 (Oral) 2000 mg/kg *Component 2* Non-hazardous according to NOHSC, non-dangerous goods according to ADG Chronic toxicity: *Component 1* PLONOR *Component 2* Non-hazardous according to NOHSC, non-dangerous goods according to ADG Biodegradation / bioaccumulation: *Component 1* Inorganic *Component 2* Non-hazardous according to NOHSC, non-dangerous goods according to ADG	Yes

C. CHEMICAL LIST

Chemicals within products in Part B	CAS number	Mass fraction (%)
Water	7732-18-5	95.7602%
Crude Petroleum	8002-05-9	0.0003%
Potassium Chloride	7447-40-7	0.0014%
Sodium Chloride	7647-14-5	4.0148%
Soduim Bisulphite	7631-90-5	0.004%
Benzyl Alkyl-Dimethyl-Ammonium Chloride	68424-85-1	0.0187%
Ferrous Chloride	7758-94-3	0.0012%
Calcium Chloride	10043-52-4	0.0006%
Tetrakis(hydroxymethyl) Phosphonium Sulphate	55566-30-8	0.1969%
Formaldehyde	50-00-0	0.0007%
Magnesium Chloride	7786-30-3	0.0012%
Total		100%