

MATERIAL SAFETY DATA SHEET**Product Trade Name:** LOSURF-300 NONIONIC SURFACTANT**Revision Date:** 24-Apr-2013**Revision Number:** 16**1. Product and Company Identification****Product Identifier**

Product Trade Name: LOSURF-300 NONIONIC SURFACTANT
Synonyms: None
Chemical Family: Blend
Internal ID Code: HM001008

Product Use

Application: Surfactant

Manufacturer's Name and Contact Details

Name and Address Halliburton Energy Services
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Canada

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Prepared By

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2. Hazard(s) Identification**WHMIS Classification**

WHMIS Hazard Class B2 Flammable Liquids
D2A Very Toxic Materials
D2B Toxic Materials

WHMIS Symbol(s)**Summary of hazards of the product**

Hazard Overview May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects. May be harmful if swallowed.
Flammable. Potential carcinogen.

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	HMIRA Registry Number	Filing Date
Light aromatic solvent	64742-95-6	10 - 30%	Not applicable	Not applicable
Naphthalene	91-20-3	1 - 5%	Not applicable	Not applicable

Isopropanol	67-63-0	30 - 60%	Not applicable	Not applicable
Ethoxylated nonylphenol	Proprietary	5 - 10%	.	.

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.

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 launder before reuse.

Ingestion

Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

Most important symptoms and effects, both acute and delayed

May cause eye, skin, and respiratory irritation. May cause headache, dizziness, and other central nervous system effects.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically

5. Fire Fighting 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

May be ignited by heat, sparks or flames. Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. 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.

Hazardous combustion products

Carbon monoxide and carbon dioxide.

6. Accidental release measures

Personal precautions and emergency procedures

Protective Equipment

Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas.

Environmental Precautionary Measures

Prevent from entering sewers, waterways, or low areas.

Procedure for Cleaning / Absorption

Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Contain spill with sand or other inert materials. Scoop up and remove.

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. Ground and bond containers when transferring from one container to another.

Conditions for safe storage and Incompatible materials for storage

Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits

Exposure Limits

Substances	CAS Number	ACGIH TLV-TWA	OSHA PEL-TWA
Light aromatic solvent	64742-95-6	Not applicable	Not applicable
Naphthalene	91-20-3	TWA: 10 ppm STEL: 15 ppm	10 ppm
Isopropanol	67-63-0	TWA: 200 ppm STEL: 400 ppm	400 ppm
Ethoxylated nonylphenol	Proprietary	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

Organic vapor respirator.
In high concentrations, supplied air respirator or a self-contained breathing apparatus.

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.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State: Liquid
Odor: Alcohol

Color: Amber
Odor Threshold: No information available

Property

Remarks/ - Method

pH:

Values

7.5

pH Concentration of Solution:

No information available.

Freezing Point/Range

-2 °C

Melting Point/Range

No information available

Boiling Point/Range (C):

No information available.

Flash Point/Range (C):

18 °C

Flash Point Method:

PMCC

Autoignition Temperature (C):

No information available.

Flammability Limits in Air - Lower (%):

No information available.

Flammability Limits in Air - Upper (%):

No information available.

Evaporation Rate (Butyl Acetate=1):

No information available.

Vapor Pressure @ 20 C (mmHg):

No information available.

Vapor Density (Air=1):

No information available.

Specific Gravity @ 20 C (Water=1):

0.91

Solubility in Water (g/100ml):

Disperses

Solubility in other solvents

No information available.

Partition Coefficient/n-Octanol/Water:

No information available.

Decomposition Temperature (C):	No information available.
Viscosity	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available
Other Information	
Molecular Weight (g/mole):	No information available.
VOC Content (%)	No information available

10. Stability and Reactivity

Conditions of Reactivity

Conditions to Avoid

Keep away from heat, sparks and flame.

Hazardous Polymerization:

Will Not Occur

Chemical Stability

Stable

Sensitivity to Static Discharge

Not available

Sensitivity to Mechanical Impact

Not available

Incompatible materials

Strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide and carbon dioxide.

11. Toxicological Information

Routes of entry

Eye or skin contact, inhalation.

Information on Toxicological Effects

Acute effects from exposure

Inhalation

May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact

May cause eye irritation

Skin Contact

May cause skin defatting with prolonged exposure. Can dry skin.

Ingestion

Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression.

Chronic effects from exposure

Chronic Effects/Carcinogenicity

Repeated overexposure may cause liver and kidney effects. Contains petroleum distillates which have been shown to cause skin cancer in laboratory animals.

The International Agency for Research on Cancer (IARC) has evaluated naphthalene and determined it to be a possible carcinogen to humans (Group 2B, based on sufficient evidence in experimental animals and inadequate evidence in humans).

Irritancy of product

Irritation

Irritating to eyes and skin

Sensitization of product

Sensitization

Not confirmed to cause skin or respiratory sensitization.

Mutagenicity

Mutagenic Effects

Not regarded as mutagenic

Carcinogenicity

Carcinogenic Effects

Contains a known or suspected carcinogen

Reproductive Toxicity

Reproductive Toxicity

This product does not contain any known or suspected reproductive hazards

Teratogenicity/embryotoxicity

Teratogenic

Not a confirmed teratogen or embryotoxin.

Toxicologically synergistic material

Isopropanol: Enhanced by the toxicity of carbon tetrachloride, 1,1,2-trichloroethane, chloroform, trichloroethylene, and dimethylnitrosamine (possibly carbon tetrachloride)

Naphthalene: Naphthalene increased the mutagenicity of benzo(a)pyrene in bacteria, in the presence of metabolic activation

Acute Toxicity

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Light aromatic solvent	64742-95-6	8400 mg/kg (Rat)	2000 mg/kg (Rabbit)	5.2 mg/L (Rat) 4 h 3400 ppm (Rat) 4 h
Naphthalene	91-20-3	490 mg/kg (Rat)	2500 mg/kg (Rat) 20 g/kg (Rabbit) 1120 mg/kg (Rabbit)	340 mg/m ³ (Rat) 1 h
Isopropanol	67-63-0	4396 mg/kg (Rat) 5840 mg/kg (Rat) 3600 mg/kg (Mouse)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit) 16.4 mL/kg (Rabbit)	72.6 mg/L (Rat) 4h >1000 ppm(24.6 mg/L) (Rat)
Ethoxylated nonylphenol	Proprietary	1310 mg/kg (Rat) 4290-5000 mg/kg (Rat) 4290 mg/kg (Mouse) (similar substance)	2 mL/kg (Rabbit) 2500 mg/kg (Rabbit)	> 0.0213 mL/L (Rat)

12. Ecological Information**Toxicity**

Ecotoxicity Effects

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity for Invertebrates
Light aromatic solvent	64742-95-6	No information available	No information available	No information available	No information available
Naphthalene	91-20-3	EC50(72h): 0.4 mg/L (Skeletonema costatum)	LC50(96h) 6.08 mg/L (Pimephales promelas) LC50(96h): 1.2 mg/L (Oncorhynchus gorbuscha) LC50(96h): 1.6 mg/L (Oncorhynchus mykiss) NOEC(40d): 0.37 mg/L (Oncorhynchus kisutch) NOEC(30d): < 0.85 mg/L Pimephales promelas)	No information available	EC50(48h): 2.16 mg/L (Daphnia magna)

Isopropanol	67-63-0	EC50: > 1000 mg/l(Desmodesmus subspicatus) EC50(7d): 1800 mg/L (mean extinction value) (Scenedesmus quadricauda)	LC50: 9640 mg/l (Pimephales promelas)	TT(16h): 1050 mg/L (Pseudomonas putida)	EC50: 13299 mg/l (Daphnia magna) EC50(24h): > 10000 mg/L (Daphnia magna)
Ethoxylated nonylphenol	Proprietary	EC50(48h) 20 mg/L (growth inhibition) (Pseudokirchnerella subcapitata) EC50(48h) 50 mg/L (growth rate) (Pseudokirchnerella subcapitata)	LC50(96h): 5.6 mg/L (Brachydanio rerio) LC50(96h): 1.3 mg/L (Lepomis macrochirus) LC50(96h): 5 mg/L (Danio rerio)	No information available	EC50(48h): 1.821 mg/L (Daphnia sp.) (QSAR)

Persistence and Degradability

Not readily biodegradable

Bioaccumulation potential

No information available

Substances	Log Pow
Naphthalene	3.28
Isopropanol	0.05 @ 25°C
Ethoxylated nonylphenol	3.7 @ 25°C

Mobility in soil

No information available

Results of PBT and vPvB assessment

No information available.

Substances	PBT and vPvB assessment
Isopropanol	Not PBT/vPvB
Ethoxylated nonylphenol	PBT & vPvB

Other adverse effects**Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

Substances	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Ethoxylated nonylphenol	Group III	Cat. 1	

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

Canadian TDG

UN Number: UN1993,
 UN Proper Shipping Name: Flammable Liquid, N.O.S.
 Transport Hazard Class(es): , 3
 Packing Group: , II
 EMS: EmS F-E, S-E

IATA/ICAO

UN Number: UN1993,
 UN Proper Shipping Name: Flammable Liquid, N.O.S.

Transport Hazard Class(es): , 3
Packing Group: , II

IMDG/IMO

UN Number: UN1993,
UN Proper Shipping Name: Flammable Liquid, N.O.S.
Transport Hazard Class(es): , 3
Packing Group: , II
EMS: EmS F-E, S-E

Special Precautions for User None

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

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

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canadian Regulations

Canadian DSL Inventory All components listed on inventory or are exempt.

WHMIS Hazard Class

B2 Flammable Liquids
D2A Very Toxic Materials
D2B Toxic Materials

WHMIS Symbol(s)**US Regulations**

US TSCA Inventory All components listed on inventory or are exempt.

16. Other Information

Preparation Information

Prepared By Chemical Compliance
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Revision Date: 24-Apr-2013

Not applicable

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 Compliance at 1-580-251-4335.

Key or legend to abbreviations and acronyms

WHMIS: Workplace Hazardous Materials Information System

Key literature references and sources for data

www.ChemADVISOR.com/

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*****END OF MSDS*****