

MATERIAL SAFETY DATA SHEET

Product Trade Name: LOSURF-330 SURFACTANT

Revision Date: 16-Jan-2015

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: LOSURF-330 SURFACTANT

Synonyms: None

Chemical Family: Nonionic Surfactant Blend

Application: Surfactant

Manufacturer/Supplier: Halliburton Energy Services, Inc.
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Emergency Telephone: (281) 575-5000

Prepared By: Chemical Compliance
Telephone: 1-580-251-4335
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	ACGIH TLV-TWA	OSHA PEL-TWA
Ethanol	64-17-5	30 - 60%	STEL: 1000 ppm	1000 ppm
Ethoxylated propoxylated alcohols	Proprietary	10 - 30%	Not applicable	Not applicable

3. HAZARDS IDENTIFICATION

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.

4. 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.

Skin: Wash with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.

Eyes: Check for and remove contact lenses if present. 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.

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Notes to Physician: Not Applicable

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	80.6
Flash Point/Range (C):	27
Flash Point Method:	PMCC
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (%):	Not Determined

Fire Extinguishing Media Carbon Dioxide, Dry Chemicals, Foam.

Special Exposure Hazards Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce toxic gases.

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

NFPA Ratings: Health 2, Flammability 3, Reactivity 0
HMIS Ratings: Health 2, Flammability 3, Physical Hazard 0 , PPE: H

6. ACCIDENTAL RELEASE MEASURES

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

7. HANDLING AND STORAGE

Handling Precautions 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. Avoid breathing mist.

Storage Information Keep from heat, sparks, and open flames. Keep container closed when not in use. Store in a cool well ventilated area. Store locked up. Product has a shelf life of 24 months.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Respiratory Protection Organic vapor respirator.

Hand Protection Impervious rubber gloves. Viton 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

Physical State:	Liquid
Color:	Clear light yellow
Odor:	Alcohol
pH:	5-8 (5% 9:1 IPA/Water)
Specific Gravity @ 20 C (Water=1):	.9446
Density @ 20 C (lbs./gallon):	7.87
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	212
Boiling Point/Range (C):	100
Freezing Point/Range (F):	-41
Freezing Point/Range (C):	-40.5
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	30-40
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Not Determined
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	Not Determined
Molecular Weight (g/mole):	Not Determined

10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	Keep away from heat, sparks and flame.
Incompatibility (Materials to Avoid)	Strong oxidizers.
Hazardous Decomposition Products	Oxides of nitrogen. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure Eye or skin contact, inhalation.

Symptoms related to exposure**Acute Toxicity****Product Information****Inhalation**

Under certain conditions of use, some of the product ingredients may cause the following:
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 irritation.

Ingestion

Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea. Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	64-17-5	7060 mg/kg (Rat)	No data available	124.7 mg/L (Rat) 4 h
Ethoxylated propoxylated alcohols	Proprietary	>5000 mg/kg (Rat) (similar substance) 600 mg/kg (Rat) (similar substance)	>2000 mg/kg (Rat) (similar substance) >5200 mg/kg (Rabbit) (similar substance)	>1.6 mg/L air (Rat) (similar substance) >0.22 mg/L (saturated concentration) (Rat) (similar substance)

12. ECOLOGICAL INFORMATION

Ecotoxicological Information

Ecotoxicity Product

Acute Fish Toxicity: May be toxic to aquatic life.

Acute Crustaceans Toxicity: Not determined

Acute Algae Toxicity: Not determined

Ecotoxicity Substance

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Ethanol	64-17-5	No information available	LC50: > 100 mg/L (Pimephales promelas)	No information available	LC50: 9268 - 14221 mg/L (Daphnia magna)
Ethoxylated propoxylated alcohols	Proprietary	EC50 (72h) 0.75 mg/L (Pseudokirchnerella subcapitata) (similar substance) ErC50 (48h) 0.7 mg/L (Skeletonema costatum) EC10 9.79 mg/L (Selenastrum capricornutum) (similar substance) ErC50 1.1 mg/L (Scenedesmus subspicatus) (similar substance)	LC50 (96h) 0.59 mg/L (Pleuronectes platessa) (similar substance) LC50 (96h) 1.6 mg/L (Pimephales promelas) (similar substance) LC50 (96h) 3 mg/L (Brachydanio rerio) (similar substance)	ErC50 (16.9h) > 10 g/L (Pseudomonas putida) (similar substance)	EC50 (48h) 0.14 mg/L (Daphnia magna) (similar substance) EC50 (48h) 0.2 mg/L (Daphnia magna) (similar substance)

12.2. Persistence and degradability

Not readily biodegradable

Substances	CAS Number	Persistence and Degradability
Ethanol	64-17-5	No information available
Ethoxylated propoxylated alcohols	Proprietary	(84% @ 28d) (similar substances)

12.3. Bioaccumulative potential

Bioaccumulative potential

Substances	CAS Number	Log Pow
Ethanol	64-17-5	-0.32
Ethoxylated propoxylated alcohols	Proprietary	Log Kow >3 (similar substances)

12.4. Mobility in soil

No information available

12.5. Results of PBT and vPvB assessment

No information available.

Substances	PBT and vPvB assessment
Ethoxylated propoxylated alcohols	No data available

12.6. Other adverse effects

13. DISPOSAL CONSIDERATIONS

Disposal Method	Disposal should be made in accordance with federal, state, and local regulations. Incineration recommended in approved incinerator according to federal, state, and local regulations. Substance should NOT be deposited into a sewage facility.
Contaminated Packaging	Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

14. TRANSPORT INFORMATION

US DOT

UN Number:	UN1993
UN Proper Shipping Name:	Flammable Liquid, N.O.S. (Contains Ethanol)
Transport Hazard Class(es):	3
Packing Group:	III
NAERG:	NAERG 128

US DOT Bulk

DOT (Bulk)	Not applicable
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Canadian TDG u10

UN Number:	UN1993
UN Proper Shipping Name:	Flammable Liquid, N.O.S. (Contains Ethanol)
Transport Hazard Class(es):	3
Packing Group:	III

IMDG/IMO

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

IATA/ICAO

UN Number:	UN1993
UN Proper Shipping Name:	Flammable Liquid, N.O.S. (Contains Ethanol)
Transport Hazard Class(es):	3
Packing Group:	III

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Special Precautions for User: None

Labels: Flammable Liquid

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory	All components listed on inventory or are exempt.
EPA SARA Title III Extremely Hazardous Substances	Not applicable
EPA SARA (311,312) Hazard Class	Acute Health Hazard Fire Hazard
EPA SARA (313) Chemicals	This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).
EPA CERCLA/Superfund Reportable Spill Quantity	Not applicable.
EPA RCRA Hazardous Waste Classification	If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of: Ignitability D001
California Proposition 65	The California Proposition 65 regulations apply to this product.
MA Right-to-Know Law	One or more components listed.
NJ Right-to-Know Law	One or more components listed.
PA Right-to-Know Law	One or more components listed.
Canadian Regulations	
Canadian DSL Inventory	All components listed on inventory or are exempt.
WHMIS Hazard Class	D2B Toxic Materials B2 Flammable Liquids

16. OTHER INFORMATION

The following sections have been revised since the last issue of this SDS

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.

Disclaimer Statement

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