

## MATERIAL SAFETY DATA SHEET

Product Trade Name: **FA-14**

Revision Date: 18-Sep-2014

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: FA-14  
Synonyms: None  
Chemical Family: 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
Alcohols, C12-16, ethoxylated	68551-12-2	10 - 30%	Not applicable	Not applicable
Methanol	67-56-1	10 - 30%	TWA: 200 ppm STEL: 250 ppm Skin	TWA: 200 ppm

### 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. May cause blindness. May be absorbed through the skin. Repeated overexposure may cause liver and kidney effects. Combustible

### 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** 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.

**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.

**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**

The administration of ethanol after ingestion of this compound acts to counter the adverse effects of this material on the liver.

**5. FIRE FIGHTING MEASURES**

<b>Flash Point/Range (F):</b>	129
<b>Flash Point/Range (C):</b>	53.9
<b>Flash Point Method:</b>	PMCC
<b>Autoignition Temperature (F):</b>	Not Determined
<b>Autoignition Temperature (C):</b>	Not Determined
<b>Flammability Limits in Air - Lower (%):</b>	Not Determined
<b>Flammability Limits in Air - Upper (%):</b>	Not Determined

**Fire Extinguishing Media** Carbon Dioxide, Dry Chemicals, Foam.

**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. Runoff to sewer may cause fire or explosion hazard.

**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 2, Reactivity 0  
**HMIS Ratings:** Health 2, Flammability 2, Physical Hazard 0 , PPE: X

**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** 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**

**Handling Precautions** Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Avoid breathing mist.

**Storage Information** Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 12 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.

<b>Respiratory Protection</b>	If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Positive pressure self-contained breathing apparatus if methanol is released.
<b>Hand Protection</b>	Impervious rubber gloves.
<b>Skin Protection</b>	Rubber apron.
<b>Eye Protection</b>	Chemical goggles; also wear a face shield if splashing hazard exists.
<b>Other Precautions</b>	Eyewash fountains and safety showers must be easily accessible.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid
<b>Color:</b>	Clear to slightly hazy amber
<b>Odor:</b>	Alcohol
<b>pH:</b>	9.81 - 10.81
<b>Specific Gravity @ 20 C (Water=1):</b>	0.9745 - 0.9995
<b>Density @ 20 C (lbs./gallon):</b>	8.12 - 8.33
<b>Bulk Density @ 20 C (lbs/ft3):</b>	Not Determined
<b>Boiling Point/Range (F):</b>	Not Determined
<b>Boiling Point/Range (C):</b>	Not Determined
<b>Freezing Point/Range (F):</b>	30
<b>Freezing Point/Range (C):</b>	-1.1
<b>Vapor Pressure @ 20 C (mmHg):</b>	Not Determined
<b>Vapor Density (Air=1):</b>	Not Determined
<b>Percent Volatiles:</b>	Not Determined
<b>Evaporation Rate (Butyl Acetate=1):</b>	Not Determined
<b>Solubility in Water (g/100ml):</b>	Soluble
<b>Solubility in Solvents (g/100ml):</b>	Not Determined
<b>VOCs (lbs./gallon):</b>	Not Determined
<b>Viscosity, Dynamic @ 20 C (centipoise):</b>	Not Determined
<b>Viscosity, Kinematic @ 20 C (centistokes):</b>	Not Determined
<b>Partition Coefficient/n-Octanol/Water:</b>	Not Determined
<b>Molecular Weight (g/mole):</b>	Not Determined

## 10. STABILITY AND REACTIVITY

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

## 11. TOXICOLOGICAL INFORMATION

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

### Symptoms related to exposure

#### Acute Toxicity

##### 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 severe eye irritation.

##### Skin Contact

May cause skin irritation. May be absorbed through the skin and contribute to the symptoms listed under ingestion. May cause skin defatting with prolonged exposure.

##### Ingestion

May be fatal or cause blindness if swallowed. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression.

#### Chronic Effects/Carcinogenicity

Prolonged or repeated exposure may cause eye, blood, lung, liver, kidney, heart, central nervous system and spleen damage.

### Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Alcohols, C12-16, ethoxylated	68551-12-2	1,400 mg/kg (Rats)	>2000 and < 5000 mg/kg (similar substances)	No data available
Methanol	67-56-1	> 1187 - 2769 mg/kg (Rat) 3000 mg/kg (Monkey) 300 mg/kg (Human)	15800 mg/kg (Rabbit) 393 mg/kg (Primate)	87.5 mg/L (Rat) 6h vapour 128.2 mg/L (Rat) 4h vapour 83.2 mg/L (Rat) 4 h 64000 ppm (Rat) 4 h 10 mg/L (Human)

## 12. ECOLOGICAL INFORMATION

### Ecotoxicological Information

#### Ecotoxicity Product

**Acute Fish Toxicity:** Not determined

**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
Alcohols, C12-16, ethoxylated	68551-12-2	(similar substance) EC50(72h): 0.5 mg/L (Scenedesmus subspicatus) (similar substance) EC50(72h): 0.85 mg/L (Selenastrum capricornutum)	(similar substance) LC50(96h): 1.2 – 6.4 (Brachydanio rerio)	(similar substance) EC0(30m): >10000 mg/L (Pseudomonas putida)	(similar substance) EC50(48h): 0.5 – 1.9 mg/L
Methanol	67-56-1	EC50(96h): ca. 22000 mg/L (Pseudokirchnerella subcapitata, Growth rate)	LC50: 28200 mg/l (Pimephales promelas) LC50(96h): 12700 – 15400 mg/L (Lepomis macrochirus) 200 hr NOEC for % Embryo-cardiovascular for stage 2 = 15800 mg/L	IC50(3h): > 1000 mg/L (activated sludge)	EC50(96h): 18260 mg/L (Daphnia magna) NOEC(21d): 122 mg/L (Daphnia magna, Reproduction)

### 12.2. Persistence and degradability

No information available

Substances	CAS Number	Persistence and Degradability
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Alcohols, C12-16, ethoxylated	68551-12-2	Expected to be readily biodegradable (similar substances)
Methanol	67-56-1	Readily biodegradable (95-97% @ 20d)

### 12.3. Bioaccumulative potential

No information available

Substances	CAS Number	Log Pow
Alcohols, C12-16, ethoxylated	68551-12-2	No information available
Methanol	67-56-1	-0.77 BCF 1.0 – 4.5 (Cyprinus carpio) BCF < 10 (Leuciscus idus melanotus)

### 12.4. Mobility in soil

No information available

### 12.5. Results of PBT and vPvB assessment

No information available.

Substances	PBT and vPvB assessment
Methanol	Not PBT/vPvB

### 12.6. Other adverse effects

## 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

### US DOT

**UN Number:** UN1993  
**UN Proper Shipping Name:** Flammable Liquid, N.O.S. (Contains Methanol)  
**Transport Hazard Class(es):** 3  
**Packing Group:** III  
**Environmental Hazards:** , Marine Pollutant (Alcohol C-12 - C-16 Poly (1-6) ethoxylate)  
**NAERG:** NAERG 128

### US DOT Bulk

**DOT (Bulk)** Not Applicable

### Canadian TDG ul0

**UN Number:** UN1993  
**UN Proper Shipping Name:** Flammable Liquid, N.O.S. (Contains Methanol)  
**Transport Hazard Class(es):** 3  
**Packing Group:** III  
**Environmental Hazards:** , Marine Pollutant (Alcohol C-12 - C-16 Poly (1-6) ethoxylate)

### IMDG/IMO

**UN Number:** UN1993  
**UN Proper Shipping Name:** Flammable Liquid, N.O.S. (Contains Methanol)  
**Transport Hazard Class(es):** 3  
**Packing Group:** III  
**Environmental Hazards:** , Marine Pollutant (Alcohol C-12 - C-16 Poly (1-6) ethoxylate)  
**EMS:** EmS F-E, S-E

### IATA/ICAO

**UN Number:** UN1993  
**UN Proper Shipping Name:** Flammable Liquid, N.O.S. (Contains Methanol)

Transport Hazard Class(es): 3  
Packing Group: III  
Environmental Hazards: , Marine Pollutant (Alcohol C-12 - C-16 Poly (1-6) ethoxylate)

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  
Marine Pollutant

## 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
EPA SARA (313) Chemicals	This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372: Methanol//67-56-1
EPA CERCLA/Superfund Reportable Spill Quantity	EPA Reportable Spill Quantity is 6060 Gallons based on Methanol (CAS: 67-56-1).
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	Product contains one or more components not listed on the inventory.
WHMIS Hazard Class	D1B Toxic Materials D2A Very Toxic Materials D2B Toxic Materials B3 Combustible 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\*\*\***