

**MATERIAL SAFETY DATA SHEET****Product Trade Name:**        **NEA-96M****Revision Date:**                07-Jan-2015**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Trade Name:**        NEA-96M  
**Synonyms:**                    None  
**Chemical Family:**         Blend  
**Application:**                Surfactant

**Manufacturer/Supplier**        Halliburton Energy Services  
   P.O. Box 1431  
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**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Substances	CAS Number	PERCENT (w/w)	ACGIH TLV-TWA	OSHA PEL-TWA
Hexylene glycol	107-41-5	10 - 30%	25 ppm	Not applicable
Isopropanol	67-63-0	10 - 30%	TWA: 200 ppm STEL: 400 ppm	400 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. Repeated overexposure may cause liver and kidney effects. Flammable.

**4. FIRST AID MEASURES**

**Inhalation**                        If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

**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**                Not Applicable

## 5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	86
Flash Point/Range (C):	30
Flash Point Method:	Not Determined
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** Water fog, carbon dioxide, foam, dry chemical.

**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. Do not allow runoff to enter waterways.

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

**NFPA Ratings:** Health 3, Flammability 3, Reactivity 0  
**HMIS Ratings:** Health 3, Flammability 3, Reactivity 0

## 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** 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.

**Storage Information** Store away from oxidizers. Store away from acids. Store in a cool well ventilated area. Keep from heat, sparks, and open flames. Keep container closed when not in use. 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 with a dust/mist filter. (A2P2/P3)

**Hand Protection** Impervious rubber gloves.

**Skin Protection** Full protective chemical resistant clothing.

**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:	Amber
Odor:	Alcohol
pH:	7-9
Specific Gravity @ 20 C (Water=1):	1.04
Density @ 20 C (lbs./gallon):	8.66
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (F):	Not Determined
Freezing Point/Range (C):	Not Determined
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	< 1
Solubility in Water (g/100ml):	Soluble
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	None anticipated
Incompatibility (Materials to Avoid)	Strong oxidizers. Strong acids.
Hazardous Decomposition Products	Oxides of sulfur. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

**11. TOXICOLOGICAL INFORMATION**

Principle Route of Exposure	Eye or skin contact, inhalation.
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**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 moderate to severe eye irritation.

**Skin Contact**

May cause skin irritation. May cause an allergic skin reaction.

**Ingestion**

Irritation of the mouth, throat, and stomach. May cause central nervous system depression including headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue blurred vision, slurred speech, giddiness, tremors and convulsions.

**Chronic Effects/Carcinogenicity**

Repeated overexposure may cause liver and kidney effects.

**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hexylene glycol	107-41-5	3692 mg/kg (Rat) > 1,400 mg/kg (Rat) (similar substance)	> 2000 mg/kg (Rat) 8560 µL/kg (Rabbit)	> the saturated vapour concentration at room temperature (Rat)
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) 6280 mg/kg (Rabbit)	72.6 mg/L (Rat) 4h >10000 ppm (Rat) 6h

**12. ECOLOGICAL INFORMATION****Ecotoxicological Information****Ecotoxicity Product**

<b>Acute Fish Toxicity:</b>	Not determined
<b>Acute Crustaceans Toxicity:</b>	Not determined
<b>Acute Algae Toxicity:</b>	Not determined

**Ecotoxicity Substance**

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Hexylene glycol	107-41-5	EC50(72h): > 429 mg/L (Selenastrum capricornatum)	LC50(96h) 10500 - 11000 mg/L (Pimephales promelas) LC50(96h): 10000 mg/L (Lepomis macrochirus) LC50(96h) 8690 mg/L (Pimephales promelas) CL50(96h) 9450 mg/L (Oncorhynchus mykiss)	Inhibitory Concentration (10d): > 1000 mg/L (Pseudomonas aeruginosa)	EC50: 2700 - 3700 mg/L EC50(48h): 2800 mg/L (Ceriodaphnia reticulata)
Isopropanol	67-63-0	EC50(72h): > 1000 mg/L (Desmodesmus subspicatus) EC50(7d): 1800 mg/L (mean extinction value) (Scenedesmus quadricauda)	LC50(96h): 9640 mg/L (Pimephales promelas) LC50(7d): 7060 mg/L (Poecilia reticulata)	TT(16h): 1050 mg/L (Pseudomonas putida)	EC50(48h): 13299 mg/L (Daphnia magna) EC50(24h): > 10000 mg/L (Daphnia magna)

**12.2. Persistence and degradability**

Substances	CAS Number	Persistence and Degradability
Hexylene glycol	107-41-5	Readily biodegradable (60 @ 14d)
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)

**12.3. Bioaccumulative potential**

Substances	CAS Number	Log Pow
Hexylene glycol	107-41-5	<0.14
Isopropanol	67-63-0	0.05 @ 25°C

**12.4. Mobility in soil**

No information available

**12.5. Results of PBT and vPvB assessment**

No information available.

Substances	PBT and vPvB assessment
Hexylene glycol	Not PBT/vPvB
Isopropanol	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 Isopropanol)  
**Transport Hazard Class(es):** 3  
**Packing Group:** III  
**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 Isopropanol)  
**Transport Hazard Class(es):** 3  
**Packing Group:** III

#### IMDG/IMO

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

<b>EPA SARA (311,312) Hazard Class</b>	Acute Health Hazard Chronic Health Hazard Fire Hazard
<b>EPA SARA (313) Chemicals</b>	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: Isopropanol//67-63-0
<b>EPA CERCLA/Superfund Reportable Spill Quantity</b>	Not applicable.
<b>EPA RCRA Hazardous Waste Classification</b>	If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:  Ignitability D001
<b>California Proposition 65</b>	All components listed do not apply to the California Proposition 65 Regulation.
<b>MA Right-to-Know Law</b>	One or more components listed.
<b>NJ Right-to-Know Law</b>	One or more components listed.
<b>PA Right-to-Know Law</b>	One or more components listed.
<b>Canadian Regulations</b>	
<b>Canadian DSL Inventory</b>	All components listed on inventory or are exempt.
<b>WHMIS Hazard Class</b>	B2 Flammable Liquids E Corrosive Material D2B Toxic Materials

## 16. OTHER INFORMATION

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

Not applicable

<b>Additional information</b>	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.
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\*\*\*END OF MSDS\*\*\*