

## MATERIAL SAFETY DATA SHEET

**Product Trade Name:** CL-40W

**Revision Date:** 07-Jan-2015

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Trade Name:** CL-40W  
**Synonyms:** None  
**Chemical Family:** Blend  
**Application:** Crosslinker

**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
Propylene glycol	57-55-6	5 - 10%	10 mg/m <sup>3</sup> AIHA WEEL TWA: 10 mg/m <sup>3</sup>	15 mg/m <sup>3</sup>
Triisopropanolamine	122-20-3	5 - 10%	Not applicable	Not applicable

### 3. HAZARDS IDENTIFICATION

**Hazard Overview** May cause eye irritation

### 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.

**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** If swallowed, induce vomiting immediately by giving two glasses of water and sticking fingers down throat; never give anything to an unconscious person. Get medical attention.

**Notes to Physician** Not Applicable

## 5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	> 212 <b>Min:</b> > 200
Flash Point/Range (C):	> 100 <b>Min:</b> > 93
Flash Point Method:	PMCC
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (%):	Not Determined

<b>Fire Extinguishing Media</b>	All standard firefighting media.
<b>Special Exposure Hazards</b>	Decomposition in fire may produce toxic gases.
<b>Special Protective Equipment for Fire-Fighters</b>	Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.
<b>NFPA Ratings:</b>	Health 1, Flammability 0, Reactivity 0
<b>HMS Ratings:</b>	Health 1, Flammability 0, Physical Hazard 0 , PPE: C

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautionary Measures</b>	Use appropriate protective equipment.
<b>Environmental Precautionary Measures</b>	Prevent from entering sewers, waterways, or low areas.
<b>Procedure for Cleaning / Absorption</b>	Contain spill with sand or other inert materials. Scoop up and remove.

## 7. HANDLING AND STORAGE

<b>Handling Precautions</b>	Avoid contact with eyes, skin, or clothing. Avoid breathing mist. Avoid breathing vapors.
<b>Storage Information</b>	Store away from oxidizers. Product has a shelf life of 24 months.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls</b>	Use in a well ventilated area.
<b>Respiratory Protection</b>	Not normally needed. But if significant exposures are possible then the following respirator is recommended: Organic vapor/acid gas respirator.
<b>Hand Protection</b>	Nitrile gloves. Polyvinylchloride 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
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CL-40W  
Page 2 of 6

Color:	Clear to Light straw
Odor:	Slight Ammonia
pH:	8-9
Specific Gravity @ 20 C (Water=1):	1.16
Density @ 20 C (lbs./gallon):	9.66
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	> 212
Boiling Point/Range (C):	> 100
Freezing Point/Range (F):	< -4
Freezing Point/Range (C):	< -20
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
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:	May Occur
Conditions to Avoid	None anticipated
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

##### Inhalation

May cause respiratory irritation. Excessive inhalation causes headache, dizziness, nausea and incoordination.

##### Eye Contact

May cause eye irritation

##### Skin Contact

Prolonged or repeated contact may cause skin irritation.

##### Ingestion

May be harmful if swallowed. May cause abdominal pain, vomiting, nausea, and diarrhea.

#### Chronic Effects/Carcinogenicity

No data available to indicate product or components present at greater than 1% are chronic health hazards.

### Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Propylene glycol	57-55-6	20000 mg/kg (Rat) 22000 mg/kg (rat)	20800 mg/kg (Rabbit) > 2000 mg/kg (Rabbit)	> 317042 mg/m <sup>3</sup> (Rabbit)

Triisopropanolamine	122-20-3	4730 mg/kg (Rat) 4000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	No data available
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## 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
Propylene glycol	57-55-6	EC50(48h): (growth rate) 34100 mg/L (Selenastrum capricornutum) EC50(48h): (growth rate) 19000 mg/L (Skeletonema costatum)	LC50(96h): 40613 mg/L (Oncorhynchus mykiss) LC50(96h): 54900 mg/L (Pimephales promelas) NOEC(7d): (growth rate) 11530 mg/L (Pimephales promelas)	NOEC(18h): >20000 mg/L (Pseudomonas putida)	LC50(96h): 18800 mg/L (Americamysis bahia) LC50(48h): 18340 mg/L (Ceriodaphnia dubia) NOEC(7d): (growth rate): 13020 mg/L (Ceriodaphnia sp.)
Triisopropanolamine	122-20-3	EC50 (72h) 35 mg/L (Scenedesmus subspicatus) EC50 (72h) 50 mg/L (Desmodesmus subspicatus) EC50 (72h) 710 mg/L (Desmodesmus subspicatus) NOEC (72h) 0.64 mg/L (Desmodesmus subspicatus)	LC50 (96h) 3158.48 mg/L (Leuciscus idus) LC50 (96h) > 100 mg/L (Pimephales promelas)	EC20 (30m) > 1995 mg/L (activated sludge, industrial)	EC50 (48h) > 500 mg/L (Daphnia magna) EC50 (48h) 966 mg/L (Daphnia magna)

### 12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Propylene glycol	57-55-6	No information available
Triisopropanolamine	122-20-3	Not readily biodegradable (0-10% @ 28d)

### 12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Propylene glycol	57-55-6	No information available
Triisopropanolamine	122-20-3	-0.015

### 12.4. Mobility in soil

No information available

### 12.5. Results of PBT and vPvB assessment

No information available.

Substances	PBT and vPvB assessment
Triisopropanolamine	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: Not restricted  
UN Proper Shipping Name: Not restricted  
Transport Hazard Class(es): Not applicable  
Packing Group: Not applicable

### US DOT Bulk

DOT (Bulk) Not applicable

### Canadian TDG u10

UN Number: Not restricted  
UN Proper Shipping Name: Not restricted  
Transport Hazard Class(es): Not applicable  
Packing Group: Not applicable

### IMDG/IMO

UN Number: Not restricted  
UN Proper Shipping Name: Not restricted  
Transport Hazard Class(es): Not applicable  
Packing Group: Not applicable

### IATA/ICAO

UN Number: Not restricted  
UN Proper Shipping Name: Not restricted  
Transport Hazard Class(es): Not applicable  
Packing Group: Not applicable

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

Special Precautions for User: None

## 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 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 NOT meet the criteria of a hazardous waste as defined by the US EPA.

**California Proposition 65** All components listed do not apply to the California Proposition 65 Regulation.

**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

## **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.

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