

## MATERIAL SAFETY DATA SHEET

Product Trade Name: **BC-200G**

Revision Date: 25-Apr-2013

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: BC-200G  
Synonyms: None  
Chemical Family: Not applicable  
Application: Crosslinker

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

Prepared By: Chemical Compliance  
Telephone: 1-580-251-4335  
e-mail: fdunexchem@halliburton.com

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Substances                          | CAS Number | PERCENT  | ACGIH TLV-TWA                 | OSHA PEL-TWA   |
|-------------------------------------|------------|----------|-------------------------------|----------------|
| Dipropylene glycol monomethyl ether | 34590-94-8 | 30 - 60% | TWA: 100 ppm<br>STEL: 150 ppm | 100 ppm (S)    |
| Sodium carbonate                    | 497-19-8   | 5 - 10%  | 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. 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** Get medical attention! If vomiting occurs, keep head lower than hips to prevent aspiration.

**Notes to Physician** Aspiration may cause severe lung damage. Evacuate stomach in a way which avoids aspiration.

## 5. FIRE FIGHTING MEASURES

|   |                |
|---|----------------|
| Flash Point/Range (F):                  | 185Min: > 150  |
| Flash Point/Range (C):                  | 85Min: > 65    |
| Flash Point Method:                     | TCC            |
| Autoignition Temperature (F):           | Not Determined |
| Autoignition Temperature (C):           | Not Determined |
| Flammability Limits in Air - Lower (%): | 1.1            |
| Flammability Limits in Air - Upper (%): | 3              |

**Fire Extinguishing Media** Water fog, carbon dioxide, foam, dry chemical.

**Special Exposure Hazards** Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce toxic gases. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations.

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

**NFPA Ratings:** Health 1, Flammability 2, Reactivity 0

**HMS Ratings:** Health 1, Flammability 2, Reactivity 0

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures** Use appropriate protective equipment. Evacuate all persons from the area. Use only competent persons for cleanup.

**Environmental Precautionary Measures** Prevent from entering sewers, waterways, or low areas.

**Procedure for Cleaning / Absorption** 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.

**Storage Information** Store away from oxidizers. Store in a cool well ventilated area. Product has a shelf life of 6 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.  
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

|  |                                  |
|--|----------------------------------|
| Physical State:                            | Liquid                           |
| Color:                                     | Light gray                       |
| Odor:                                      | Ether                            |
| pH:  | Not Determined                   |
| Specific Gravity @ 20 C (Water=1):         | 1.300                            |
| Density @ 20 C (lbs./gallon):              | 10.83                            |
| Bulk Density @ 20 C (lbs/ft3):             | Not Determined                   |
| Boiling Point/Range (F):                   | Not Determined <b>Min:</b> > 400 |
| Boiling Point/Range (C):                   | Not Determined <b>Min:</b> > 204 |
| Freezing Point/Range (F):                  | Not Determined                   |
| Freezing Point/Range (C):                  | Not Determined                   |
| Vapor Pressure @ 20 C (mmHg):              | 0.52                             |
| Vapor Density (Air=1):                     | 5.1                              |
| Percent Volatiles:                         | Not Determined                   |
| Evaporation Rate (Butyl Acetate=1):        | Not Determined                   |
| Solubility in Water (g/100ml):             | Disperses                        |
| 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.  |
| <u>Symptoms related to exposure</u>  |   |
| <b>Inhalation</b>                    | May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness. |
| <b>Skin Contact</b>                  | May cause skin irritation.  |
| <b>Eye Contact</b>                   | May cause eye irritation.   |
| <b>Ingestion</b>                     | Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal.   |
| <b>Aggravated Medical Conditions</b> | Skin disorders.   |

**Chronic Effects/Carcinogenicity** No data available to indicate product or components present at greater than 1% are chronic health hazards.

**Other Information** None known.

#### **Toxicity Tests**

**Oral Toxicity:** Not determined

**Dermal Toxicity:** Not determined

**Inhalation Toxicity:** Not determined

**Primary Irritation Effect:** Not determined

**Carcinogenicity** Not determined

**Genotoxicity:** Not determined

**Reproductive /  
Developmental Toxicity:** Not determined

## **12. ECOLOGICAL INFORMATION**

**Mobility (Water/Soil/Air)** Not determined

**Persistence/Degradability** Not determined

**Bio-accumulation** Not determined

#### **Ecotoxicological Information**

**Acute Fish Toxicity:** Not determined

**Acute Crustaceans Toxicity:** Not determined

**Acute Algae Toxicity:** Not determined

**Chemical Fate Information** Not determined

**Other Information** Not applicable

## **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**

#### **Land Transportation**

**DOT**  
Not restricted

**DOT (Bulk)**  
NA1993, Combustible Liquid, N.O.S., Combustible Liquid, III  
(Contains Dipropylene Glycol Monomethyl Ether)

**Canadian TDG**

Not restricted

**ADR**

Not restricted

**Air Transportation**

**ICAO/IATA**

Not restricted

**Sea Transportation**

**IMDG**

Not restricted

**Other Transportation Information**

Labels: 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  
Fire 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: Glycol Ethers//34590-94-8

**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** B3 Combustible Liquids  
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.

**Disclaimer Statement**

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

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