

# MATERIAL SAFETY DATA SHEET

**Product Trade Name:** **BF-1**

**Revision Date:** 04-Jan-2011

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Trade Name:** BF-1  
**Synonyms:** None  
**Chemical Family:** Organic acid  
**Application:** Scale Inhibitor

**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

<b>Substances</b>	<b>CAS Number</b>	<b>PERCENT</b>	<b>ACGIH TLV-TWA</b>	<b>OSHA PEL-TWA</b>
Hydroxyacetic acid	79-14-1	60 - 100%	3 ppm	Not applicable

## 3. HAZARDS IDENTIFICATION

**Hazard Overview** May be harmful if swallowed. May cause eye, skin, and respiratory burns.

## 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** Remove contaminated clothing and launder before reuse. In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention.

**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

<b>Flash Point/Range (F):</b>	Not Determined
<b>Flash Point/Range (C):</b>	Not Determined
<b>Flash Point Method:</b>	Not Determined
<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
<b>Fire Extinguishing Media</b>	Water fog, carbon dioxide, foam, dry chemical.
<b>Special Exposure Hazards</b>	Reacts with metals to generate flammable hydrogen gas. 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 3, Flammability 0, Reactivity 0
<b>HMIS Ratings:</b>	Health 3, Flammability 0, Reactivity 0

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures** Use appropriate protective equipment.

**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. Neutralize to pH of 6-8. Scoop up and remove.

## 7. HANDLING AND STORAGE

**Handling Precautions** Wash hands after use. Launder contaminated clothing before reuse. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors.

**Storage Information** Store away from alkalis. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 36 months.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls</b>	Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.
<b>Respiratory Protection</b>	Organic vapor/acid gas respirator.
<b>Hand Protection</b>	Impervious rubber gloves.
<b>Skin Protection</b>	Full protective chemical resistant clothing.
<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 amber
<b>Odor:</b>	Mild burnt sugar

## 9. PHYSICAL AND CHEMICAL PROPERTIES

pH:	0.5
Specific Gravity @ 20 C (Water=1):	1.25
Density @ 20 C (lbs./gallon):	10.41
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	234
Boiling Point/Range (C):	112
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:	30
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Miscible
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistrokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	0.0776
Molecular Weight (g/mole):	76.05

## 10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	None anticipated
Incompatibility (Materials to Avoid)	Strong oxidizers. Strong alkalis. Sulfuric acid. Ammonium compounds. Amines. Isocyanates. Contact with metals.
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide. Flammable hydrogen gas.
Additional Guidelines	Not Applicable

## 11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.
Inhalation	Causes severe respiratory irritation.
Skin Contact	May cause skin burns.
Eye Contact	May cause eye burns.
Ingestion	May cause abdominal pain, vomiting, nausea, and diarrhea. Causes burns of the mouth, throat and stomach.
Aggravated Medical Conditions	Skin disorders.
Chronic Effects/Carcinogenicity	Prolonged, excessive exposure may cause erosion of the teeth.
Other Information	None known.
Toxicity Tests	
Oral Toxicity:	LD50: 4240 mg/kg (Rat)
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** Readily biodegradable  
**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

UN3265,Corrosive Liquid, Acidic, Organic, N.O.S.(Contains Glycolic Acid), 8, II  
NAERG 153

#### Canadian TDG

Corrosive Liquid, Acidic, Organic, N.O.S.(Contains Glycolic Acid), 8, UN3265, II

#### ADR

UN3265,Corrosive Liquid, Acidic, Organic, N.O.S.(Contains Glycolic Acid), 8, II

### Air Transportation

#### ICAO/IATA

UN3265,Corrosive Liquid, Acidic, Organic, N.O.S., 8, II  
(Contains Glycolic Acid Solution)

## Sea Transportation

### IMDG

UN3265,Corrosive Liquid, Acidic, Organic, N.O.S.(Contains Glycolic Acid), 8, II  
EmS F-A, S-B

## Other Shipping Information

**Labels:** Corrosive

## 15. REGULATORY INFORMATION

### US Regulations

<b>US TSCA Inventory</b>	All components listed on inventory or are exempt.
<b>EPA SARA Title III Extremely Hazardous Substances</b>	Not applicable
<b>EPA SARA (311,312) Hazard Class</b>	Acute Health Hazard
<b>EPA SARA (313) Chemicals</b>	This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).
<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:  Corrosivity D002
<b>California Proposition 65</b>	All components listed do not apply to the California Proposition 65 Regulation.
<b>MA Right-to-Know Law</b>	Does not apply.
<b>NJ Right-to-Know Law</b>	Does not apply.
<b>PA Right-to-Know Law</b>	Does not apply.
<b>Canadian Regulations</b>	
<b>Canadian DSL Inventory</b>	All components listed on inventory.
<b>WHMIS Hazard Class</b>	E Corrosive Material

## 16. OTHER INFORMATION

**The following sections have been revised since the last issue of this MSDS**  
Not applicable

**Additional Information**

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material 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\*\*\***