HALLIBURTON

# MATERIAL SAFETY DATA SHEET

**Product Trade Name:** **BARABRINE® SI**

**Revision Date:** 20-Dec-2012

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Trade Name:** BARABRINE® SI
**Synonyms:** None
**Chemical Family:** Blend
**Application:** Scale Inhibitor

**Manufacturer/Supplier**
Baroid Fluid Services
Product Service Line of Halliburton
P.O. Box 1675
Houston, TX 77251
Telephone: (281) 871-4000
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 |
|---|---|---|---|---|
| Aminophosphorous compound | | 30 - 60% | Not applicable | Not applicable |
| Hydrochloric acid | 7647-01-0 | 5 - 10% | 2 ppm | 5 ppm |

## 3. HAZARDS IDENTIFICATION

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

## 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** Not Applicable

## 5. FIRE FIGHTING MEASURES

| | |
|---|---|
| **Flash Point/Range (F):** | > 200 |
| **Flash Point/Range (C):** | > 93 |
| **Flash Point Method:** | PMCC |
| **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** Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce toxic gases.

**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 1, Reactivity 0
**HMIS Ratings:** Health 3, Flammability 1, Physical Hazard 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 with lime slurry, limestone, or soda ash. 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 alkalis. Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use. Product has a shelf life of 36 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** 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, 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.

Organic vapor/acid gas 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:** | Amber |
| **Odor:** | Acrid |
| **pH:** | 2 (1%) |
| **Specific Gravity @ 20 C (Water=1):** | 1.36 |
| **Density @ 20 C (lbs./gallon):** | 11.25 |
| **Bulk Density @ 20 C (lbs/ft3):** | 77.4 |
| **Boiling Point/Range (F):** | Not Determined |
| **Boiling Point/Range (C):** | Not Determined |
| **Freezing Point/Range (F):** | -10 |
| **Freezing Point/Range (C):** | -23 |
| **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):** | 20-40 |
| **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 alkalis. Strong oxidizers. |
| **Hazardous Decomposition Products** | Oxides of nitrogen. Oxides of phosphorus. Carbon monoxide and carbon dioxide. |
| **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** | Causes burns of the mouth, throat and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea. |
| **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:** | 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**

UN3264,Corrosive Liquid, Acidic, Inorganic, N.O.S.(Contains Hydrochloric Acid), 8, III
NAERG 154

**Canadian TDG**
Corrosive Liquid, Acidic, Inorganic, N.O.S.(Contains Hydrochloric Acid), 8, UN3264, III

**ADR**

UN3264,Corrosive Liquid, Acidic, Inorganic, N.O.S.(Contains Hydrochloric Acid), 8, III

## Air Transportation

**ICAO/IATA**

UN3264,Corrosive Liquid, Acidic, Inorganic, N.O.S., 8, III
(Contains Hydrochloric Acid)

## Sea Transportation

**IMDG**

UN3264,Corrosive Liquid, Acidic, Inorganic, N.O.S.(Contains Hydrochloric Acid), 8, III
EmS F-A, S-B

## Other Transportation Information

**Labels:** Corrosive

## 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** | EPA Reportable Spill Quantity is 8140 Gallons based on Hydrochloric acid (CAS: 7647-01-0). |
| **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:<br><br>Corrosivity D002 |
| **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** | All components listed on inventory or are exempt. |
| **WHMIS Hazard Class** | 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*****