HALLIBURTON

# MATERIAL SAFETY DATA SHEET

**Product Trade Name:** **HEAVY OIL ACID BLEND**

**Revision Date:** 03-Jan-2013

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Trade Name:** HEAVY OIL ACID BLEND
**Synonyms:** None
**Chemical Family:** Inorganic acid
**Application:** Acid

**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 |
|---|---|---|---|---|
| Hydrofluoric acid | 7664-39-3 | 1 - 5% | 0.5 ppm | 3 ppm |
| 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 fatal 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. Wearing protective gloves, apply 2.5% calcium gluconate gel at burn site rubbing continuously.

**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** Apply 1 to 2 drops of 0.5% Pontocaine Hydrochloride into open eye. Irrigate with 1.0% calcium gluconate in normal saline for 1 to 2 hours.

## 5. FIRE FIGHTING MEASURES

| | |
|---|---|
| **Flash Point/Range (F):** | Not Determined |
| **Flash Point/Range (C):** | Not Determined |
| **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** All standard firefighting media.

**Special Exposure Hazards** Decomposition in fire may produce toxic gases. Reaction with steel and certain other metals generates flammable hydrogen gas. 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 4, Flammability 0, Reactivity 1
**HMIS Ratings:** Health 4, Flammability 0, Reactivity 0,

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures** Use appropriate protective equipment. Reaction can be violent and harmful vapors may be released.

**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** 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 in a cool well ventilated area. Keep container closed when not in use. Do not store in containers made of fiberglass.

## 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** Acid gas respirator.

**Hand Protection** Impervious rubber gloves.

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

**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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Color:** | Clear colorless |
| **Odor:** | Pungent irritating |
| **pH:** | 0.5 |
| **Specific Gravity @ 20 C (Water=1):** | 1.09 |
| **Density @ 20 C (lbs./gallon):** | 9.08 |
| **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):** | 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:** | Will Not Occur |
| **Conditions to Avoid** | None anticipated |
| **Incompatibility (Materials to Avoid)** | Silicone bearing materials. Strong alkalis. Contact with metals. |
| **Hazardous Decomposition Products** | Flammable hydrogen gas. Chlorine. Hydrogen fluoride. Hydrogen sulfide. |
| **Additional Guidelines** | Not Applicable |

## 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| **Principle Route of Exposure** | Eye or skin contact, inhalation. |
| **Inhalation** | Causes severe respiratory burns. May cause lungs to fill with fluids. |
| **Skin Contact** | Causes skin burns which may not be immediately painful or visible. Effects on skin may be delayed for 24-48 hours. Harmful if absorbed through the skin. |
| **Eye Contact** | Causes eye burns. |
| **Ingestion** | Causes burns of the mouth, throat and stomach. May cause damage to bones and teeth. |
| **Aggravated Medical Conditions** | Skin disorders. |
| **Chronic Effects/Carcinogenicity** | Prolonged or repeated exposure may result in fluorosis. Symptoms include nausea, vomiting, loss of appetite, diarrhea, and/or constipation. Fluorosis also results in bone density increase. 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:** | TLM96: 200 ppm (Ceriodaphnia dubia) |
| **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, Hydrofluoric Acid), 8, II
RQ (Hydrofluoric Acid - 3027 kg.)
NAERG 154

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

**ADR**

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

## Air Transportation

**ICAO/IATA**

UN3264,Corrosive Liquid, Acidic, Inorganic, N.O.S., 8, II
(Contains Hydrochloric Acid, Hydrofluoric Acid)
RQ (Hydrofluoric Acid - 3027 kg.)

## Sea Transportation

**IMDG**

UN3264,Corrosive Liquid, Acidic, Inorganic, N.O.S.(Contains Hydrochloric Acid, Hydrofluoric Acid), 8, II
RQ (Hydrofluoric Acid - 3027 kg.)
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** | CAS: 7664-39-3//Chemical Name: Hydrogen Fluoride///TPQ: 100 |
| **EPA SARA (311,312) Hazard Class** | Acute Health 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: Hydrogen Fluoride//7664-39-3 |
| **EPA CERCLA/Superfund Reportable Spill Quantity** | EPA Reportable Spill Quantity is 734 Gallons based on Hydrofluoric acid (CAS: 7664-39-3). |
| **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
D1B Toxic Materials

## 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*****