

## MATERIAL SAFETY DATA SHEET

**Product Trade Name:** FINES CONTROL ACID WITH LOSURF-259 AND HAI-OS

**Revision Date:** 21-Dec-2012

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Trade Name:** FINES CONTROL ACID WITH LOSURF-259 AND HAI-OS  
**Synonyms:** None  
**Chemical Family:** Blend  
**Application:** Acid System

**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  
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### 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
Acetic acid	64-19-7	1 - 5%	10 ppm	10 ppm
Acetic anhydride	108-24-7	1 - 5%	1 ppm	5 ppm
Ammonium bifluoride	1341-49-7	0 - 1%	2.5 mg/m <sup>3</sup>	2.5 mg/m <sup>3</sup>
Hydrochloric acid	7647-01-0	10 - 30%	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):	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** Water fog, carbon dioxide, foam, dry chemical.

**Special Exposure Hazards** May form explosive mixtures with strong alkalis. 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 3, Flammability 0, Reactivity 1  
**HMS Ratings:** Health 3, Flammability 0, Reactivity 1

## 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 in a cool well ventilated area. Keep container closed when not in use.

## 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** Rubber boots. Full protective chemical resistant clothing.

**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 acrid
pH:	0.8
Specific Gravity @ 20 C (Water=1):	Not Determined
Density @ 20 C (lbs./gallon):	Not Determined
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):	Miscible
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)	Strong alkalis.
Hazardous Decomposition Products	Flammable hydrogen gas. Chlorine. Fluorides. 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 burns.
Skin Contact	Causes skin burns which may not be immediately painful or visible. Effects on skin may be delayed for 24-48 hours.
Eye Contact	May cause eye burns.
Ingestion	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. 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.
Other Information	None known.
Toxicity Tests	

<b>Oral Toxicity:</b>	Not determined
<b>Dermal Toxicity:</b>	Not determined
<b>Inhalation Toxicity:</b>	Not determined
<b>Primary Irritation Effect:</b>	Not determined
<b>Carcinogenicity</b>	Not determined
<b>Genotoxicity:</b>	Not determined
<b>Reproductive / Developmental Toxicity:</b>	Not determined

## 12. ECOLOGICAL INFORMATION

<b>Mobility (Water/Soil/Air)</b>	Not determined
<b>Persistence/Degradability</b>	Not determined
<b>Bio-accumulation</b>	Not determined

### Ecotoxicological Information

<b>Acute Fish Toxicity:</b>	Not determined
<b>Acute Crustaceans Toxicity:</b>	Not determined
<b>Acute Algae Toxicity:</b>	Not determined

<b>Chemical Fate Information</b>	Not determined
<b>Other Information</b>	Not applicable

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal Method</b>	Disposal should be made in accordance with federal, state, and local regulations.
<b>Contaminated Packaging</b>	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

<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 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
<b>EPA CERCLA/Superfund Reportable Spill Quantity</b>	EPA Reportable Spill Quantity is 367 Gallons based on Hydrofluoric acid (CAS: 7664-39-3).
<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>	One or more components listed.
<b>NJ Right-to-Know Law</b>	One or more components listed.
<b>PA Right-to-Know Law</b>	One or more components listed.
<b>Canadian Regulations</b>	
<b>Canadian DSL Inventory</b>	Product contains one or more components not listed on the inventory.
<b>WHMIS Hazard Class</b>	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

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\*\*\***