

## MATERIAL SAFETY DATA SHEET

Product Trade Name: **ENVIRO-COG™ C**

Revision Date: 04-Jan-2011

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Trade Name:** ENVIRO-COG™ C  
**Synonyms:** None  
**Chemical Family:** Inorganic acid  
**Application:** Additive

**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  
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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
Ferric chloride	7705-08-0	37-45	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>

### 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** If ingested, a stomach wash followed by saline catharsis and cenodyne is recommended.

## 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

<b>Fire Extinguishing Media</b>	All standard firefighting media.
<b>Special Exposure Hazards</b>	Decomposition in fire may produce toxic gases. Use water spray to cool fire exposed surfaces.
<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 2, Flammability 0, Reactivity 0
<b>HMS Ratings:</b>	Health 2, Flammability 0, Reactivity 0

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautionary Measures</b>	Use appropriate protective equipment.
<b>Environmental Precautionary Measures</b>	Prevent from entering sewers, waterways, or low areas.
<b>Procedure for Cleaning / Absorption</b>	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

<b>Handling Precautions</b>	Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse.
<b>Storage Information</b>	Store away from alkalis. Store in a cool, dry location. Keep from excessive heat. Product has a shelf life of 36 months.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Engineering Controls</b>	Use in a well ventilated area.
<b>Respiratory Protection</b>	Acid gas respirator with a dust/mist filter.
<b>Hand Protection</b>	Impervious rubber gloves.
<b>Skin Protection</b>	Rubber boots. Rubber apron.
<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>	Red brown
<b>Odor:</b>	Mild acidic
<b>pH:</b>	< 1

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity @ 20 C (Water=1):	1.43
Density @ 20 C (lbs./gallon):	11.91
Bulk Density @ 20 C (lbs/ft3):	Not Determined
Boiling Point/Range (F):	230
Boiling Point/Range (C):	110
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):	> 1
Solubility in Water (g/100ml):	Soluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	12.1 (40%) 6.7C
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 known.
Incompatibility (Materials to Avoid)	Strong alkalis. Contact with metals. Concrete.
Hazardous Decomposition Products	Hydrogen chloride.
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 irritation.
Eye Contact	Causes severe eye irritation May cause permanent eye damage. May cause eye tissue discoloration.
Ingestion	May be fatal if swallowed. May cause abdominal pain, vomiting, nausea, and diarrhea. May cause liver and kidney damage. May affect the blood and blood system.
Aggravated Medical Conditions	Lung disorders. Skin disorders.
Chronic Effects/Carcinogenicity	Prolonged or repeated exposure may cause liver, kidney and blood effects. Prolonged or repeated exposure may cause lung damage.
Other Information	None known.
Toxicity Tests	
Oral Toxicity:	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

UN2582, Ferric Chloride Solution, 8, III  
NAERG 154

#### Canadian TDG

Ferric Chloride Solution, 8, UN2582, III

#### ADR

UN2582, Ferric Chloride Solution, 8, III

### Air Transportation

#### ICAO/IATA

UN2582,Ferric Chloride Solution, 8, III

## Sea Transportation

### IMDG

UN2582,Ferric Chloride Solution, 8, III  
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 Chronic 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>	EPA Reportable Spill Quantity is 210 Gallons based on Ferric chloride (CAS: 7705-08-0).
<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>	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\*\*\***