# MATERIAL SAFETY DATA SHEET

**Preparation Date:** July 25, 2007

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** EnerHib C-4001
**Description:** Corrosion Inhibitor
**Manufacturers Name:** Rapid Energy Services L.L.C.
**Manufacturers Address:** 1424 South Hugh Wallis Road
Lafayette, Louisiana 70508
**Emergency Telephone Number:** (800) 255-3924 ChemTel

## 2. COMPOSITION/ INFORMATION ON INGREDIENTS

| Ingredient | CAS Number | % | ACGIH/OSHA |
|---|---|---|---|
| **Napthalene** | 91-20-3 | .5 - 5 | TWA: 10 STEL: 15(ppm) from ACGIH(TLV)[United States][1996]<br><br>TWA:52 STEL:79(mg/m$^3$)from ACGIH(TLV)[United States][1996] |
| **Aromatic Hydrocarbon** | 64741-67-9 | <40 | Not Available |
| **DEA Raw** | 111-42-2 | .1 - 5 | TWA: 0.46(ppm) from ACGIH (TLV)[United States]<br><br>TWA: 2 (mg/m$^3$)from ACGIH(TLV)[United States] |
| **Isopropyl alcohol** | 67-63-0 | 1-5 | TWA: 400(ppm) from OSHA(PEL)[United States]<br><br>TWA: 400 STEL:500(ppm) from ACGIH(TLV)[United States]<br><br>TWA: 983 STEL: 1230 (mg/m$^3$)from ACGIH(TLV)[United States] |
| **Kerosene** | Mixture | Proprietary Information | Proprietary Information |

The criteria for listing components in the composition section are as follows: Carcinogens are listed when present at 0.1% or greater. Non-hazardous components may be listed at 3.0% or greater if not proprietary in nature. This is not intended to be complete compositional disclosure. Refer to Section 14 for applicable states right to know and other regulatory information.

## 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**

**Eye irritation, mild to severe skin irritation, mild to severe irritation of respiratory tract, irritation and burning of gastrointestinal tract.**

**Principle Routes of Exposure:** Ingestion, inhalation, adsorption.

**Potential Health Effects**

**Eyes:** Will produce severe irritation. Prolonged contact results in chemical burns.

**Skin Contact:** May produce mild to severe irritations. Prolonged contact may produce chemical burns.

**Skin Absorption:** May produce mild to severe irritations. Prolonged contact may produce chemical burns.

**Inhalation:** Inhalation of acid mist may produce mild to severe irritation of the respiratory tract.

**Ingestion:** Ingestion may result in irritation and burning of the mucous membrane and/or gastrointestinal tract**.**

## 4. FIRST AID MEASURES

**Eye Contact:** Promptly flush eyes with clean, cool water for at least 15 minutes. Contact a physician immediately.

**Skin Contact:** Promptly remove contaminated clothing and rinse area with clean water for at least 15 minutes.

**Ingestion:** Dilute with 2-3 glasses of water or milk. Do not induce vomiting. Consult a physician immediately.

**Inhalation:** Remove person to fresh air. if person is not breathing, perform artificial respiration if properly trained.

**Notes to Physician:** If swallowed, do not induce vomiting. Gastric lavage is recommended. Hemodialysis may be indicated for more complete elimination. For eye contact, continue to rinse eye with clean water for 20-30 minutes, retracting eyelids often. Contact ophthalmologist immediately.

## 5. FIRE-FIGHTING MEASURES

**Flash Point:** 78̊F (26̊C)

**Flammable Limits:** The greatest range is Lower 0.7%, Upper 5% (kerosene)

**Extinguishing Media:** Water spray, $CO_2$, Dry chemical, Foam

**Hazardous Combustion Products:** Contact with water and strong alkalies may cause reaction with evolution of heat.

**Auto-Ignition Temperature:** The lowest known value is 450̊ F (232̊C)(kerosene)

**Protective Equipment and Precautions for Firefighters:** Fire fighters and others exposed to products of combustion should wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** See section 8 - Exposure Control/Personal Protection

**Environmental Precautions:** Low toxicity to aquatic life. Do not contaminate any watercourse or other body of water by direct application, disposal, or cleaning of equipment.

**Methods for Containment:** Dike around spill for containment and recover for re-processing.

**Methods for Clean-up:** Small spills can be safely neutralized with limestone or soda ash. Caustic soda should not be avoided because of excessive activity. Transfer to secure containers, dispose of in accordance with federal , state and local regulations.

## 7. HANDLING AND STORAGE

**Handling and Storage:** Store between 32̂F (0̂C) and 120̂F(48.9̂C)(. Have adequate first aid water available. Always wear proper protective equipment.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** General area ventilation.

**Personal Protective Equipment**

**Eye/Face Protection:** Wear safety glasses with side shields, chemical splash goggles, or safety glasses with side shields and a full-face shield to prevent contact with eyes. The choice of protection should be based on the job activity and potential for exposure to the eyes and face.

**Skin Protection:** Use gloves or other appropriate personal protective equipment if skin contact with formulation is possible. Wear lab coat or other protective over garment if splashing is possible. The choice of protection should be based on the job activity and potential for skin contact.

**Respiratory Protection:** When possible, handle material in enclosed processes or containers. If it is properly handled with effective local exhaust ventilation or containment, respiratory protection may not be needed. For procedures involving larger quantities or dust/aerosol generating procedures such as weighing or a large transfer of liquids, an air-purifying respirator with NIOSH/MSHA approval for dusts and mists may be needed.

**Other:** Wash hands, face, and other potentially exposed areas after handling material (especially before eating, drinking, or smoking). Clean protective equipment thoroughly after each use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Appearance:** | Dark Brown |
| **Physical State:** | Liquid |
| **Molecular Weight:** | N/D |
| **pH:** | Basic |
| **Specific Gravity:** | 0.875 |
| **Density:** | 7.27 lb/gal (typical) |
| **Flash Point (°F):** | 78F (26C) |
| **Freezing Point (°F):** | N/D |
| **Boiling Point:** | N/D |
| **Vapor Pressure:** | N/D |
| **Vapor Density:** | The highest known value is 4.5(air=1)(Aromatic Hydrocarbon).Weight average 4.12(air=1) |
| **Evaporation Rate:** | 2.3 (isopropyl alcohol) |
| **Water Solubility:** | Insoluble |

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal conditions.

**Conditions to Avoid:** Contact with water and strong alkalies may cause reaction with evolution of heat. To dilute: add product slowly to lukewarm water; not water to product.

**Incompatible Materials:** Highly reactive to reducing agents, organic materials, metals, alkalis.

**Hazardous Decomposition Products:** N/A

**Possibility of Hazardous Reactions:** Avoid contact with water and strong alkalies, reducing agents.

## 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity**

**LD50 Oral:** LD50(rat) is 710 mg/kg;(DEA Raw)

**Acute Dermal Toxicity:** N/A

**Acute Inhalation Toxicity:** Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation.

**Reproductive and Developmental Toxicity:**

**Mutagenicity:** N/A

**Chronic Toxicity:** N/A

**Carcinogenicity:** This material has not been classified as a carcinogen by NTP, IARC, or OSHA.

**Target Organ Effects:** N/A

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity Effects:** N/A

**Persistence/ Degradability:** N/A

**Bioaccumulation:** N/A

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Collect and reprocess where possible. Following neutralization with limestone or soda ash, consult state and federal regulations before final disposal.

## 14. TRANSPORT INFORMATION

**DOT:** Flammable Liquid N.O.S. (Napthalene, Aromatic Hydrocarbon, Isopropyl alcohol)
**Proper Shipping Name:** Flammable Liquid N.O.S. (Napthalene, Aromatic Hydrocarbon, Isopropyl alcohol),3,UN1993,PGIII,RQ=3333.52
**Hazard Class:** 3
**Subsidiary Class:**
**UN Number:** UN1993
**Packing Group:** III
**Reportable Quantity (RQ):** 3333.52 lbs
**Marine Pollutant:** NO
**Description:** Corrosion Inhibitor
**Product Name:** EnerHib C-4001

## 15. REGULATORY INFORMATION

**International Inventories:**

**Federal Regulations:**

**SARA 313:** Section 313 of Title III of the superfund Amendments and Regulation Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazardous Categorization:**

**Acute Health Hazard:** No
**Chronic Health Hazard:** No
**Fire Hazard:** Yes
**Sudden Release of Pressure Hazard:** Yes
**Reactive Hazard:** Yes

**State Regulations:**

**California Proposition 65:** This product does not contain any Proposition 65 chemicals.
**TSCA:** All ingredients of this product are listed on TSCA inventory list.

## 16. OTHER INFORMATION

| | |
|---|---|
| **HEALTH** | **2** |
| **FLAMMABILITY** | **2** |
| **REACTIVITY** | **0** |
| **PERSONAL PROTECTION** | **C** |

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Signed: Safety Officer
Date: Jul 15, 2008
Revised: