MATERIAL SAFETY DATA SHEET

I. MATERIAL IDENTIFICATION

Name: CTU Overhead/Debutanizer Gas
Synonyms: Primary Tower Overhead Gas; Crude Unit Wet Gas; LSR Stabilizer Overhead Gas
Chemical Family: Petroleum Hydrocarbons
Manufacturer: Conoco Inc.
Address: P.O. Box 1267, Ponca City, OK 74603

Transportation Emergency No.:
(800) 424-9300 (Chemtrec)
Product Information No.:
(405) 767-6000

II. OSHA HAZARD DETERMINATION

Hazardous Ingredients:
Hydrocarbons (Gaseous alkanes)

Hydrogen Sulfide (7783-06-4)

Benzene (71-43-2)

Physical Effect Properties:
Product/Mixture: Compressed Gas, Flammable.

III. PHYSICAL DATA

Appearance: Colorless gas

Vapor Pressure (PSI)	100-200	API Gravity	Not Applicable
Vapor Density (Air=1)	> 1	Distillation Range	-258° F to +400° F*
Solubility in Water	Slightly Soluble		

*Includes traces of hydrocarbons, hexanes and higher molecular weight.

IV. REACTIVITY DATA

Stable: X Unstable:

Hazardous Decomposition Products: Oxides of carbon and sulfur. May produce carbon monoxide.

Conditions To Avoid: Highly flammable gas. Reactive with oxidizing agents. Corrosive to many materials when wet.

Hazardous Polymerization: Will not occur.

V. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): Below Ambient

Handle and store in accordance with NFPA procedure for Compressed Gas, Flammable.

Extinguishing Media: If gas has ignited, do not extinguish. Stop gas flow. Allow to burn out.

Special Fire Fighting Procedures: Stop flow of gas. Use water to keep fire-exposed containers cool and to protect personnel effecting the shutoff. If a leak or spill has not ignited, use water spray to disperse the gas or vapor and to protect personnel attempting to stop a leak.

Unusual Fire and Explosion Hazards: Highly flammable. Products of combustion may contain carbon monoxide, carbon dioxide and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

National Fire Protection Association (NFPA) Classification	HAZARD RATING
Health 1 Fire 4 Reactivity 0	Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

VI. TRANSPORTATION AND STORAGE

DOT HAZARD CLASS: Not Applicable

Precautions To Be Taken In Handling And Storing: Product is Compressed Gas, Flammable per NFPA Code No. 30-1984. Store and handle accordingly.

Shipping Information: Not To Be Transported By Truck, Rail, Air or Water.

OSHA Label: DANGER, CONTAINS BENZENE, CANCER HAZARD.

Minimize exposure. Product contains hydrocarbons which may cause irritation to eyes, skin, and lungs after prolonged or repeated exposure. The product may also be toxic to the liver, kidney, blood, and blood-forming tissues. Aspiration into the lungs may cause pneumonia.

Vapors reduce oxygen available for breathing. The use in poorly ventilated areas may cause weakness, dizziness, confusion, or unconsciousness and may lead to asphyxiation. Contact with compressed or liquified product may cause frostbite. This product may contain hydrogen sulfide which is irritating at low concentrations to the eyes, skin, and lungs. At higher concentrations, loss of ability to smell hydrogen sulfide, respiratory paralysis, and death may occur.

FIRST AID: If swallowed, do not induce vomiting.

Avoid ignition sources.

VII. HEALTH HAZARD INFORMATION

Benzene: PEL TWA, 1 ppm; STEL, 5 ppm
TLV TWA, 10 ppm
Du Pont AEL TWA, 10 ppm

Hydrogen Sulfide: PEL Ceiling of 20 ppm; 10-minute maximum peak of 50 ppm
TLV TWA, 10 ppm; STEL, 15 ppm
Du Pont AEL TWA, 10 ppm

Petroleum Distillates: PEL TWA, 500 ppm

Primary Route(s) of Entry: Inhalation.

Signs and Symptoms of Exposure/Medical Conditions Aggravated By Exposure:

Extreme exposure or aspiration into the lungs may cause pneumonia. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects; greater exposure may cause dizziness, slurred speech, flushed face, unconsciousness, or convulsions. Large concentrations in ambient air can cause asphyxiation due to oxygen displacement. Contact with compressed or liquified gas may cause frostbite.

The product contains petroleum hydrocarbons which may cause irritation to the eyes, skin, and lungs after prolonged or repeated exposure. The product may contain low concentrations of ammonia and thus enhance the irritant properties of the product.

A few studies have indicated that workers exposed many years to high concentrations of benzene have a slightly higher incidence of leukemia. Benzene can also be toxic to the blood and blood-forming tissues.

Hydrogen sulfide can be irritating at low concentrations to the eyes, skin, and respiratory tract. At higher concentrations, loss of ability to smell hydrogen sulfide, respiratory paralysis, and death may occur.

Is Product Listed as Carcinogen or Potential Carcinogen by: NTP? No IARC? No OSHA? No

VIII. EMERGENCY AND FIRST AID PROCEDURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes and seek medical attention.

Skin: Remove contaminated clothing as soon as possible. Wash exposed skin thoroughly with soap and water. If irritation develops, consult a physician.

See Section X for Precautionary Measures.

Inhalation: Because hydrogen sulfide can cause death, rescuers must wear positive pressure full facepiece, self-contained or supplied-air NIOSH approved respirators before attempting the rescue, if hydrogen sulfide is present. Remove victim to fresh air immediately. If breathing stops, begin artificial resuscitation. Keep victim warm and at rest. Seek medical attention.

Ingestion: If this material is swallowed, do not induce vomiting. If vomiting begins, lower victim's head in an effort to prevent vomitus from entering lungs. Seek medical attention. Never give anything by mouth to an unconscious person.

Note to Physician: Gastric lavage by qualified medical personnel may be considered, depending on quantity of material ingested.

IX. SPILL, LEAK AND DISPOSAL PROCEDURES

RCRA HAZARDOUS WASTE: Yes__X__ No_____

In Case Of Spill Or Leak: Evacuate all personnel downwind of release. If released indoors, evacuate building until vapors have been cleared. Extinguish all ignition sources. Use appropriate protective clothing, rubber gloves, safety goggles and respiratory apparatus (see Section X).

Waste Disposal Method: When feasible, vapors should be dispersed mechanically.

X. PRECAUTIONARY MEASURES

Respiratory Protection: Select appropriate NIOSH-approved respiratory protective equipment where atmospheric concentrations exceed permissible exposure limits.

Ventilation: Sufficient to maintain at conditions below permissible exposure limits.

Protective Gloves: None required.

Eye Protection: Use a full facepiece with the respirator when the atmospheric concentration of hydrogen sulfide exceeds the permissible exposure limit.

Other Protective Equipment: None required.

The above data is based on tests and experience which Conoco believes reliable and are supplied for informational purposes only. CONOCO DISCLAIMS ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA AND NOTHING CONTAINED THEREIN SHALL CONSTITUTE A GUARANTEE, WARRANTY (INCLUDING WARRANTY OF MERCHANTABILITY) OR REPRESENTATION (INCLUDING FREEDOM FROM PATENT LIABILITY) BY CONOCO WITH RESPECT TO THE DATA, THE PRODUCT DESCRIBED, OR THEIR USE FOR ANY SPECIFIC PURPOSE, EVEN IF THAT PURPOSE IS KNOWN TO CONOCO.