



Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet

SDS No: 8434

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Revision Date: 10/31/2018

Date of Issue: 11/16/2015

Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: Natural Gas, Sour Unprocessed (Raw)

Synonyms: Unprocessed Sour Natural Gas

1.2. Intended Use of the Product

Natural gas as found in nature. Light hydrocarbon liquids often accompany Raw Natural Gas - see SDS for Natural Gas Condensate w/H₂S for information on the condensed (liquid) phase of Natural Gas.

1.3. Name, Address, and Telephone of the Responsible Party

Customer

Hess Tower

1501 McKinney

Houston, TX 77010

T:(713) 496-4000

When calling the main operator ask for the EHS Safety Department. All Hess SDSs are also available via the Hess.com website.

1.4. Emergency Telephone Number

Emergency Number : (800) 424-9300 CHEMTREC (24 hours)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Simple Asphy

Flam. Gas 1 H220

Press. Gas (Comp.) H280

Acute Tox. 3 H331

(Inhalation:gas)

Eye Irrit. 2A H319

Aquatic Acute 1 H400

Full text of hazard classes and H-statements : see Section 16.

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA)



Signal Word (GHS-US/CA)

: Danger

Hazard Statements (GHS-US/CA)

: H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.
H319 - Causes serious eye irritation.
H331 - Toxic if inhaled.
H400 - Very toxic to aquatic life.
May displace oxygen and cause rapid suffocation.

Precautionary Statements (GHS-US/CA)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing gas.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311 - Call a POISON CENTER or doctor.
P321 - Specific treatment (see Section 4 on this SDS).
P337+P313 - If eye irritation persists: Get medical advice/attention.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - In case of leakage, eliminate all ignition sources.
P391 - Collect spillage.
P403 - Store in a well-ventilated place.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Contact with gas escaping the container can cause frostbite. Contains hydrogen sulfide, symptoms of overexposure are headaches, dizziness, nausea, coughing, respiratory irritation, eye irritation, skin irritation, pain in the nose, loss of consciousness, and with high exposure, respiratory paralysis. Heating of the product may release higher amounts of Hydrogen Sulfide (H₂S).

2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Name	Product Identifier	% *	GHS Ingredient Classification
Natural gas, dried	(CAS-No.) 68410-63-9	100	Simple Asphy Flam. Gas 1, H220 Press. Gas (Comp.), H280
Contains:			
Name	Product Identifier	%	Classification (GHS-US)
Methane	(CAS-No.) 74-82-8	< 100	Simple Asphy Flam. Gas 1, H220 Press. Gas (Liq.), H280
Hydrogen sulfide	(CAS-No.) 7783-06-4	< 20	Flam. Gas 1, H220 Press. Gas (Liq.), H280 Acute Tox. 2 (Inhalation:gas), H330 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Acute 1, H400
Ethane	(CAS-No.) 74-84-0	< 20	Simple Asphy Flam. Gas 1, H220 Press. Gas (Liq.), H280
Propane	(CAS-No.) 74-98-6	< 10	Simple Asphy Flam. Gas 1, H220 Press. Gas (Liq.), H280
Propene	(CAS-No.) 115-07-1	< 10	Simple Asphy Flam. Gas 1, H220 Press. Gas (Liq.), H280 Aquatic Acute 3, H402

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

			Aquatic Chronic 3, H412
Isobutane	(CAS-No.) 75-28-5	< 5	Simple Asphy Flam. Gas 1, H220 Press. Gas (Liq.), H280

Full text of H-phrases: see Section 16.

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention. If not breathing, give artificial respiration.

Inhalation: First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists. Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Contact with gas escaping the container can cause frostbite. Causes serious eye irritation. Toxic if inhaled. Asphyxia by lack of oxygen: risk of death. High concentrations of hydrogen sulfide can cause respiratory paralysis.

Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death. This product without hydrogen sulfide is considered to be non-toxic by inhalation. Inhalation of high concentrations may cause central nervous system depression such as dizziness, drowsiness, headache, and similar narcotic symptoms, but no long-term effects. Numbness, a "chilly" feeling, and vomiting have been reported from accidental exposures to high concentrations.

Signs of asphyxiation will be noticed when oxygen is reduced to below 16% and may occur in several stages. Symptoms may include rapid breathing and pulse rate, headache, dizziness, visual disturbances, mental confusion, incoordination, mood changes, muscular weakness, tremors, cyanosis, narcosis, and numbness of the extremities. Unconsciousness leading to central nervous system injury and possibly death will occur when the atmospheric oxygen concentration is reduced to about <8%.

WARNING: irritating and toxic hydrogen sulfide gas may be present. Greater than 15-20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50-500 ppm can cause headache, nausea, and dizziness. Continued exposure at these levels can lead to loss of reasoning and balance, difficulty in breathing, fluid in the lungs, loss of consciousness, and with high exposure, respiratory paralysis. Greater than 500 ppm can cause rapid unconsciousness and death if not promptly revived.

The "rotten egg" odor of hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Skin Contact: Contact with gas escaping the container can cause frostbite and freeze burns.

Eye Contact: Contact with gas escaping the container can cause frostbite, freeze burns, and permanent eye damage. Contact causes severe irritation with redness and swelling of the conjunctiva.

Ingestion: Not considered a potential route of exposure, but contact with gas escaping the container can cause freeze burns and frostbite.

Chronic Symptoms: None expected under normal conditions of use.

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand. Individuals with pre-existing conditions of the heart, lungs, and blood may have increased susceptibility to symptoms of asphyxia.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Do not extinguish burning gas if flow cannot be shut off immediately. Extinguish secondary FIRES with appropriate materials.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Extremely flammable gas.

Explosion Hazard: May form flammable/explosive vapor-air mixture. Container may explode in heat of fire.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Gas fires should not be extinguished unless flow of gas can be immediately stopped. Shut off gas source and allow gas to burn out. If spill or leak has not ignited, determine if water spray may assist in dispersing gas or vapor to protect personnel attempting to stop leak.

Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. For large fire the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure.

Isolate area, particularly around ends of storage vessels. Let vessel, tank car or container burn unless leak can be stopped. Withdraw immediately in the event of a rising sound from a venting safety device. Large fires typically require specially trained personnel and equipment to isolate and extinguish fire.

Firefighting activities that may result in potential exposure to high heat, smoke, or toxic by-products of combustion should require NIOSH/MSHA – approved pressure-demand self-contained breathing apparatus with full face piece and full protective clothing.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and/or nitrogen. Hydrogen sulfide and other sulfur-containing gases can evolve at elevated temperatures.

Other Information: Use water spray to disperse vapors. Do not allow run-off from firefighting to enter drains or water courses.

Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Eliminate every possible source of ignition. Do not get in eyes, on skin, or on clothing. Do not breathe gas.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Evacuate unnecessary personnel, isolate, and ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Stop leak, if possible without risk. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Methods for Cleaning Up: Evacuate nonessential personnel and secure all ignition sources. No road flares, smoking or flames in hazard area. Consider wind direction, stay upwind, if possible. Evaluate the direction of product travel. Cold vapor cloud may be white, but color will dissipate as cloud disperses – fire and explosion hazard is still present! TOXIC hydrogen sulfide may be present during a release: ensure response personnel are adequately protected – see Section 8 for personal protection.

Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Ruptured cylinders may rocket. Do not pressurize, cut, or weld containers. Asphyxiating gas at high concentrations. Hydrogen sulfide is a highly flammable, explosive gas under certain conditions, is a toxic gas, and may be fatal. Gas can accumulate in the headspace of closed containers, use caution when opening sealed containers. Heating the product or containers can cause thermal decomposition of the product and release hydrogen sulfide.

Naturally Occurring Radioactive Material (NORM): Industry experience indicates this material may contain small amounts of naturally-occurring uranium, thorium, and their decay products (NORM) which can accumulate in oil production and process equipment, particularly the equipment handling the water associated with crude oil production. Production equipment should be assessed for external gamma radiation and access may need to be restricted in accordance with OSHA 29 CFR 1910.1096 during operation. Production equipment should also be assumed to be internally contaminated with long half-life decay products that emit alpha radiation, which is a hazard if inhaled or ingested. Unless measurements indicate otherwise, steps should be taken to minimize skin and inhalation risk exposure to NORM dusts/mists by wearing personal protective clothing, utilizing respiratory protection, and practicing good personal hygiene. Please refer to API Bulletin E2, "Bulletin on Management of Naturally Occurring Radioactive Materials in Oil and Gas Production" for additional information on managing NORM. Scales, sludge and other deposits from this equipment may have an accumulation of NORM.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact with skin, eyes and clothing. Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing. Do not breathe gas.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Keep away from flame, sparks and excessive temperatures. Store only in approved containers. Bond and ground containers. Use only in well ventilated areas. See also applicable OSHA regulations for the handling and storage of this product, including, but not limited to, 29 CFR 1910.110 Storage and handling of liquefied petroleum gases.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Natural gas as found in nature. Light hydrocarbon liquids often accompany Raw Natural Gas - see SDS for Natural Gas Condensate w/H₂S for information on the condensed (liquid) phase of Natural Gas.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in Section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Methane (74-82-8)		
British Columbia	OEL TWA (ppm)	1000 ppm
Hydrogen sulfide (7783-06-4)		
USA ACGIH	ACGIH TWA (ppm)	1 ppm
USA ACGIH	ACGIH STEL (ppm)	5 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	20 ppm

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

USA OSHA	Acceptable Maximum Peak Above The Acceptable Ceiling Concentration For An 8-Hr Shift	50 ppm Peak (10 minutes once, only if no other measurable exposure occurs)
USA NIOSH	NIOSH REL (ceiling) (mg/m ³)	15 mg/m ³
USA NIOSH	NIOSH REL (ceiling) (ppm)	10 ppm
USA IDLH	US IDLH (ppm)	100 ppm
Alberta	OEL Ceiling (mg/m ³)	21 mg/m ³
Alberta	OEL Ceiling (ppm)	15 ppm
Alberta	OEL TWA (mg/m ³)	14 mg/m ³
Alberta	OEL TWA (ppm)	10 ppm
British Columbia	OEL Ceiling (ppm)	10 ppm
Ontario	OEL STEL (ppm)	15 ppm
Ontario	OEL TWA (ppm)	10 ppm
Québec	VECD (mg/m ³)	21 mg/m ³
Québec	VECD (ppm)	15 ppm
Québec	VEMP (mg/m ³)	14 mg/m ³
Québec	VEMP (ppm)	10 ppm
Ethane (74-84-0)		
Alberta	OEL TWA (ppm)	1000 ppm
British Columbia	OEL TWA (ppm)	1000 ppm
Propane (74-98-6)		
USA OSHA	OSHA PEL (TWA) (mg/m ³)	1800 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1800 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	1000 ppm
USA IDLH	US IDLH (ppm)	2100 ppm (10% LEL)
Alberta	OEL TWA (ppm)	1000 ppm
British Columbia	OEL TWA (ppm)	1000 ppm
Québec	VEMP (mg/m ³)	1800 mg/m ³
Québec	VEMP (ppm)	1000 ppm
Propene (115-07-1)		
USA ACGIH	ACGIH TWA (ppm)	500 ppm
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
Alberta	OEL TWA (mg/m ³)	860 mg/m ³
Alberta	OEL TWA (ppm)	500 ppm
British Columbia	OEL TWA (ppm)	500 ppm
Ontario	OEL TWA (ppm)	500 ppm
Isobutane (75-28-5)		
USA ACGIH	ACGIH STEL (ppm)	1000 ppm (explosion hazard)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	1900 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	800 ppm
Ontario	OEL STEL (ppm)	1000 ppm
Ontario	OEL TWA (ppm)	800 ppm

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Use explosion-proof equipment. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases or vapors may be released. Gas detectors should be used when toxic gases may be released. Oxygen detectors should be used when asphyxiating gases may be released.

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection. Respiratory protection of the dependent type.



Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/ flame resistant/retardant clothing.

Hand Protection: Wear protective gloves. If material is cold, wear thermally resistant protective gloves.

Eye and Face Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Whenever workplace conditions warrant the use of a respirator, a respiratory protection program should be followed that meets or exceeds OSHA 29 CFR 1910.134 and ANSI Z.88.2. Only respirators approved by NIOSH should be selected for use. Protection provided by air-purifying respirators is limited. API recommends the uses of a SCBA or positive pressure/ pressure demand respirator for atmospheric that exceed 10 PPM H₂S or 2 PPM SO₂, see API RP 55. Crude oil vapors can displace air causing an oxygen deficient atmosphere. Entry into an oxygen deficient environment can only be made using: 1) a full face piece pressure demand self-contained breathing apparatus (SCBA) with a minimum service life of thirty minutes, or 2) a combination full face piece pressure demand supplied-air respirator with an auxiliary self-contained air supply. A level of H₂S gas at or above 100 ppm is Immediately Dangerous to Life and Health (IDLH). Entry into IDLH atmospheres can only be made using: 1) a full face piece pressure demand self-contained breathing apparatus (SCBA) with a minimum service life of thirty minutes, or 2) a combination full face piece pressure demand supplied-air respirator with an auxiliary self-contained air supply. Entry into IDLH atmospheres require the use of the Buddy System, see OSHA 1910.120.

Thermal Hazard Protection: Wear thermally resistant protective clothing.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Gas
Appearance	: Colorless gas. Cold vapor cloud may be white but the lack of visible gas cloud does not indicate absence of gas.
Odor	: For natural gas with hydrogen sulfide: Hydrogen sulfide has a characteristic rotten egg "sulfurous" odor with an odor threshold of less than 10 parts per billion. However, this odor should not be used as a warning property of toxic levels because H ₂ S can overwhelm and deaden the sense of smell. Therefore, the smell of H ₂ S should not be used as an indicator of a hazardous condition – a H ₂ S meter or colorimetric indicating tubes are typically used to determine the concentration of H ₂ S.
Odor Threshold	: Not available
pH	: Not available
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: -162 °C (-259.6 °F)
Flash Point	: -188 °C (-306.4 °F)
Auto-ignition Temperature	: 482 - 632 °C (899.6 - 1169.6 °F)
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Extremely flammable gas
Lower Flammable Limit	: 3.8 - 6.5 %
Upper Flammable Limit	: 13 - 17 %
Vapor Pressure	: 40 atm @ -86°C (-187°F)
Relative Vapor Density at 20°C	: 0.6 (air=1)
Relative Density	: Not available
Specific Gravity	: 0.4 @-164°C (-263°F)

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Solubility	: 3.5% in water
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Explosive Properties	: Contains gas under pressure; may explode if heated

SECTION 10: STABILITY AND REACTIVITY

- 10.1. **Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. **Chemical Stability:** Contains gas under pressure; may explode if heated.
- 10.3. **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. **Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.
- 10.5. **Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6. **Hazardous Decomposition Products:** None expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

- Acute Toxicity (Oral):** Not classified
- Acute Toxicity (Dermal):** Not classified
- Acute Toxicity (Inhalation):** Inhalation:gas: Toxic if inhaled.

LD50 and LC50 Data:

Natural Gas, Sour Unprocessed (Raw)	
ATE US/CA (gas)	2,220.00 ppmV/4h

Skin Corrosion/Irritation: Not classified

Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death. In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death. This product without hydrogen sulfide is considered to be non-toxic by inhalation. Inhalation of high concentrations may cause central nervous system depression such as dizziness, drowsiness, headache, and similar narcotic symptoms, but no long-term effects. Numbness, a "chilly" feeling, and vomiting have been reported from accidental exposures to high concentrations.

Signs of asphyxiation will be noticed when oxygen is reduced to below 16% and may occur in several stages. Symptoms may include rapid breathing and pulse rate, headache, dizziness, visual disturbances, mental confusion, incoordination, mood changes, muscular weakness, tremors, cyanosis, narcosis, and numbness of the extremities. Unconsciousness leading to central nervous system injury and possibly death will occur when the atmospheric oxygen concentration is reduced to about <8%.

WARNING: irritating and toxic hydrogen sulfide gas may be present. Greater than 15-20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50-500 ppm can cause headache, nausea, and dizziness. Continued exposure at these levels can lead to loss of reasoning and balance, difficulty in breathing, fluid in the lungs, loss of consciousness, and with high exposure, respiratory paralysis. Greater than 500 ppm can cause rapid unconsciousness and death if not promptly revived.

The "rotten egg" odor of hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Symptoms/Injuries After Skin Contact: Contact with gas escaping the container can cause frostbite and freeze burns.

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Symptoms/Injuries After Eye Contact: Contact with gas escaping the container can cause frostbite, freeze burns, and permanent eye damage. Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Not considered a potential route of exposure, but contact with gas escaping the container can cause freeze burns and frostbite.

Chronic Symptoms: None expected under normal conditions of use.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Hydrogen sulfide (7783-06-4)	
LC50 Inhalation Rat	444 ppm/4h
Ethane (74-84-0)	
LC50 Inhalation Rat	658 mg/l/4h
Propane (74-98-6)	
LC50 Inhalation Rat	> 800000 ppm (Exposure time: 15 min)
Propene (115-07-1)	
LC50 Inhalation Rat	> 65000 ppm/4h
Isobutane (75-28-5)	
LC50 Inhalation Rat	658 mg/l/4h
LC50 Inhalation Rat	11000 ppm
Propene (115-07-1)	
IARC Group	3

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Very toxic to aquatic life.

Hydrogen sulfide (7783-06-4)	
LC50 Fish 1	0.0448 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
LC50 Fish 2	0.016 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
Propene (115-07-1)	
ErC50 (algae)	33.39 mg/l

12.2. Persistence and Degradability

Natural Gas, Sour Unprocessed (Raw)	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

Natural Gas, Sour Unprocessed (Raw)	
Bioaccumulative Potential	Not established.
Natural gas, dried (68410-63-9)	
Log Pow	<= 2.8
Hydrogen sulfide (7783-06-4)	
BCF Fish 1	(no bioaccumulation expected)
Log Pow	0.45 (at 25 °C)
Ethane (74-84-0)	
Log Pow	<= 2.8
Propane (74-98-6)	
Log Pow	2.3
Propene (115-07-1)	
Log Pow	<= 2.8
Isobutane (75-28-5)	
BCF Fish 1	1.57 - 1.97
Log Pow	2.88 (at 20 °C)

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

12.4. Mobility in Soil

Not available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions. Handle empty containers with care because residual vapors are flammable. Empty gas cylinders should be returned to the vendor for recycling or refilling. Do not puncture or incinerate container.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S., Inhalation Hazard Zone C, (HYDROGEN SULFIDE, NATURAL GAS)

Hazard Class : 2.3

Identification Number : UN1953

Label Codes : 2.3, 2.1

Marine Pollutant : Marine pollutant

ERG Number : 119



14.2. In Accordance with IMDG

Proper Shipping Name : COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S., (HYDROGEN SULFIDE, NATURAL GAS)

Hazard Class : 2.3 (2.1)

Identification Number : UN1953

Label Codes : 2.3, 2.1

EmS-No. (Fire) : F-D

EmS-No. (Spillage) : S-U

Marine pollutant : Marine pollutant



14.3. In Accordance with IATA

Proper Shipping Name : COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S., (HYDROGEN SULFIDE, NATURAL GAS)

Identification Number : 2.3 (2.1)

Hazard Class : UN1953

ERG Code (IATA) : 10P

14.4. In Accordance with TDG

Proper Shipping Name : COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S., (HYDROGEN SULFIDE, NATURAL GAS)

Hazard Class : 2.3

Identification Number : UN1953

Label Codes : 2.3, 2.1

Marine Pollutant (TDG) : Marine pollutant



SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

Natural Gas, Sour Unprocessed (Raw)	
SARA Section 311/312 Hazard Classes	Fire hazard Sudden release of pressure hazard Immediate (acute) health hazard
Natural gas, dried (68410-63-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Methane (74-82-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Hydrogen sulfide (7783-06-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on the United States SARA Section 302	
Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 313 - Emission Reporting	1 %
Ethane (74-84-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Propane (74-98-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Propene (115-07-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1 %
Isobutane (75-28-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

Methane (74-82-8)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Hydrogen sulfide (7783-06-4)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List
Ethane (74-84-0)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Propane (74-98-6)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Propene (115-07-1)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List
Isobutane (75-28-5)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

15.3. Canadian Regulations

Natural gas, dried (68410-63-9)
Listed on the Canadian DSL (Domestic Substances List)

Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Methane (74-82-8)
Listed on the Canadian DSL (Domestic Substances List)
Hydrogen sulfide (7783-06-4)
Listed on the Canadian DSL (Domestic Substances List)
Ethane (74-84-0)
Listed on the Canadian DSL (Domestic Substances List)
Propane (74-98-6)
Listed on the Canadian DSL (Domestic Substances List)
Propene (115-07-1)
Listed on the Canadian DSL (Domestic Substances List)
Isobutane (75-28-5)
Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 10/31/2018

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

GHS Full Text Phrases:

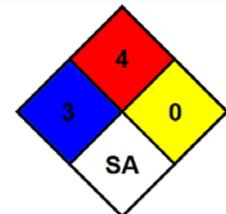
H280	Contains gas under pressure; may explode if heated
Acute Tox. 2 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 2
Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Gas 1	Flammable gases Category 1
Press. Gas (Comp.)	Gases under pressure Compressed gas
Press. Gas (Liq.)	Gases under pressure Liquefied gas
Simple Asphy	Simple Asphyxiant
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
H319	Causes serious eye irritation
H330	Fatal if inhaled
H331	Toxic if inhaled
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

NFPA Health Hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA Fire Hazard : 4 - Materials that rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and burn readily.

NFPA Reactivity Hazard : 0 - Material that in themselves are normally stable, even under fire conditions.

NFPA Specific Hazards : SA - This denotes gases which are simple asphyxiants.



Natural Gas, Sour Unprocessed (Raw)

Safety Data Sheet **SDS No: 8434**

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

NA GHS SDS 2015 (Can, US)