

NATURAL GAS CONDENSATE SOUR



Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Version: 1.4 Revision Date: 05/20/2016

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product Identifier

Product Form: Mixture

Product Name: Natural Gas Condensate

Synonyms: Drips; Condensate; Field Condensate; Gas Well Condensate; High Pressure Inlet Liquids; Lease Condensate; Pipeline Liquids

CAS No. 68919-39-1

Intended Use of the Product

Use of the Substance/Mixture: Industrial Use

Name, Address, and Telephone of the Responsible Party

Company

Williams, Inc.
One Williams Center
Tulsa, OK 74172, US
T 800-945-5426
ehs@williams.com

Emergency Telephone Number

Emergency number **Chemtrec - 800-424-9300**

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Flam. Liq. 2 H225

Muta. 1B H340

Carc. 1A H350

STOT RE 1 H372

Asp. Tox. 1 H304

Flam. Liq. 2 H225

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :



Signal Word (GHS-US) :

Danger

Hazard Statements (GHS-US) :

H220 - Extremely flammable gas
H225 - Highly flammable liquid and vapor
H280 - Contains gas under pressure; may explode if heated
H304 - May be fatal if swallowed and enters airways
H330 - Fatal if inhaled
H340 - May cause genetic defects
H350 - May cause cancer
H372 - Causes damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life

Precautionary Statements (GHS-US) :

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe vapors, mist, spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, respiratory protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P314 - Get medical advice and attention if you feel unwell.
P331 - If swallowed, do NOT induce vomiting.
P370+P378 - In case of fire: Use appropriate for extinction.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: Contains hydrogen sulfide. 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..Exposure may aggravate those with pre

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

existing eye, skin, or respiratory conditions. Exposure may aggravate individuals with pre-existing skin, kidney, liver, and pulmonary disorders. Flammable vapors can accumulate in head space of closed systems.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

NAME	PRODUCT IDENTIFIER	% (W/W)	CLASSIFICATION (GHS-US)
Natural gas condensates	(CAS No) 68919-39-1	97.9 - 99.6	Flam. Liq. 1, H224 Muta. 1B, H340 Carc. 1B, H350 Asp. Tox. 1, H304

Components

NAME	PRODUCT IDENTIFIER	% (W/W)	CLASSIFICATION (GHS-US)
n-Heptane	(CAS No) 142-82-5	10 - 30	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Hexane	(CAS No) 110-54-3	10 - 30	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Pentane	(CAS No) 109-66-0	10 - 30	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Isopentane	(CAS No) 78-78-4	5 - 10, 10 - 20	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Butane	(CAS No) 106-97-8	1 - 5, 5 - 10	Simple Asphy Flam. Gas 1, H220 Liquefied gas, H280

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Isobutane	(CAS No) 75-28-5	0.1 - 1, 1 - 5	Simple Asphy Flam. Gas 1, H220 Liquefied gas, H280
Xylenes (o-, m-, p- isomers)	(CAS No) 1330-20-7	0.1 - 1	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation: vapor), H332 Skin Irrit. 2, H315 Asp. Tox. 1, H304 Aquatic Acute 2, H401
Toluene	(CAS No) 108-88-3	0.1 - 1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 3, H412
Benzene	(CAS No) 71-43-2	0.4 - 2.1	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304
Hydrogen sulfide	(CAS No) 7783-06-4	<= 0.0004	Flam. Gas 1, H220 Liquefied gas, H280 Acute Tox. 2 (Inhalation:gas), H330 Aquatic Acute 1, H400

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If exposed or concerned: Get medical advice/attention.

Inhalation: When symptoms occur: go into open air and ventilate suspected area. If exposed or concerned: Get medical advice/attention. Call a POISON CENTER/doctor/physician if you feel unwell

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation persists.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ingestion (Swallowing): Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Causes damage to organs through prolonged or repeated exposure. May cause genetic defects. May cause cancer. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

Inhalation: May cause respiratory irritation. May cause drowsiness or dizziness.

Skin Contact: May cause moderate irritation.

Eye Contact: May cause slight irritation.

Ingestion: May be fatal if swallowed and enters airways. Aspiration of this material may cause chemical pneumonia. Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Contains a small amount of Hydrogen Sulfide. Symptoms of overexposure are headaches, dizziness, nausea, coughing, respiratory irritation, eye irritation, skin irritation, pain in the nose, and loss of consciousness. Heating of the product may release higher amounts of Hydrogen Sulfide (H₂S).

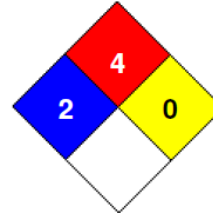
Indication of Any Immediate Medical Attention and Special Treatment Needed:

If exposed or concerned, get medical advice and attention.

SECTION 5: FIREFIGHTING MEASURES

NFPA 704 Hazard Class

Health: 2 Flammability: 4 Instability: 0



0 (Minimal)
1 (Slight)
2 (Moderate)
3 (Serious)
4 (Severe)

Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

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

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Highly flammable liquid and vapor

Explosion Hazard: May form flammable/explosive vapor-air mixture.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

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

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Hydrocarbon, sulfur dioxide (SO₂), and Hydrogen sulfide (H₂S) fatal and irritating gases.

Other information: Do not allow run-off from fire fighting to enter drains or water courses. Do not allow the product to be released into the environment.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Use special care to avoid static electric charges. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Remove ignition sources. Stop leak if safe to do so. Do not get in eyes, on skin, or on clothing. Do NOT breathe (vapor, mist, spray).

For Non-Emergency Personnel

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

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Use only non-sparking tools.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Use only non-sparking tools. Contact competent authorities after a spill. Do not take up in combustible material such as: saw dust or cellulosic material.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Avoid all eyes and skin contact and do not breathe vapour and mist. If stored under heat for extended periods or significantly agitated, this material might evolve or release hydrogen sulfide, a toxic, flammable gas, which can raise and widen this material's actual flammability limits and significantly lower its auto-ignition temperature. Hydrogen sulfide can be fatal.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands, forearms, and other exposed areas thoroughly after handling.

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep in fireproof place. Keep/Store away from combustible materials, direct sunlight, extremely high or low temperatures, sources of ignition.

Incompatible Materials: Strong acids, strong bases, strong oxidizers, chlorine, halogenated compounds.

Specific End Use(s): Industrial use.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH	OSHA	NIOSH
n-Heptane (42-82-51)	TWA: 400 ppm STEL: 500 ppm	PEL (TWA): 500 ppm PEL (TWA):2000 mg/m ³	REL (TWA): 350 mg/m ³ REL (TWA): 85 ppm REL (Ceiling): 1800 mg/m ³ REL (Ceiling): 440 ppm IDLH: 750 ppm
Hexane (110-54-3)	TWA: 50 ppm Skin - potential significant contribution to overall exposure by the cutaneous route	PEL (TWA): 500 ppm PEL (TWA): 1800 mg/m ³	REL (TWA): 50 ppm REL (TWA): 180 mg/m ³ IDLH: 1500 ppm (10% LEL)
Pentane (109-66-0)	TWA: 1000 ppm	PEL (TWA): 1000 ppm PEL (TWA): 2950 mg/m ³	REL (TWA): 120 ppm REL (TWA):350 mg/m ³ REL (Ceiling): 120 ppm REL (Ceiling):350 mg/m ³ IDLH: 1500 ppm (10% LEL)
Isopentane (78-78-4)	TWA: 1000 ppm	--	--
Butane (106-97-8)	STEL: 1000 ppm	--	REL (TWA): 800 ppm REL (TWA):1900 mg/m ³
Isobutane (75-28-5)	STEL: 1000 ppm	--	REL (TWA): 800 ppm REL (TWA):1900 mg/m ³
Xylenes (o-, m-, p-isomers) (1330-20-7)	TWA: 100 ppm STEL: 150 ppm	PEL (TWA): 100 ppm PEL (TWA): 435 mg/m ³	--
Toluene (108-88-3)	TWA: 20 ppm	PEL (TWA): 200 ppm PEL (Ceiling): 300 ppm	REL (TWA): 375 mg/m ³ REL (TWA): 100 ppm REL (STEL): 560 mg/m ³ REL (STEL): 150 ppm IDLH: 500 ppm

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Benzene (71-43-2)	TWA: 0.5 ppm STEL: 2.5 ppm	PEL (TWA): 1 ppm PEL (STEL): 5 ppm PEL (Ceiling): 25 ppm	REL (TWA): 0.1 ppm REL (STEL): 1 ppm IDLH: 500 ppm
Hydrogen Sulfide	STEL: 5 ppm TWA: 1 ppm	1910.1000 - Ceiling: 20 ppm 1926.55 - TWA: 15 mg/m ³ 1926.55 - TWA: 10 ppm	REL (Ceiling): 10 ppm REL (Ceiling): 15 mg/m ³ IDLH: 100 ppm

Note: State province, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Exposure Controls

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

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



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

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use NIOSH-approved full facepiece negative pressure respirators equipped with approved cartridges or canisters within the use limitations of these devices. (Present restrictions on cartridges and canisters do not permit them to be used for a full workshift.) In all other situations, use positive pressure respirators such as the positive-pressure air purifying respirator or the self-contained breathing apparatus (SCBA). If you use a negative pressure respirator, your employer must provide you with fit testing of the respirator at least once a year.

Thermal Hazard Protection: Wear suitable protective clothing.

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

Physical State : Liquid

Appearance : Colorless to brownish-black

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Odor	: Petroleum
pH	: Not applicable
Relative Evaporation Rate (Air=1)	: >100
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point (test method ASTM D86)	: -20 to 800 °F / -29 to 427 °C
Flash Point (test method ASTM D56)	: < 10 °C (<50 °F)
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: 1%
Upper Flammable Limit	: 10%
Vapor Pressure	: 51 - 857 mm Hg @37.8°C (100°F)
Relative Vapor Density at 20 °C	: > 1 (air = 1)
Relative Density	: 0.766-0.87
Specific Gravity (water=1)	: Approx. 0.62 - 0.76
Solubility in Water	: Negligible
Explosion Data – Sensitivity to Mechanical Impact	: Not available
Explosion Data – Sensitivity to Static Discharge	: Static Discharge could act as an ignition source

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur under normal conditions.

Chemical Stability: Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Open flame. Ignition sources. Incompatible materials.

Incompatible Materials: Strong acids, Strong bases, Strong oxidizers

Hazardous Decomposition Products: Carbon oxides (CO, CO₂). Hydrocarbons. Sulfur dioxide and hydrogen sulfide are fatal and irritating gases.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: May cause genetic defects.

Teratogenicity: Not available

Carcinogenicity: May cause cancer.

Specific Target Organ Toxicity (Repeated Exposure): Causes damage to organs through prolonged or repeated exposure.

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: May be fatal if swallowed and enters airways.

Symptoms/Injuries After Inhalation: May cause respiratory irritation. May cause drowsiness or dizziness.

Symptoms/Injuries After Skin Contact: May cause moderate irritation.

Symptoms/Injuries After Eye Contact: May cause slight irritation.

Symptoms/Injuries After Ingestion: May be fatal if swallowed and enters airways. Aspiration of this material may cause chemical pneumonia. Ingestion is likely to be harmful or have adverse effects.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data

Pentane (109-66-0)	
LD50 Dermal Rabbit	3000 mg/kg
LC50 Inhalation Rat	364 g/m ³ (Exposure time: 4 h)

Butane (106-97-8)	
LC50 Inhalation Rat	30957 mg/m ³ (Exposure time: 4 h)

Hexane (110-54-3)	
LD50 Dermal Rabbit	3000 mg/kg
LC50 Inhalation Rat	48000 ppm/4h

Xylenes (o-, m-, p- isomers) (1330-20-7)	
LD50 Oral Rat	> 5000 mg/kg
LC50 Inhalation Rat	6247 ppm/4h (species: Sprague-Dawley)
IARC Group	3

Toluene (108-88-3)	
LD50 Oral Rat	5580 mg/kg
LD50 Dermal Rabbit	12000 mg/kg
IARC Group	3

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Benzene (71-43-2)	
LD50 Oral Rat	3306 mg/kg
LD50 Dermal Rabbit	> 8200 mg/kg
LC50 Inhalation Rat	44.66 mg/l/4h
IARC Group	1
National Toxicity Program (NTP) Status	1, 2

Isobutane (75-28-5)	
LC50 Inhalation Rat	658 mg/l/4h

n-Heptane (142-82-5)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	3000 mg/kg
LC50 Inhalation Rat	103 g/m ³ (Exposure time: 4 h)

Natural gas condensates (68919-39-1)	
LD50 Oral Rat	14000 mg/kg
LD50 Dermal Rabbit	> 2000 mg/kg
LC50 Inhalation Rat (mg/l)	> 5.2 mg/l/4h

Hydrogen sulfide (7783-06-4)	
LC50 Inhalation Rat (mg/l)	0.99 mg/l (Exposure time: 1 h)
ATE (gases)	100.000 ppmV/4h

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecology - General: Very toxic to aquatic life with long lasting effects.

Natural gas condensates (68919-39-1)	
LC50 Fish 1	119 mg/l (Exposure time: 96 h - Species: Alburnus alburnus [static])
EC50 Daphnia 1	170 mg/l (Exposure time: 24 h - Species: Daphnia magna)
EC50 Other Aquatic Organisms 1	56 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)
LC 50 Fish 2	82 mg/l (Exposure time: 96 h - Species: Cyprinodon variegatus [static])

Pentane (109-66-0)	
LC50 Fish 1	9.87 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	9.74 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	11.59 mg/l (Exposure time: 96 h - Species: Pimephales promelas)

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Isopentane (78-78-4)	
EC50 Daphnia 1	2.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)
Hexane (110-54-3)	
LC50 Fish 1	2.1 - 2.98 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
Xylenes (o-, m-, p- isomers) (1330-20-7)	
LC50 Fish 1	3.3 mg/l
EC50 Daphnia 1	3.82 mg/l (Exposure time: 48 h - Species: water flea)
LC 50 Fish 2	2.661 (2.661 - 4.093) mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
Toluene (108-88-3)	
LC50 Fish 1	15.22 - 19.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	5.46 - 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
NOEC chronic crustacea	0.74 mg/l (Ceriodaphnia dubia)
Benzene (71-43-2)	
LC50 Fish 1	10.7 - 14.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	8.76 - 15.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 1	29 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)
LC 50 Fish 2	5.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 2	10 mg/l (Exposure time: 48 h - Species: Daphnia magna)
n-Heptane (142-82-5)	
LC50 Fish 1	375.0 mg/l (Exposure time: 96 h - Species: Cichlid fish)
Hydrogen sulfide (7783-06-4)	
LC50 Fish 1	0.0448 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])
EC50 Daphnia 1	0.022 mg/l (Exposure time: 96 h - Species: Gammarus pseudolimnaeus)
LC 50 Fish 2	0.016 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
Persistence and Degradability	
Natural Gas Condensate	
Persistence and Degradability	Not established.
Bioaccumulative Potential	
Natural Gas Condensate	
Bioaccumulative Potential	Not established.
Pentane (109-66-0)	
Log Pow	3.39
Isopentane (78-78-4)	
Log Pow	3.2 - 3.3
Butane (106-97-8)	
Log Pow	2.89

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Xylenes (o-, m-, p- isomers) (1330-20-7)	
BCF Fish 1	0.6 (0.6 - 15)
Log Pow	2.77 - 3.15
Toluene (108-88-3)	
Log Pow	2.65
Benzene (71-43-2)	
BCF Fish 1	3.5 - 4.4
Log Pow	1.83
Isobutane (75-28-5)	
BCF Fish 1	1.57 - 1.97
Log Pow	2.88 (at 20 °C)
n-Heptane (142-82-5)	
Log Pow	4.66
Hydrogen sulfide (7783-06-4)	
BCF fish 1	(no bioaccumulation)
Log Pow	0.45 (at 25 °C)

Mobility in Soil

Natural Gas Condensate	
Ecology - Soil	Hydrocarbon film may develop and spread on the surface of water. Some low weight components will become volatile, while others will adsorb to sediment particles. Both of these scenarios represent hazards to the aquatic ecosystem.

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

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

Additional Information: Handle empty containers with care because residual vapors are flammable.

EPA Waste Number(s)

- D001 - Ignitability characteristic
- D018 - Toxicity characteristic (Benzene)

SECTION 14: TRANSPORT INFORMATION

UN Number

UN-No.(DOT): 3295 or 1268

DOT NA no.: UN3295 or UN1268

UN Proper Shipping Name

DOT Proper Shipping Name : UN3295, **Hydrocarbons, liquids, n.o.s, 3**
or
UN1268, **Petroleum distillates, n.o.s. or Petroleum products, n.o.s., 3**

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Department of Transportation (DOT) Hazard Classes

Hazard Labels (DOT) : 3 - Flammable liquids



DOT Symbols

: None

Packing Group (DOT)

: I or II [I if BP < 35° C (95° F); II if BP > 35° C]

DOT Special Provisions (49 CFR 172.102)

: **144** – If transported as a residue in an underground storage tank (UST), as defined in 40 CFR 280.12, that has been cleaned and purged or rendered inert according to the American Petroleum Institute (API) Standard 1604 (IBR, see 171.7 of this subchapter), then the tank and this material are not subject to any other requirements of this subchapter. However, sediments remaining in the tank that meet the definition for a hazardous material are subject to the applicable regulations of this subchapter.

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F).

TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 150

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 242

Additional Information

Marine Pollutant : Marine pollutant (n-heptane)

Emergency Response Guide (ERG) Number : 128

Transport by sea

DOT Vessel Stowage Location : B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Air transport

DOT Quantity Limitations Passenger Aircraft/Rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo Aircraft Only (49 CFR 175.75) : 60 L

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Natural Gas Condensate	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

Benzene (71-43-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 313 (Specific toxic chemical listings)	
RQ (Reportable Quantity, Section 304 of EPA's List of Lists):	10 lb
SARA Section 313 - Emission Reporting	0.1 %

Natural gas condensates (68919-39-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Toluene (108-88-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
RQ (Reportable Quantity, Section 304 of EPA's List of Lists):	1000 lb
SARA Section 313 - Emission Reporting	1.0 %

Isobutane (75-28-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

n-Heptane (142-82-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

Hydrogen sulfide (7783-06-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 302 (Specific toxic chemical listings) Listed on SARA Section 313 (Specific toxic chemical listings)	
SARA Section 302 Threshold Planning Quantity (TPQ)	500
SARA Section 313 - Emission Reporting	1.0 %



Canadian Regulations

Natural Gas Condensate

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
 	

Natural gas condensates (68919-39-1)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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Pentane (109-66-0)

Listed on the Canadian DSL (Domestic Substances List)

Listed on the Canadian IDL (Ingredient Disclosure List)

IDL Concentration 1 %

WHMIS Classification	Class B Division 2 - Flammable Liquid
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Isopentane (78-78-4)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class B Division 2 - Flammable Liquid
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Butane (106-97-8)

Listed on the Canadian DSL (Domestic Substances List)

Listed on the Canadian IDL (Ingredient Disclosure List)

IDL Concentration 1 %

WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas
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Hexane (110-54-3)

Listed on the Canadian DSL (Domestic Substances List)

Listed on the Canadian IDL (Ingredient Disclosure List)

IDL Concentration 1 %

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Xylenes (o-, m-, p- isomers) (1330-20-7)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Toluene (108-88-3)

Listed on the Canadian DSL (Domestic Substances List)

Listed on the Canadian IDL (Ingredient Disclosure List)

IDL Concentration 1 %

WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Benzene (71-43-2)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 0.1 %	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Isobutane (75-28-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas
n-Heptane (142-82-5)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION

Revision date : 05/20/2016

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Acute Tox. 4 (Inhalation: vapor)	Acute toxicity (inhalation: vapor) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Carc. 1A	Carcinogenicity Category 1A
Carc. 1B	Carcinogenicity Category 1B
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Gas 1	Flammable gases Category 1
Flam. Liq. 1	Flammable liquids Category 1
Flam. Liq. 2	Flammable liquids Category 2
Flam. Liq. 3	Flammable liquids Category 3
Muta. 1B	Germ cell mutagenicity Category 1B
Repr. 2	Reproductive toxicity Category 2
Simple Asphy	Simple Asphyxiant

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H220	Extremely flammable gas
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H226	Flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H330	Fatal if inhaled
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H340	May cause genetic defects
H350	May cause cancer
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Guide to Abbreviations:

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer of Expressed and implied Warranties:

The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared.

NATURAL GAS CONDENSATE SOUR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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