MATERIAL SAFETY DATA SHEET

Natural Gas Condensate, Petroleum (Sour)

MSDS Number: OKE009
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CHEMICAL PRODUCT AND COMPANY IDENTIFICATION - SECTION 1

Company Identification: ONEOK, Inc.
100 West Fifth Street
Tulsa, OK 74103

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT:
Call Chemtrec: (800) 424-9300
For additional non-emergency information, call: (888) 417-6275

Product Name: Natural Gas Condensate, Petroleum (Sour)
Synonym(s): Gas drip (Sour), field liquids (Sour), field condensate (Sour)
CAS Number: 64741-47-5
Chemical Formula: Mixture

HAZARDS IDENTIFICATION - SECTION 2

Clear colorless liquid, with an odor similar to gasoline and rotten egg.

Extremely flammable, can be ignited by heat, spark or flame. May release explosive vapors that can travel, be ignited at remote locations and flash back.

This material is classified as hazardous under OSHA regulations.

The following information summarizes human experience and results of scientific investigations reviewed by health professionals for hazard evaluation of and development of Precautionary Measures and Occupational Control Procedures recommended in this document.

Primary Route of Entry: Dermal contact and inhalation.
Medical Conditions Which Might be Aggravated: Skin, eye and respiratory disorders.
Acute Exposure Effects:

1. **Skin:** Repeated or prolonged exposure may cause irritation and/or defat skin.
2. **Eyes:** Contact may cause mild to moderate irritation.
3. **Inhalation:** Excessive exposure may cause central nervous system effects, dizziness, loss of balance/coordination, unconsciousness, coma, respiratory failure and death. Benzene can cause blood and bone marrow disorders such as cancer and leukemia. Hydrogen sulfide is toxic by inhalation.
   At up to 100 ppm, effects will be rotten-egg smell, burning eyes and respiratory tract irritation.

HAZARDS IDENTIFICATION - SECTION 2 continued

If prolonged exposure up to 100 ppm, effects will be loss of smell, headache, dizziness and coughing.
Exposure from 100 to 300 ppm, in addition to above will be drowsiness, severe eye and throat irritation and possible pulmonary edema.
Exposures up to 600 ppm will cause loss of reasoning/balance and eventual unconsciousness.
4. Ingestion: Harmful or fatal if swallowed. Pulmonary aspiration hazard if swallowed and vomiting occurs.

COMPOSITION/INFORMATION ON INGREDIENTS - SECTION 3

Chemical Name	CAS Number	% By Weight
Hydrocarbons	64741-47-5	70-99
n-Hexane	110-54-3	5-25
Toluene	108-88-3	1-15
Xylene	1330-20-7	1-12
Benzene	71-43-2	1-2
Hydrogen Sulfide	7783-06-4	1

Note: *These analytical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.*

FIRST AID MEASURES - SECTION 4

Skin: Wash skin with plenty of soap and water until no odor remains. If redness or swelling develops, obtain medical attention. Immediately remove soaked clothing. Wash clothing before reuse.
Eyes: Flush eyes with plenty of water for at least 15 minutes. Get medical attention if eye irritation persists.
Inhalation: If irritation, headache, nausea, or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or respiratory irritation persists.
Ingestion: Do not induce vomiting! Do not give liquids! Obtain immediate medical assistance.

FIRE FIGHTING MEASURES - SECTION 5

Flash Point: -40° F (-4.4° C) **Method:** PMCC
Auto ignition Temperature: 500° F (260° C) **Method:** N/A
Combustibility: Not Determined **Method:** Not Determined
Flammable Limits in Air, % by Volume: **LEL:** 0.4% **UEL:** 11%
Extinguishing Media: Use dry chemical, foam or carbon dioxide to extinguish flames.
Special Fire Fighting Procedures: Firefighters should wear proper protective equipment and self-contained breathing apparatus. Products of combustion may contain carbon monoxide, carbon dioxide, or other toxic vapors. Do not enter enclosed area or confined space without proper protective equipment including respiratory protection.
Unusual Fire and Explosive Hazards: Extremely flammable, can be ignited by heat, spark, or flame. Do not expose to heat, sparks, flame, static, or other sources of ignition. When handling, use non-sparking tools, ground and bond all containers. Readily forms explosive air-vapor mixtures. May release explosive vapors that can travel, be ignited at remote locations, and flash back. Containers may explode in fire.

ACCIDENTAL RELEASE MEASURES - SECTION 6

Material is heavier than air and can accumulate in low-lying areas. Eliminate all ignition sources including internal combustion engines and power tools. Ventilate area. Keep people away. Stay upwind and warn of possible downwind explosion hazard. Avoid breathing vapor. Avoid contact with eyes, skin, or clothing. Wear respiratory protection and other personal protective equipment as appropriate for the potential exposure hazards.

HANDLING AND STORAGE - SECTION 7

Use spark-proof tools. Material may be at elevated temperatures and/or pressures. Exercise care when opening bleeders and sampling ports. Eyewash and safety shower should be available nearby when this product is handled or used. Ground and bond shipping container, transfer line, and receiving container. Keep away from heat, sparks, flame, and other sources of ignition. Outside storage is recommended.

EXPOSURE CONTROLS/PERSONAL PROTECTION - SECTION 8

Chemical Name	OSHA PEL (ppm)	ACGIH TLV (ppm)	Other (ppm)
Hydrocarbons	None	None	None
n-Hexane	500	50	1100 IDLH
Toluene	200, Ceiling 300	100, STEL 150	500 IDLH
Xylene	100	100, STEL 150	900 IDLH
Benzene	1, STEL 5	0.1, STEL 1	500 IDLH
Hydrogen Sulfide	Ceiling 20	Ceiling 10	100 IDLH

Eye Protection: Wear chemical type goggles or face shield.
Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Respiratory Protection: Air supplied respirators should always be worn when airborne concentrations of the contaminant are known.
Ventilation: Use explosion-proof equipment to maintain adequate ventilation to meet occupational exposure limits, prevent accumulation of explosive air-gas mixtures, and avoid significant oxygen displacement.

PHYSICAL AND CHEMICAL PROPERTIES - SECTION 9

Appearance: Clear colorless liquid
Odor: Similar to Gasoline with a rotten egg odor
Boiling Point: -20^{o} to 600^{o} F (-29^{o} to 316^{o} C)
Vapor Density: 3.4 (Air = 1)
Viscosity: Not Determined
Specific Gravity: 0.5 to 0.75 (Water = 1)
Flash Point: -40^{o} F (-4.4^{o} C)
Auto ignition Temperature: 500^{o} F (260 ^{o}C)
Flammable Limits in Air, % by Volume: **LEL:** 0.4% **UEL:** 11%
Solubility in Water (wt. %): No
Solubility in Other Solvents: Hydrocarbons

Note: *These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.*

STABILITY AND REACTIVITY - SECTION 10

Stability: Stable under normal conditions.
Incompatibility: May react with oxidizers.
Hazardous Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide and water vapor.
Hazardous Polymerization: Polymerization will not occur.

TOXICOLOGICAL INFORMATION - SECTION 11

Toxicity: skin-rat; LD_{50}: 4500 mg/kg (Slightly toxic)
Inhalation–rat; LC_{50}: 6,700 ppm (Very low toxicity)
Eye – rabbit; ALD: 4,320 mg/kg (Moderately toxic)
Teratogenicity: Not established
Reproductive Toxicity: Not established
Mutagenicity: Not established
Synergistic Products: Not established
Sensitization to Product: Not established
Carcinogenicity: Contains more than 0.1% by weight of a material listed as a potential carcinogen:

NTP	IARC	OSHA
No	Yes	No

Signs and Symptoms of Overexposure: Pain, tears, swelling, redness and blurred vision in the eyes, dizziness, headache, loss of appetite, weakness and loss of coordination.

ECOLOGICAL INFORMATION - SECTION 12

No data is available on the adverse effects of this material on the environment. Neither COD nor BOD data are available.

DISPOSAL CONSIDERATIONS - SECTION 13

Dispose of container and unused contents in accordance with federal, state and local requirements.

TRANSPORT INFORMATION - SECTION 14

DOT
Proper Shipping Name: Hydrocarbons, liquid, n.o.s.
Hazard Class/I.D. No./Packing Group: 3/UN 3295/I or II
Label: Flammable liquid, Poison

I.M.O.
Proper Shipping Name: Hydrocarbons, liquid, n.o.s.
Hazard Class/I.D. No./Packing Group: 3/UN 3295/I or II
Label: Flammable liquid, Poison

I.C.A.O./I.A.T.A.
Proper Shipping Name: Hydrocarbons, liquid, n.o.s.
Hazard Class/I.D. No./Packing Group: 3/UN 3295/I or II
Label: Flammable liquid, Poison

REGULATORY INFORMATION - SECTION 15

TSCA Inventory: Yes
Reportable Quantity (RQ) Under US EPA CERCLA Regulations: Film or sheen upon or discoloration of any water surface.
SARA Hazard Notification Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370): No
Section 313 Toxic Chemical(s): Not listed
Hazardous Chemical(s) Under OSHA Hazard Communication Standard: Yes

OTHER INFORMATION - SECTION 16

Hazard Ratings:

NFPA
Health -- 2
Fire -- 3
Reactivity -- 0
Specific Hazard -- N/A

HMIS
Health – 2 (Chronic)
Flammability -- 3
Reactivity -- 0
PPE – Depends on conditions

H_2S TOXICITY CHART

CONCENTRATION			PHYSICAL EFFECTS
Percent	Parts per Million	Grains per 100 scf	
0.001	10	0.63	Possible eye irritation
0.002	20	1.26	OSHA Ceiling level; safe for 8 hour exposure
0.005	50	3.14	OSHA Peak level; exposure to concentrations between Ceiling and Peak level acceptable only for a 10 minute period per 8-hours
0.01	100	6.29	NIOSH's IDLH level (Immediately Dangerous to Life or Health); coughing, eye irritation, loss of sense of smell in 3-15 minutes
0.02	200	12.58	Significant eye & respiratory irritation
0.05	500	31.45	Dizziness; breathing ceases within a few minutes
0.07	700	44.02	Breathing ceases; death will result if not rescued quickly
0.10	1,000	62.89	Death
1	10,000	628.93	