Safety Data Sheet

Material Name: Bakken Crude Oil
Product Synonym(s): Crude Petroleum, Hydrocarbons of Petroleum

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Statoil
6300 Bridge Point Parkway
Building 2, Suite 500
Austin, TX 78730

Phone: 512-427-3300

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquids - Category 2
Carcinogenicity - Category 1B
Specific Target Organ Toxicity Repeat Exposure - Category 2

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor.
May cause cancer.
May cause damage to organs (liver, kidneys, blood, nervous system, and skin) through prolonged or repeated exposure.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF exposed or concerned: Get medical advice/attention.
In case of fire: Use water spray, fog or fire fighting foam.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
Not Available	C10 to C49+ isoparaffins	32.5
Not Available	C10 to C49+ cyclic paraffins	19.8
Not Available	C12+ mono-aromatics	8.5
Not Available	Poly aromatic hydrocarbons	4.9
Not Available	C10 to C49+ n paraffins	3.7
Not Available	C16+ di-aromatics	2.8
Not Available	C7 cyclic paraffins	2.6
Not Available	C8 cyclic paraffins	2.3
Not Available	Trimethyl benzenes	2.3
Not Available	Dimethyl naphthalene	1.5
142-82-5	n-Heptane	1
96-37-7	Methylcyclopentane	0.9
111-84-2	Nonane	0.9
Not Available	Dimethyl benzenes	0.9
75-28-5	Isobutane	0.9
111-65-9	Octane	0.9
Not Available	Trimethyl naphthalene	0.9
110-54-3	Hexane	0.9
96-14-0	3-Methylpentane	0.8
592-27-8	2-Methylheptane	0.8
591-76-4	2-Methylhexane	0.8
109-66-0	Pentane	0.8
108-88-3	Toluene	0.8
124-18-5	Decane	0.7
Not Available	Tetramethyl benzenes	0.7
Not Available	Pentamethyl benzenes	0.6
78-78-4	Isopentane	0.6
Not Available	Low level and unidentified hydrocarbons	0.5
107-83-5	2-Methylpentane	0.5

589-34-4	3-Methylhexane	0.5
Not Available	C10 cyclic paraffins	0.5
106-42-3	p-Xylene	0.4
108-38-3	m-Xylene	0.4
589-81-1	Heptane, 3-methyl-	0.4
Not Available	C9 cyclic paraffins	0.4
90-12-0	1-Methylnaphthalene	0.3
Not Available	Decane isomers	0.3
589-53-7	4-Methylheptane	0.2
91-57-6	2-Methylnaphthalene	0.2
74-98-6	Propane	0.2
95-47-6	o-Xylene	0.1
91-20-3	Naphthalene	0.1
100-41-4	Ethylbenzene	0.1
79-29-8	2,3-Dimethylbutane	0.1
71-43-2	Benzene	0.1
584-94-1	2,3-Dimethylhexane	0.1
583-48-2	Hexane, 3,4-dimethyl-	0.1
Not Available	Nonane isomers	0.1

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Firefighters should wear full protective gear.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Product may release substantial amounts of flammable vapors and gases (e.g., methane, ethane, and propane), at or below ambient temperature depending on source and process conditions and pressure.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection - do not discharge solid water stream patterns into the liquid resulting in splashing.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Incompatibilities

Keep away from strong oxidizers.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

n-Heptane (142-82-5)

ACGIH: 400 ppm TWA (listed under Heptane, all isomers)
500 ppm STEL (listed under Heptane, all isomers)
OSHA: 500 ppm TWA; 2000 mg/m3 TWA
NIOSH: 85 ppm TWA; 350 mg/m3 TWA
440 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min)

Octane (111-65-9)

ACGIH: 300 ppm TWA
OSHA: 500 ppm TWA; 2350 mg/m3 TWA
NIOSH: 75 ppm TWA; 350 mg/m3 TWA
385 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min)

Nonane (111-84-2)

ACGIH: 200 ppm TWA
NIOSH: 200 ppm TWA; 1050 mg/m3 TWA

Hexane (110-54-3)

ACGIH: 50 ppm TWA
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 500 ppm TWA; 1800 mg/m3 TWA
NIOSH: 50 ppm TWA; 180 mg/m3 TWA

Isobutane (75-28-5)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)
NIOSH: 800 ppm TWA; 1900 mg/m3 TWA

Toluene (108-88-3)

ACGIH: 20 ppm TWA
OSHA: 200 ppm TWA
300 ppm Ceiling
NIOSH: 100 ppm TWA; 375 mg/m3 TWA
150 ppm STEL; 560 mg/m3 STEL

Pentane (109-66-0)

ACGIH: 600 ppm TWA (listed under Pentane, all isomers)
OSHA: 1000 ppm TWA; 2950 mg/m3 TWA
NIOSH: 120 ppm TWA; 350 mg/m3 TWA
610 ppm Ceiling (15 min); 1800 mg/m3 Ceiling (15 min)

2-Methylhexane (591-76-4)

ACGIH: 400 ppm TWA (listed under Heptane, all isomers)
500 ppm STEL (listed under Heptane, all isomers)

Isopentane (78-78-4)

ACGIH: 600 ppm TWA (listed under Pentane, all isomers)

3-Methylhexane (589-34-4)

ACGIH: 400 ppm TWA (listed under Heptane, all isomers)
500 ppm STEL (listed under Heptane, all isomers)

p-Xylene (106-42-3)

ACGIH: 100 ppm TWA
150 ppm STEL
NIOSH: 100 ppm TWA; 435 mg/m3 TWA
150 ppm STEL; 655 mg/m3 STEL

m-Xylene (108-38-3)

ACGIH: 100 ppm TWA
150 ppm STEL
NIOSH: 100 ppm TWA; 435 mg/m3 TWA
150 ppm STEL; 655 mg/m3 STEL

1-Methylnaphthalene (90-12-0)

ACGIH: 0.5 ppm TWA
Skin - potential significant contribution to overall exposure by the cutaneous route

2-Methylnaphthalene (91-57-6)

ACGIH: 0.5 ppm TWA
Skin - potential significant contribution to overall exposure by the cutaneous route

Propane (74-98-6)

ACGIH: 1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)
OSHA: 1000 ppm TWA; 1800 mg/m3 TWA
NIOSH: 1000 ppm TWA; 1800 mg/m3 TWA

o-Xylene (95-47-6)

ACGIH: 100 ppm TWA
150 ppm STEL
NIOSH: 100 ppm TWA; 435 mg/m3 TWA
150 ppm STEL; 655 mg/m3 STEL

Ethylbenzene (100-41-4)

ACGIH: 20 ppm TWA
OSHA: 100 ppm TWA; 435 mg/m3 TWA
NIOSH: 100 ppm TWA; 435 mg/m3 TWA
125 ppm STEL; 545 mg/m3 STEL

Benzene (71-43-2)

ACGIH: 0.5 ppm TWA
2.5 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
10 ppm TWA (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028); 1 ppm TWA
5 ppm STEL (see 29 CFR 1910.1028)
25 ppm Ceiling
NIOSH: 0.1 ppm TWA
1 ppm STEL

Naphthalene (91-20-3)

ACGIH: 10 ppm TWA
15 ppm STEL
Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA: 10 ppm TWA; 50 mg/m3 TWA
NIOSH: 10 ppm TWA; 50 mg/m3 TWA
15 ppm STEL; 75 mg/m3 STEL

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile or neoprene are recommended.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Thick, dark yellow to brown or greenish black	**Odor:**	Moderate, Characteristic
Physical State:	Liquid	**pH:**	Not Determined
Vapor Pressure:	Not Determined	**Vapor Density:**	Not Determined
Boiling Point:	130°F	**Melting Point:**	Not Determined
Solubility (H2O):	Insoluble to slightly soluble	**Specific Gravity:**	0.7601
Evaporation Rate:	Not Determined	**VOC:**	Present per speciated review
Octanol/H2O Coeff.:	Not Determined	**Flash Point:**	<-50°F
Flash Point Method:	Setaflash	**Upper Flammability Limit (UFL):**	Not Determined
Lower Flammability Limit (LFL):	Not Determined	**Burning Rate:**	Not Determined
Auto Ignition:	Not Determined		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

n-Heptane (142-82-5)

Inhalation LC50 Rat 103 g/m3 4 h; Oral LD50 Mouse 5000 mg/kg; Dermal LD50 Rabbit 3000 mg/kg

Octane (111-65-9)

Inhalation LC50 Rat 118 g/m3 4 h; Inhalation LC50 Rat 25260 ppm 4 h

Nonane (111-84-2)

Inhalation LC50 Rat 3200 ppm 4 h

Hexane (110-54-3)

Inhalation LC50 Rat 48000 ppm 4 h; Oral LD50 Rat 25 g/kg; Dermal LD50 Rabbit 3000 mg/kg

Isobutane (75-28-5)

Inhalation LC50 Rat 658 mg/L 4 h

Toluene (108-88-3)
Inhalation LC50 Rat 12.5 mg/L 4 h; Inhalation LC50 Rat >26700 ppm 1 h; Oral LD50 Rat 636 mg/kg; Dermal LD50 Rabbit 8390 mg/kg; Dermal LD50 Rat 12124 mg/kg

Pentane (109-66-0)
Inhalation LC50 Rat 364 g/m3 4 h; Dermal LD50 Rabbit 3000 mg/kg; Oral LD50 Rat >2000 mg/kg

Decane (124-18-5)
Inhalation LC50 Mouse 72300 mg/m3 2 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rat >2000 mg/kg

Isopentane (78-78-4)
Inhalation LC50 Rat 280000 mg/m3 4 h

p-Xylene (106-42-3)
Inhalation LC50 Rat 4550 ppm 4 h; Oral LD50 Rat >3392 mg/kg

m-Xylene (108-38-3)
Oral LD50 Rat 5000 mg/kg; Dermal LD50 Rabbit 14100 µL/kg

1-Methylnaphthalene (90-12-0)
Oral LD50 Rat 1840 mg/kg

2-Methylnaphthalene (91-57-6)
Oral LD50 Rat 1630 mg/kg

Propane (74-98-6)
Inhalation LC50 Rat 658 mg/L 4 h

o-Xylene (95-47-6)
Inhalation LC50 Rat 2180 ppm 4 h; Oral LD50 Rat 3609 mg/kg

Ethylbenzene (100-41-4)
Inhalation LC50 Rat 17.2 mg/L 4 h; Oral LD50 Rat 3500 mg/kg; Dermal LD50 Rabbit 15354 mg/kg

Benzene (71-43-2)
Inhalation LC50 Rat 13050-14380 ppm 4 h; Oral LD50 Rat 1800 mg/kg

Naphthalene (91-20-3)
Inhalation LC50 Rat >340 mg/m3 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Contact with eyes may cause moderate to severe irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

Some crude oils and crude oil fractions have been positive in mutagenicity studies.

Carcinogenicity

A: General Product Information

May cause cancer.

B: Component Carcinogenicity

Toluene (108-88-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

p-Xylene (106-42-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999] (listed under Xylenes) (Group 3 (not classifiable))

m-Xylene (108-38-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999] (listed under Xylenes) (Group 3 (not classifiable))

1-Methylnaphthalene (90-12-0)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

2-Methylnaphthalene (91-57-6)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

o-Xylene (95-47-6)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Monograph 71 [1999] (listed under Xylenes) (Group 3 (not classifiable))

Ethylbenzene (100-41-4)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC: Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))

Benzene (71-43-2)

ACGIH: A1 - Confirmed Human Carcinogen
OSHA: 5 ppm STEL (Cancer hazard, Flammable, See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
NIOSH: potential occupational carcinogen
NTP: Known Human Carcinogen (Select Carcinogen)
IARC: Monograph 100F [2012]; Supplement 7 [1987]; Monograph 29 [1982] (Group 1 (carcinogenic to humans))

Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)
IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

May cause damage to organs (liver, kidneys, blood, nervous system and skin) through prolonged or repeated exposure.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

n-Heptane (142-82-5)

Test & Species		Conditions
96 Hr LC50 Cichlid fish	375.0 mg/L	
24 Hr EC50 Daphnia magna	>10 mg/L	

Octane (111-65-9)

Test & Species		Conditions
48 Hr EC50 water flea	0.38 mg/L	

Hexane (110-54-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	2.1-2.98 mg/L [flow-through]	
24 Hr EC50 Daphnia magna	>1000 mg/L	

Toluene (108-88-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	15.22-19.05 mg/L [flow-through]	1 day old
96 Hr LC50 Pimephales promelas	12.6 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.89-7.81 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	14.1-17.16 mg/L [static]	
96 Hr LC50 Oncorhynchus mykiss	5.8 mg/L [semi-static]	
96 Hr LC50 Lepomis macrochirus	11.0-15.0 mg/L [static]	
96 Hr LC50 Oryzias latipes	54 mg/L [static]	
96 Hr LC50 Poecilia reticulata	28.2 mg/L [semi-static]	
96 Hr LC50 Poecilia reticulata	50.87-70.34 mg/L [static]	
96 Hr EC50 Pseudokirchneriella subcapitata	>433 mg/L	
72 Hr EC50 Pseudokirchneriella subcapitata	12.5 mg/L [static]	
48 Hr EC50 Daphnia magna	5.46 - 9.83 mg/L [Static]	
48 Hr EC50 Daphnia magna	11.5 mg/L	

Pentane (109-66-0)

Test & Species		Conditions
96 Hr LC50 Oncorhynchus mykiss	9.87 mg/L	
96 Hr LC50 Pimephales promelas	11.59 mg/L	

96 Hr LC50 Lepomis macrochirus	9.99 mg/L
48 Hr EC50 Daphnia magna	9.74 mg/L

Decane (124-18-5)

Test & Species	Conditions
24 Hr EC50 Chlorella vulgaris	0.043 mg/L
48 Hr EC50 Daphnia magna	0.029 mg/L

Isopentane (78-78-4)

Test & Species	Conditions
48 Hr EC50 Daphnia magna	2.3 mg/L

p-Xylene (106-42-3)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	7.2-9.9 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	2.6 mg/L
96 Hr LC50 Oncorhynchus mykiss	2.6 mg/L [static]
96 Hr LC50 Poecilia reticulata	8.8 mg/L [semi-static]
3 Hr EC50 Chlorella vulgaris	105.1 mg/L
72 Hr EC50 Pseudokirchneriella subcapitata	3.2 mg/L [static]
48 Hr EC50 Daphnia magna	3.55 - 6.31 mg/L [Static]

m-Xylene (108-38-3)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	14.3-18 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	8.4 mg/L [semi-static]
96 Hr LC50 Poecilia reticulata	12.9 mg/L [semi-static]
72 Hr EC50 Pseudokirchneriella subcapitata	4.9 mg/L [static]
48 Hr EC50 Daphnia magna	2.81 - 5.0 mg/L [Static]

o-Xylene (95-47-6)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	11.6-22.4 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	11.6-22.4 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	5.59-11.6 mg/L [flow-through]

96 Hr LC50 Poecilia reticulata	12 mg/L
192 Hr EC50 Pseudokirchneriella subcapitata	4.2 mg/L
72 Hr EC50 Pseudokirchneriella subcapitata	4.7 mg/L [static]
48 Hr EC50 Daphnia magna	3.2 mg/L
48 Hr EC50 Daphnia magna	2.61 - 5.59 mg/L [Flow through]
48 Hr EC50 Daphnia magna	0.78 - 2.51 mg/L [Static]

Ethylbenzene (100-41-4)

Test & Species	Conditions
96 Hr LC50 Oncorhynchus mykiss	11.0-18.0 mg/L [static]
96 Hr LC50 Oncorhynchus mykiss	4.2 mg/L [semi-static]
96 Hr LC50 Pimephales promelas	7.55-11 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	32 mg/L [static]
96 Hr LC50 Pimephales promelas	9.1-15.6 mg/L [static]
96 Hr LC50 Poecilia reticulata	9.6 mg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	4.6 mg/L
96 Hr EC50 Pseudokirchneriella subcapitata	>438 mg/L
72 Hr EC50 Pseudokirchneriella subcapitata	2.6 - 11.3 mg/L [static]
96 Hr EC50 Pseudokirchneriella subcapitata	1.7 - 7.6 mg/L [static]
48 Hr EC50 Daphnia magna	1.8 - 2.4 mg/L

Benzene (71-43-2)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	10.7-14.7 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	5.3 mg/L [flow-through]
96 Hr LC50 Lepomis macrochirus	22.49 mg/L [static]
96 Hr LC50 Poecilia reticulata	28.6 mg/L [static]
96 Hr LC50 Pimephales promelas	22330-41160 µg/L [static]
96 Hr LC50 Lepomis macrochirus	70000-142000 µg/L [static]
72 Hr EC50 Pseudokirchneriella subcapitata	29 mg/L
48 Hr EC50 Daphnia magna	8.76 - 15.6 mg/L [Static]

48 Hr EC50 Daphnia magna	10 mg/L

Naphthalene (91-20-3)

Test & Species	Conditions
96 Hr LC50 Pimephales promelas	5.74-6.44 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	1.6 mg/L [flow-through]
96 Hr LC50 Oncorhynchus mykiss	0.91-2.82 mg/L [static]
96 Hr LC50 Pimephales promelas	1.99 mg/L [static]
96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]
72 Hr EC50 Skeletonema costatum	0.4 mg/L
48 Hr LC50 Daphnia magna	2.16 mg/L
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

*** Section 13 - Disposal Considerations ***

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

*** Section 14 - Transportation Information ***

DOT Information

Shipping Name: Petroleum Crude Oil
Hazard Class: 3
UN #: 1267
Packing Group: I

* * * Section 15 - Regulatory Information * * *

Regulatory Information

US Federal Regulations

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Hexane (110-54-3)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

Toluene (108-88-3)

CERCLA: 1000 lb final RQ; 454 kg final RQ

p-Xylene (106-42-3)

CERCLA: 100 lb final RQ; 45.4 kg final RQ

m-Xylene (108-38-3)

CERCLA: 1000 lb final RQ; 454 kg final RQ

o-Xylene (95-47-6)

CERCLA: 1000 lb final RQ; 454 kg final RQ

Ethylbenzene (100-41-4)

SARA 313: 0.1 % de minimis concentration
CERCLA: 1000 lb final RQ; 454 kg final RQ

Benzene (71-43-2)

SARA 313: 0.1 % de minimis concentration
CERCLA: 10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)

Naphthalene (91-20-3)

SARA 313: 0.1 % de minimis concentration
CERCLA: 100 lb final RQ; 45.4 kg final RQ

State Regulations

A: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
n-Heptane	142-82-5	Yes	Yes	Yes	Yes	Yes	No
Methylcyclopentane	96-37-7	No	Yes	No	Yes	Yes	No
Octane	111-65-9	Yes	Yes	Yes	Yes	Yes	No
Nonane	111-84-2	Yes	Yes	Yes	Yes	Yes	No
Hexane	110-54-3	No	Yes	Yes	Yes	Yes	No
Isobutane	75-28-5	No	Yes	No	Yes	Yes	No
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes	No
3-Methylpentane	96-14-0	No	Yes	No	No	Yes	No
Pentane	109-66-0	Yes	Yes	Yes	Yes	Yes	No
2-Methylhexane	591-76-4	No	Yes	No	No	Yes	No
Decane	124-18-5	No	No	No	Yes	Yes	No
Isopentane	78-78-4	No	Yes	No	Yes	Yes	No
3-Methylhexane	589-34-4	No	Yes	No	Yes	Yes	No
2-Methylpentane	107-83-5	No	Yes	Yes	Yes	Yes	No
p-Xylene	106-42-3	Yes	Yes	No	Yes	Yes	No
m-Xylene	108-38-3	Yes	Yes	No	Yes	Yes	No
1-Methylnaphthalene	90-12-0	No	Yes	No	Yes	Yes	No
2-Methylnaphthalene	91-57-6	No	No	No	Yes	No	No
Propane	74-98-6	No	Yes	Yes	Yes	Yes	No
o-Xylene	95-47-6	Yes	Yes	No	Yes	Yes	No
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes	No
2,3-Dimethylbutane	79-29-8	No	Yes	No	Yes	Yes	No
Benzene	71-43-2	Yes	Yes	Yes	Yes	Yes	No
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes	No
2,3-Dimethylhexane	584-94-1	No	Yes	No	No	Yes	No

WARNING! This product contains a chemical known to the state of California to cause cancer.
WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
n-Heptane	142-82-5	1 %
p-Xylene	106-42-3	0.1 %
Ethylbenzene	100-41-4	0.1 %
Benzene	71-43-2	0.1 %

Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
n-Heptane	142-82-5	Yes	DSL	EINECS
Methylcyclopentane	96-37-7	Yes	DSL	EINECS
Octane	111-65-9	Yes	DSL	EINECS
Nonane	111-84-2	Yes	DSL	EINECS
Hexane	110-54-3	Yes	DSL	EINECS
Isobutane	75-28-5	Yes	DSL	EINECS
Toluene	108-88-3	Yes	DSL	EINECS
3-Methylpentane	96-14-0	Yes	DSL	EINECS
Pentane	109-66-0	Yes	DSL	EINECS
2-Methylhexane	591-76-4	Yes	DSL	EINECS
2-Methylheptane	592-27-8	No	No	EINECS
Decane	124-18-5	Yes	DSL	EINECS
Isopentane	78-78-4	Yes	DSL	EINECS
3-Methylhexane	589-34-4	Yes	NDSL	EINECS
2-Methylpentane	107-83-5	Yes	DSL	EINECS
p-Xylene	106-42-3	Yes	DSL	EINECS
m-Xylene	108-38-3	Yes	DSL	EINECS
Heptane, 3-methyl-	589-81-1	Yes	NDSL	EINECS
1-Methylnaphthalene	90-12-0	Yes	DSL	EINECS
2-Methylnaphthalene	91-57-6	Yes	DSL	EINECS
Propane	74-98-6	Yes	DSL	EINECS
4-Methylheptane	589-53-7	No	No	EINECS
o-Xylene	95-47-6	Yes	DSL	EINECS
Ethylbenzene	100-41-4	Yes	DSL	EINECS
Hexane, 3,4-dimethyl-	583-48-2	Yes	NDSL	EINECS
2,3-Dimethylbutane	79-29-8	Yes	DSL	EINECS
Benzene	71-43-2	Yes	DSL	EINECS
Naphthalene	91-20-3	Yes	DSL	EINECS
2,3-Dimethylhexane	584-94-1	No	No	EINECS

* * * Section 16 - Other Information * * *

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

End of Sheet

Safety Data Sheet

1. Identification

Product Name:	Crude Oil (Sweet)
Chemical Family:	Petroleum Hydrocarbon Mixture
Manufacturers Name:	Whiting Oil and Gas Corporation
Address:	1700 Broadway, Suite 2300 Denver, Colorado 80290
Product Use:	Feedstock for petroleum and petrochemical refining.
Phone Number for Information:	(303) 837-1661
Emergency Phone Number:	(800) 424-9300 (Chemtrec)

Crude oil is a complex mixture of paraffinic, cycloparaffinic and aromatic hydrocarbons covering carbon numbers ranging from C1 to over C60. It is amber to black in color. Crude oil contains small amounts of sulfur, nitrogen and oxygen compounds as well as trace amounts of heavy metals.

2. Hazard Identification

Crude oil is extremely flammable and can cause eye, skin, gastrointestinal, and respiratory irritation. Inhalation may cause dizziness, nausea, or headache. More serious health effects can occur if crude oil in inhaled or swallowed.

Crude oil may contain variable amounts of benzene and n-hexane. Long-term exposure to these materials has been shown to lead to systemic toxicity such leukemia and peripheral neurotoxicity.

DANGER!
FLAMMABLE LIQUID

MAY CONTAIN BENZENE WHICH CAN CAUSE CANCER OR BE TOXIC TO BLOOD-FORMING ORGANS. ASPIRATION OF LIQUID INTO THE LUNGS CAN PRODUCE CHEMICAL PNEUMONIA OR EVEN DEATH.

NO SMOKING!
KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. WEAR PROTECTIVE GLOVES, CLOTHING AND EYE WEAR WHEN HANDLING. AVOID RELEASE INTO THE ENVIRONMENT.

Globally Harmonized System (GHS) Information

Physical Hazards Classification
Flammable Liquids, Category 2

Health Hazards Classification
Acute Toxicity (Skin/Dermal), Category 3
Skin Corrosion/irritation, Category 2
Serious eye damage/eye irritation, Category 2a
Carcinogenicity, Category 1B
Specific Target organ toxicity – single exposure, Category 3 (narcotic effects)
Specific Target organ toxicity – repeated exposure, Category 2 (bone marrow, liver, thymus)
Aspiration hazard, Category 1

Environmental Hazards Classification
Acute Toxicity to the aquatic environment, Category 3
Chronic Toxicity to the aquatic environment, Category 3

<table>
<tr><th colspan="2">GHS Label Information</th></tr>
<tr><td colspan="2">Symbols:  </td></tr>
<tr><td colspan="2">Signal Word: Danger</td></tr>
<tr><td>Hazard Statements:</td><td>Precautionary Statements:</td></tr>
<tr><td>Physical Hazards
Flammable liquid and vapor

Health Hazards
May cause cancer
May be fatal if swallowed and enters airways
Causes eye irritation
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure
Causes mild skin irritation

Environmental Hazards
Harmful to aquatic life
Harmful to aquatic life with long lasting effects</td><td>Prevention
Keep away from heat/sparks/open flames/hot surfaces – no smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion proof electrical/ventilation/lighting equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wash hands thoroughly after handling
Do not breathe vapors
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Avoid release to the environment
Response
IF ON SKIN (or hair): Remove all contaminated clothing. Rinse skin with water/shower
In case of fire: use appropriate extinguishing media
If exposed or concerned: Get medical attention or advice
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.</td></tr>
</table>

	If irritation persists get medical advice/attention IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Collect spillage IF SWALLOWED: Immediately call a poison control center or doctor/physician Do not induce vomiting **Storage** Store locked up Store in a well-ventilated place. Keep container tightly closed. **Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations

3. Composition/Information on Ingredients

COMPOSITION	CAS NUMBER	PERCENT
Crude Oil	8002-05-9	100
May Contain Variable Amounts of:		
Natural Gas	8005-14-2	---
Benzene	71-43-2	---
N-Hexane	110-54-3	---

4. First Aid Measures

Eye Contact
Immediately flush eyes while holding eyelids open, with large amounts of clean, low-pressure tepid water for at least 15 minutes. If symptoms, irritation or injury persists, worsen or develop, seek medical attention.

Skin Contact
Remove contaminated clothing/shoes, wipe excess from skin. Immediately flush skin with water for 15 minutes then wash with soap and water. If illness or adverse symptoms develop or irritation persists, seek medial attention. Discard contaminated leather goods.

Inhalation
Remove victim to fresh air and provide oxygen if breathing labored, shallow, or difficult. Rescuer must wear appropriate supplied air respirator to remove worker from contaminated area to fresh air. Give artificial respiration if victim is not breathing. Seek medical attention immediately*.

Ingestion
Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek medical attention.*

Note to Physician
*If more than 2.0 ML per KG has been ingested and emesis has not occurred, vomiting should be induced with supervision. Keep victim's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

Aggravated Medical Conditions
Preexisting eye, skin, and respiratory disorders may be aggravated by exposure to crude oil.

5. Fire-Fighting Measures

Extinguishing Media
For small fires, class B fire extinguishing media can be used. Use water fog, foam, dry chemical or CO_2. Do not use a direct stream of water. Product will float and can be reignited on surface of water.

Special Fire Fighting Procedures and Precautions
Warning: Flammable. Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots) including a positive pressure NIOSH approved self-contained breathing apparatus (SCBA). Cool containers exposed to fire with water.

Unusual Fire Explosion Hazards
Container exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture (bleve). Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Sulfur oxides and hydrogen sulfide, both of which are toxic, may be released upon combustion.

NFPA Ratings
Health – 2
Flammability – 3
Reactivity – 0
Other – 0

Key: Least-0; Slight-1; Moderate-2; High-3; Extreme-4

6. Accidental Release Measures

Keep the public away. Isolate and evacuate the area. Eliminate all ignition sources. Handling equipment must be grounded or bonded to prevent sparking.

***** Large Spills***** Evacuate the hazard area of unprotected personnel. Wear appropriate respirator and protective clothing. Shut off source of leak only if safe to do so. Dike and contain with sand or soil. If vapor cloud forms, water fog may be used to suppress. Contain run-off. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal. Flush area with water to remove trace residue and dispose of flush solutions as above.
***** Small Spills***** Take up with an absorbent material and place in non-leaking containers; seal tightly for proper disposal.

7. Handling and Storage

Comply with all regulatory requirements. Store in suitable tanks or closed, labeled containers in a cool, well-ventilated area.

Keep liquid and vapor away from heat, sparks and flame. Surfaces that are sufficiently hot may even ignite liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors have been dispersed. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers. Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer containers and equipment.

Wash hands with soap and water before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse. Dispose of leather articles including shoes which cannot be decontaminated.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits

COMPONENT	OSHA PEL	ACGIH TLV TWA
Crude Oil	400 ppm ***	Not available
Natural Gas	Not available	Not available
Hexane	500 ppm	500 ppm/STEL 1000 ppm
Benzene	1 ppm**/STEL 5 ppm	0.5 ppm

Notes:
** OSHA's action level is 0.5 ppm (29 CFR 1910.1028)
*** Listed PEL was vacated in 1993

Engineering Controls

Maintain air concentrations below flammable limits and occupational exposure standards for chemical components by using ventilation and other engineering controls.

Personal Protective Equipment

Eye/Face Protection
Use safety glasses, chemical splash goggles and/or a face shield as appropriate to prevent eye contact.

Skin Protection
Wear chemical resistant gloves and other protective clothing, as required, to minimize skin contact. Test data from published literature and/or glove and clothing manufacturers indicate suitable protection is provided by neoprene or nitrile gloves.

Respiratory Protection
Use NIOSH approved respiratory protection as required to prevent overexposure to oil mist and vapor. Do not enter storage compartments unless equipped with a NIOSH approved self-contained breathing apparatus with a full face-piece operated in a positive pressure mode.

Protective Clothing
Wear chemical resistant gloves and other protective clothing, as required, to minimize skin contact. Use safety glasses or chemical splash goggles to prevent eye contact. Test data from published literature and/or glove and clothing manufacturers indicate suitable protection is provided by neoprene or nitrile gloves.

9. Physical and Chemical Properties

Appearance and Odor: Black, dark green or yellow liquid; strong hydrocarbon and possible sulfur odor.

pH:	Neutral
Melting Point/freezing point:	Not available
Boiling Point:	<100°F
Flash Point and Method:	<60°F to >200°F / Pensky-Martens Closed Cup Tester
Evaporation Rate:	Slower (N-Butyl Acetate =1)
Flammable Limits:	(approximate % Volume in air) Lower: 1.0 Upper: 7.0
Vapor Pressure:	0-724 mm Hg
Specific Gravity:	0.7-1.0 (H_2O=1.0)
Vapor Density	1.5-3.0 (Air=1)
Solubility:	Slight (in water)
Partition coefficient (n-octanol/water):	2-6
Auto ignition temperature	>500 °F
Decomposition temperature	Not available
Viscosity	Not available

10. Stability and Reactivity

Stability: Stable
Hazardous polymerization: Will not occur
Conditions and Materials to Avoid: Avoid heat, sparks, flame and contact with strong oxidizing agents.
Hazardous Decomposition Products: Thermal decomposition products are highly dependent on the combustion conditions. A complex mixture of airborne, solid, liquid, particulates and gases will evolve when this material undergoes pyrolysis or combustion. Carbon monoxide and other unidentified organic compounds may be formed upon combustion.

11. Toxicological Information

Acute toxicity - Ingestion may cause irritation of the mouth, throat & gastrointestinal tract leading to nausea, vomiting, diarrhea and restlessness. Vapors can be harmful or fatal if inhaled. Exposure may result in central nervous system (CNS) depression. Early to moderate CNS depression may be evidenced by giddiness, headache, dizziness and nausea; in extreme cases, unconsciousness and death may occur.

Skin corrosion/irritation - Based on the presence of light hydrocarbons, crude oil is presumed to be moderately irritating to the skin. Prolonged and repeated contact may cause various skin disorders such as dermatitis, folliculitis, oil acne, or skin tumors.

Eye damage/irritation - Based on the presence of light hydrocarbons, crude oil is presumed to be moderately irritating to the eyes.

Sensitization - Not known to cause respiratory or skin sensitization

Germ cell mutagenicity – Information not available

Carcinogenicity – May contain benzene which is a confirmed human carcinogen (leukemia). Also, several long term skin painting studies in experimental animals have shown crude oil to produce skin cancer.

Reproductive toxicity – Not a known reproductive toxin

Specific Target Organs/Systemic Toxicity – Blood/bone marrow, nervous system, respiratory system, eyes

Aspiration hazard – Aspiration of this product into the lungs can cause chemical pneumonia and can be fatal. Aspiration can occur while vomiting after ingestion of this product. Aspiration pneumonitis may be evidenced by coughing, labored breathing and cyanosis (bluish skin); in severe cases death may occur.

12. Ecological Information

Coating action of oil can kill birds, plankton, algae and fish. Keep out of all bodies of water and sewage drainage systems.

13. Disposal Considerations

This product, as produced, is not specifically listed as an EPA RCRA hazardous waste according to 40 CFR 261. However, when disposed of, it may meet the criteria of a "characteristic" hazardous waste (e.g. D001 – ignitable). This product could also contain benzene and could be considered hazardous because it exhibits the characteristic of "toxicity." It is the responsibility of the user to determine if the material is considered hazardous for disposal under federal, state and local regulations.

14. Transportation Information

Department of Transportation Classification: Flammable liquid if flash point <200°F.
D.O.T. proper shipping name: Crude Oil Petroleum
Other Requirements: UN 1267
Hazard Class: 3
Packing Group II

15. Regulatory Information

TSCA This product is listed on the TSCA chemical inventory.

SARA Section 302 This product does not contain any components on the EPA's extremely hazardous substance list.

SARA Section 304 This product may contain the following component(s) which in the event of a spill may be subject to SARA reporting requirements: toluene, xylene, hexane, benzene.

SARA Section 311/312 The following hazard categories apply to this product:
Acute health hazard
Chronic health hazard
Fire hazard

SARA Section 313 This product may contain the following component(s) which may be subject to reporting on a toxic release inventory: toluene, xylene, hexane, benzene.

EPA-CWA Spills into or leading to surface waters that cause a sheen must be reported to the National Response Center, 800-424-8802.

16. Other Information

Date Prepared:	August 29, 2008
Revised:	October 30, 2013
Last Reviewed:	October 30, 2013

Disclaimer:

The information and recommendations contained in this SDS are believed to be accurate at the date of its preparation. Whiting Oil and Gas Corporation makes no representations or warranties, express or implied, with respect to the accuracy or completeness of the information contained herein. Whiting Oil and Gas Corporation assumes no responsibility for incorrect handling or use of the product or the inherent hazards in the product itself.