






## 1.0 Identification

<b>GHS product identifier:</b> Straight-run yellow wax oil	<b>Version #:</b> 1
<b>Synonyms:</b> Distillates (Petroleum)	<b>Issue date:</b> 09/09/2019
<b>CAS #:</b> Mixture	
<b>Recommended use:</b> Process stream, fuels, and lubricants production	
<b>Recommended restrictions:</b> Use in accordance with this SDS.	
<b>Manufacturer:</b> Encana Oil & Gas (USA), Inc., 370 17 <sup>th</sup> Street, Suite 1700, Denver, CO 80202	
<b>Emergency phone #:</b> 800-262-8200 or 911	<b>Email:</b> SDS@encana.com

## 2.0 Hazard identification

## GHS classification &amp; label elements

<b>Signal word:</b> <b>Danger</b>			
Type of Hazard		Category	Hazard Symbol
Physical Hazards	Flammable liquids	4	
Health Hazards	Germ cell mutagenicity Carcinogenicity Skin corrosion/irritation Eye corrosion/irritation Specific target organ toxicity, single exposure (respiratory) Specific target organ toxicity, single exposure (narcotic) Specific target organ toxicity, repeat exposure Aspiration hazard	2 1A 2 2 3 3 2 1	
Environmental Hazards	Chronic toxicity to the aquatic environment	2	

## Hazard Statement

- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause respiratory irritation.
- May cause drowsiness or dizziness.
- May cause genetic defects.

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- May cause cancer.
- Suspected of damaging fertility or the unborn child.
- May cause damage to organs through prolonged or repeated exposure.
- Very toxic to aquatic life with long lasting effects (long-term, chronic).

### Precautionary Statement

- Prevention
  - Obtain special instructions before use.
  - 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.
  - Do not breathe gas/mist/vapors/spray.
  - Wash thoroughly after handling.
  - Use only outdoors or in a well-ventilated area.
  - Avoid release to the environment.
  - Wear protective gloves/protective clothing/eye protection/face protection.
- Response
  - If swallowed, immediately call POISON CENTER or doctor/physician.
  - If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.
  - Call poison center/doctor if you feel unwell.
  - Do NOT induce vomiting.
  - If skin irritation occurs, get medical advice/attention.
  - Take off contaminated clothing and wash before reuse.
  - In case of fire, use water spray, fog, or firefighting foam.
  - Collect spillage.
- Storage
  - Store in a well-ventilated place.
  - Keep container tightly closed.
  - Keep cool.
  - Store locked up.
- Disposal
  - Dispose of contents/container in accordance with local/regional/national/international regulations.
- Hazards not otherwise classified
  - May contain or release hydrogen sulfide gas.

### 3.0 Composition/information on ingredients

Components	CAS #	Percent (weight)
Naphtha (petroleum), light straight-run	64741-46-4	<5%
Distillates (petroleum), straight-run middle	64741-44-2	<40%
Residues (petroleum), atm. tower	64741-45-3	<70%
Benzene	71-43-2	<1%
Hydrogen sulfide	7783-06-4	<1%
Xylenes	1330-20-7	<1%
Toluene	108-88-3	<1%
Ethylbenzene	100-41-4	<1%
Polynuclear aromatic hydrocarbons	N/A	<1%

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## 4.0 First aid measures

### First aid procedures

- **Inhalation:** Inhalation of vapor may irritate the nose, throat, and respiratory tract. Coughing, sneezing, and shortness of breath may occur following exposure. Inhalation may cause rapid heart rate, headaches, confusion, anemia, dizziness and drowsiness.
  - If inhaled, move victim to fresh air and seek medical attention.
- **Eye contact:** Direct contact with liquid or vapor may cause irritation or burn the eyes.
  - Immediately flush eyes with large amounts of clean water for fifteen (15) minutes while holding open the eyelids. Lift eyelids to ensure rinsing. Beyond flushing, seek medical attention from a physician.
- **Ingestion:** Ingestion may cause unconsciousness, narcosis, cyanosis, decrease in motor functions, behavioral changes, edema, liver enlargement, jaundice, conjunctivitis, proteinuria, defatting of the skin and a rash.
  - DO NOT INDUCE VOMITING. Aspiration hazard. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration.
- **Skin:** Direct contact with skin may cause irritation.
  - Wash with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.
- **Indication of immediate medical attention and special treatment needed if necessary:** If ingested, do NOT induce vomiting, as this may cause chemical pneumonia. Application of epinephrine may cause cardiac arrhythmia in persons exposed to large quantities of hydrocarbon vapor or due to skin absorption. Observe for development of symptoms leading to cardiac arrhythmia. Contaminated clothing, including shoes may present a fire hazard and should be discarded.

## 5.0 Fire-fighting measures

### Flammable properties

- Vapors may be ignited quickly when exposed to sources of ignition (open flame, heat, spark, and others).
- Flowing product may be ignited by self-generated static electricity.
- 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.
- Alcohol flames may not be visible.
- Flash back may occur with vapors traveling an extended distance to an ignition source due to their density. Some vapors present may be lighter or heavier than air.
- See Sections 9 and 10 for physical/chemical and stability/reactive properties.
- NFPA: Health 2, Flammability 3, Instability: 0.

### Extinguishing media

Suitable	Do not use
<ul style="list-style-type: none"><li>• Water fog, carbon dioxide, foam, dry chemical</li></ul>	<ul style="list-style-type: none"><li>• Water jet, which will spread the fire</li></ul>

### Protection of fire-fighters

Specific hazards arising from product	Protective equipment and precautions
<ul style="list-style-type: none"><li>• Thermal decomposition may produce smoke and lower molecular weight organic compounds; whose composition may not have been characterized.</li></ul>	<ul style="list-style-type: none"><li>• Wear full protective clothing, including helmet, self-contained positive pressure demand breathing apparatus, protective clothing and facemask.</li></ul>

### Fire-fighting equipment/instructions

- Evacuate area and fight fire from a safe distance.

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- Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire.
- Fight fire from maximum distance, use unmanned hose holders, or monitor nozzles.
- Move containers from fire area if you can do it without risk.
- Evacuate area.
- For massive fires the use of unmanned hose holders or monitor nozzle may be advantageous to further minimize personnel exposure.
- Water spray should be used to cool containers. Cool containers exposed with water until well after the fire is out.
- Vapors may form explosive air mixtures even at room temperature.
- Prevent buildup of vapors or gases to explosive concentrations.
- Some of these materials, if spilled may evaporate leaving a flammable residue.
- Water runoff can cause environmental damage.
- Use compatible foam to minimize vapor generation as needed.
- Containers can burst violently when heated, due to excess pressure build-up.

### 6.0 Accidental release measures

- Personal precautions:
  - Keep unnecessary personnel away.
  - Local authorities should be advised if significant spills cannot be contained.
  - Keep upwind.
  - Keep out of low areas.
  - Ventilate closed spaces before entering.
  - Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Emergency procedures: If safe to do so,
  - Carefully contain and stop the source of spill.
  - Evacuate nonessential personnel and remove or secure all ignition sources.
  - Stay upwind to consider potential exposure to vapors as produce may release a substantial amount of potentially toxic and flammable vapors.
  - If possible, remove heat and potential ignition sources to lessen the risk of fire.
  - The use of non-sparking tools and intrinsically safe equipment is recommended.
  - Consider the direction the spilled product is moving/flowing; place damming or diking materials to prevent the product from entering sewers, waterways, drains, and confined areas.
  - Provide explosion-proof clearing ventilation, if possible. Use a LEL meter and H<sub>2</sub>S (or 4-gas) meter to determine air quality in area.
  - Take action to isolate environmental receptors including drains, storm sewers and natural water bodies.
  - Keep on impervious surface if at all possible.
  - Use water sparingly to prevent product from spreading.
  - Foam and absorbents may be used to reduce/prevent airborne release.
- Methods for cleaning up: If safe to do so,
  - Carefully contain and stop the source of spill.
  - Pump or vacuum residual liquids into appropriate tanks or containers for recycle or disposal.
  - Collect oil and oil impacted soils, debris, and stage in approved DOT containers or on suitable liner material for staging and classification for recycle or disposal.
  - Use oil absorbing materials to soak up spill if small and contained.
  - Oil and oil impacted materials recovered in cleanup operations should be disposed of in accordance with any applicable laws, regulation or requirements.

### 7.0 Handling and storage

#### Safe handling precautions

- Eliminate sources of ignition.
- Avoid spark promoters.
- Ground/bond container and equipment. These alone may be insufficient to remove static electricity.
- Wear personal protective equipment.

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- Do not breathe dust/fume/gas/mist/vapors/spray.
- Avoid contact with eyes, skin, and clothing.
- Do not taste or swallow.
- Do not siphon by mouth.
- Avoid prolonged exposure.
- Use only with adequate ventilation.
- Wash thoroughly after handling.
- The product is extremely flammable, and explosive vapor/air mixtures may be formed at normal room temperatures.
- DO NOT handle, store or open near an open flame, sources of heat or sources of ignition.
- Protect material from direct sunlight.
- Take precautionary measures against static discharges.
- All equipment used when handling the product must be grounded.
- Use non-sparking tools and explosion-proof equipment.
- When using, do not eat, drink or smoke.
- Promptly remove contaminated clothing and launder before reuse.
- Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer.
- Avoid release to the environment.
- HMIS: Health: 2, Flammability: 3, Physical hazards: 0

### Conditions for safe storage including incompatibilities

- Flammable liquid storage.
- Do not handle or store near an open flame, heat or other sources of ignition.
- This material can accumulate static charge which may cause spark and become an ignition source.
- The pressure in sealed containers can increase under the influence of heat.
- Keep container tightly closed in a cool, well-ventilated place.
- Keep away from food, drink and animal feed.
- Keep out of the reach of children.
- Use only approved containers for storage and transport.
- Keep incompatible materials away.

## 8.0 Exposure controls/personal protection

### Occupational exposure limits

Component	Limit type	OSHA PEL	ACGIH TLV	NIOSH REL
Benzene CAS # 71-43-2	STEL	25 ppm	2.5 ppm	1 ppm
	TWA	10 ppm*	0.5 ppm	0.1 ppm
Hydrogen sulfide CAS # 7783-06-4	STEL	20 ppm*	1 ppm	10 ppm
	TWA	None	5 ppm	None
Xylenes CAS# 95-47-6	STEL	None	150 ppm	150 ppm
	TWA	100 ppm	100 ppm	100 ppm
Ethylbenzene CAS# 100-41-4	STEL	None	None	125 ppm
	TWA	100 ppm	20 ppm	100 ppm
Toluene CAS# 108-88-3	STEL	300 ppm (C)	None	150 ppm
	TWA	200 ppm	20 ppm	100 ppm

\*Value from OSHA Table Z-2.

### Engineering controls

- Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.
- Provide explosion-proof clearing ventilation, if possible.
- Gas monitors should be used to assess exposure.

### Personal protective equipment

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- **Eye face protection:** Safety glasses or goggles re recommended when splashing or spraying is a possibility.
- **Skin protection:** Wear gloves constructed of nitrile or neoprene are recommended at a minimum. Other job-specific gloves may be required.
- **Respiratory protection:**
  - 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 recommended exposure limits.
  - Only properly trained, fit-tested, personnel should be in areas that require the use of a respirator.
  - Protection provided by air-purifying respirators is limited.
  - The use of positive pressure, air-supplied respirators may be necessary if there is a potential for release or in oxygen-deficient atmospheres.
  - Air-supplied respirators should especially be used if exposure levels are unknown or any other circumstance where an air-purifying respirator may not provide the adequate protection.
  - Respirator should also comply with OSHA requirements of personnel working with hazardous materials.
  - OSHA requires personnel to be respirator trained, this training includes fit testing, medical clearance, repair and cleaning, and other requirements.

### 9.0 Physical and chemical properties

<b>Physical state</b>	Liquid
<b>Color</b>	Varies from light color to dark brown or greenish black liquid
<b>Odor</b>	Characteristics of petroleum scent
<b>pH</b>	Not applicable
<b>Melting point/freezing point</b>	Not determined.
<b>Initial boiling point</b>	125°C (257°F)
<b>Flash point</b>	>61°C (142°F)
<b>Lower explosive limit (by volume)</b>	Not determined
<b>Upper explosive limit (by volume)</b>	Not determined
<b>Vapor pressure</b>	Variable
<b>Vapor density</b>	Not determined
<b>Relative density</b>	Variable
<b>Solubility</b>	Insoluble to slight solubility
<b>Partition coefficient (n-octanol/water)</b>	Not determined.
<b>Auto-ignition temperature</b>	Not determined
<b>Decomposition temperature</b>	Not determined
<b>Viscosity</b>	Not determined

### 10.0 Stability and reactivity

**Chemical stability:** Stable at normal anticipated storage and handling temperatures and pressures. Store the product in a well-ventilated, cool, dry place away from heat, sunlight, hot surfaces or other sources of ignition. Use only approved containers for storage and transport. Product may react with strong oxidizers.

**Possibility of hazardous reactions:** Volatility of vapors can flash fires. Buildup of vapors is known to contribute to fires and may potentially cause explosions.

**Conditions to avoid:** Avoid high temperatures and all possible sources of ignition: open flames, sparks, welding, and smoking. Prevent vapor accumulation. Do not store in improper containers. Keep away from incompatible materials such as strong oxidizers.

**Incompatible materials:** Keep away from strong oxidizers such as acids, alkalis, chlorine and halogens, dichromates or permanganates, which may cause fire or explosion.

**Hazardous decomposition products:** Hazardous decomposition products are not expected with normal storage. Combustion products can include carbon monoxide and carbon dioxide, oxides of sulfur.

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## 11.0 Toxicological information

### Routes of exposure

- **Ingestion:** Aspiration into the lungs may cause chemical pneumonitis including coughing, difficulty breathing, wheezing, coughing up blood and pneumonia, which can be fatal. May cause abdominal pain, vomiting, nausea, and diarrhea.
- **Inhalation:** Harmful if inhaled. May cause mild respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness. May cause liver damage. May cause kidney damage.
- **Skin contact:** Causes skin irritation. May cause skin defatting with prolonged exposure.
- **Eye contact:** Causes eye irritation.

### Toxicological effects

- **Acute effects:** Suffocation (asphyxiant) hazard – if allowed to accumulate to concentrations that reduce oxygen levels below safe breathing levels. Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite.
- **Chronic effects:** Prolonged or repeated exposure to high concentrations may affect the central nervous system.

### Chronic effects:

- Due to the presence of benzene, long term exposure may increase the risk of anemia and leukemia. Repeated skin contact may increase the risk of skin cancer. Benzene, a constituent present in petroleum crude, is listed with IARC as Group 1, known carcinogen to human. The NTP lists benzene as a Select Carcinogen: Known Human Carcinogen. Similarly, OSHA and ACGIH also list benzene as a carcinogen to humans.

### Component toxicity

Component	LD <sub>50</sub> oral	LD <sub>50</sub> dermal	LC <sub>50</sub>
Benzene (71-43-2)	930 mg/kg (rat)	>9,400 µL/kg (rabbit)	10,000 ppm (7-hour, inhalation, rat)
Toluene (108-88-3)	2,600 mg/kg (rat)	14.1 mL/kg (rabbit)	49,000 mg/m <sup>3</sup> (4-hour, inhalation, rat)
Xylenes (95-47-6)	4,300 mg/kg (rat)	>1,700 mg/kg (rabbit)	5,000 ppm (4-hour, inhalation, rat)
Ethylbenzene (100-41-4)	3,500 mg/kg (rat)	17,800 µL/kg (rabbit)	Not available
Hydrogen sulfide (7783-06-4)	Not available	Not available	444 ppm (4-hour, inhalation, rat)

## 12.0 Ecological information

**Ecotoxicity:** No information available.

**Persistence and degradability:** No information available.

**Mobility in Soil:** No information available.

### Bioaccumulative potential:

- Polycyclic aromatic hydrocarbons (PAHs) found in crude oil can be highly toxic to zooplankton and can be accumulated and moved-up throughout the food webs.
- Petroleum distillates straight-run middle (64741-44-2) :
  - LL<sub>50</sub> for fish ranges 6.3 mg/L (96-hour)
  - EL<sub>50</sub> aquatic invertebrates 688 mg/L (48-hour)

**Other adverse effects:** Avoid release to the environment.

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### 13.0 Disposal considerations

It is the responsibility of the user to determine if the material is considered hazardous for disposal under federal, state, and local regulations.

### 14.0 Transportation information

#### US DOT

<b>UN number</b>	1268
<b>UN proper shipping name</b>	Petroleum distillates, N.O.S.
<b>Transport hazardous class</b>	3
<b>Packing group</b>	III
<b>Environmental hazards: Marine pollutant</b>	Yes
<b>Labels required</b>	3
<b>Packaging exceptions</b>	144, 357, IB2, T4, TP1, TP8
<b>Packaging non-bulk</b>	150
<b>Packaging bulk</b>	242
<b>Special precautions for the user</b>	Read safety instructions, SDS, and emergency procedures before handling.

#### IATA

<b>UN number</b>	1268
<b>UN proper shipping name</b>	Petroleum distillates, N.O.S.
<b>Transport hazardous class(es)</b>	3
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>Label required</b>	3
<b>ERG code</b>	3L
<b>Special precautions for the user</b>	Read safety instructions, SDS, and emergency procedures before handling.

#### IMDG

<b>UN number</b>	1268
<b>UN proper shipping name</b>	Petroleum distillates, N.O.S.
<b>Transport hazardous class(es)</b>	3
<b>Packing group</b>	III
<b>Environmental hazards: Marine pollutant</b>	Yes
<b>Label required</b>	3
<b>EmS</b>	F-E, S-E
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable. However, this product is a liquid and, if transported in bulk, is covered under MARPOL 73/78 Annex I.
<b>Special precautions for the user</b>	Read safety instructions, SDS, and emergency procedures before handling.

### 15.0 Regulatory information

#### U.S.

<b>OSHA</b>	This product is a hazardous chemical, as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>TSCA</b>	This product is not listed in the TSCA chemical inventory.
<b>SARA Section 302</b>	This product contains hydrogen sulfide which has been listed on the EPA's extremely hazardous substance list.
<b>SARA Section 304</b>	This product may contain the following component(s) which in the event of a spill may be subject to SARA reporting



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	requirements: benzene, ethyl benzene toluene, xylene, n-hexane.
<b>SARA Section 311/312</b>	The following categories apply to this product: Acute health hazard, Chronic health hazard, Fire hazard.
<b>SARA Section 313</b>	This product may contain the following component(s) which may be subject to reporting on a toxic release inventory: benzene, ethyl benzene, toluene, n-hexane, xylene.
<b>EPA Clean Water Act</b>	Spills into or leading to surface waters that cause a sheen must be reported to the National Response Center, 800-424-8802.

### International inventories

Country or region	Inventory name	On inventory (Yes/No)
Australia	Australian inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

### 16.0 Other information, including date of preparation of last version

**Issue date:** 09/09/2019

**Version #:** 1

References: IARC Monographs. Overall Evaluation of Carcinogenicity (Volumes 1-102) IUCLID. Hazardous Substances Data Bank.

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.