SAFETY DATA SHEET

1. Identification

Product identifier: Crude (Sour)

Other means of identification: None.

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier: Devon Energy Production Company, L.P.
333 W. Sheridan Avenue
Oklahoma City, OK 73102-5010

Telephone: (405) 235-3611

Emergency: CHEMTREC 24 Hour Emergency
Within the USA (800) 424-9300
Outside the USA +1 703-527-3887

2. Hazard(s) identification

Physical hazards: Flammable liquids

Health hazards: Serious eye damage/eye irritation
Carcinogenicity

Specific target organ toxicity, single exposure
Specific target organ toxicity, repeated exposure
Aspiration hazard

Environmental hazards: Hazardous to the aquatic environment, long-term hazard

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement: Extremely flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause drowsiness or dizziness. May cause cancer. May cause damage to organs (Liver) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention: Do not handle until all safety precautions have been read and understood. 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 mist or vapor. 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 a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. Do NOT induce vomiting. If eye irritation persists: Get medical advice/attention. In case of fire: Use appropriate media to extinguish. Collect spillage.

Storage

Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal

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

Hazard(s) not otherwise classified (HNOC)

Static Accumulating Liquid.

Supplemental information

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude oil</td>
<td>8002-05-9</td>
<td>98 - 100</td>
</tr>
</tbody>
</table>

Contains

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen sulfide</td>
<td>7783-06-4</td>
<td>&gt;= 0.001</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>≥ 5</td>
</tr>
<tr>
<td>Xylene (mixed isomers)</td>
<td>1330-20-7</td>
<td>≥ 2</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>≥ 0.6</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>≥ 0.5</td>
</tr>
</tbody>
</table>

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact

Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Jaundice. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information

Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
Extremely flammable liquid and vapor.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. The product is immiscible with water and will spread on the water surface. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling
Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

<table>
<thead>
<tr>
<th>Contains</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>STEL</td>
<td>5 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude oil (CAS 8002-05-9)</td>
<td>PEL</td>
<td>5 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 ppm</td>
</tr>
<tr>
<td>n-Hexane (CAS 110-54-3)</td>
<td>PEL</td>
<td>1800 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 ppm</td>
</tr>
<tr>
<td>Xylene (mixed isomers) (CAS 1330-20-7)</td>
<td>PEL</td>
<td>435 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
</tr>
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</table>

US. OSHA Table Z-2 (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Contains</th>
<th>Type</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>Ceiling</td>
<td>300 ppm</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>Ceiling</td>
<td>25 ppm</td>
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### US. OSHA Table Z-2 (29 CFR 1910.1000)

<table>
<thead>
<tr>
<th>Contains</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen sulfide (CAS 7783-06-4)</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>20 ppm</td>
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</table>

### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Contains</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane (CAS 110-54-3)</td>
<td>TWA</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Xylene (mixed isomers) (CAS 1330-20-7)</td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>TWA</td>
<td>100 ppm</td>
</tr>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>STEL</td>
<td>2.5 ppm</td>
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<tr>
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<td>TWA</td>
<td>0.5 ppm</td>
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<tr>
<td>Hydrogen sulfide (CAS 7783-06-4)</td>
<td>STEL</td>
<td>5 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

### US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Contains</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
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</thead>
<tbody>
<tr>
<td>Crude oil (CAS 8002-05-9)</td>
<td>Ceiling</td>
<td>1800 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>350 mg/m³</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Contains</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane (CAS 110-54-3)</td>
<td>TWA</td>
<td>180 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 ppm</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>STEL</td>
<td>560 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>375 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
</tr>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>STEL</td>
<td>1 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.1 ppm</td>
</tr>
<tr>
<td>Hydrogen sulfide (CAS 7783-06-4)</td>
<td>Ceiling</td>
<td>15 mg/m³</td>
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<tr>
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<td>10 ppm</td>
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</table>

### Biological limit values

#### ACGIH

<table>
<thead>
<tr>
<th>Contains</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>500 µg/g</td>
<td>t,t-Muconic acid</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>

#### ACGIH Biological Exposure Indices

<table>
<thead>
<tr>
<th>Contains</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane (CAS 110-54-3)</td>
<td>0.4 mg/l</td>
<td>2,5-Hexanedione, without hydrolysis</td>
<td>Urine</td>
<td>*</td>
</tr>
<tr>
<td>Xylene (mixed isomers) (CAS 1330-20-7)</td>
<td>1.5 g/g</td>
<td>Methylhippuric acids</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>0.3 mg/g</td>
<td>o-Cresol, with hydrolysis</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>0.03 mg/l</td>
<td>Toluene</td>
<td>Urine</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>0.02 mg/l</td>
<td>Toluene</td>
<td>Blood</td>
<td>*</td>
</tr>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>25 µg/g</td>
<td>S-Phenylmercapturic acid</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.
Exposure guidelines

**US - California OELs: Skin designation**
- Benzene (CAS 71-43-2) Can be absorbed through the skin.
- n-Hexane (CAS 110-54-3) Can be absorbed through the skin.
- Toluene (CAS 108-88-3) Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**
- Toluene (CAS 108-88-3) Skin designation applies.

**US ACGIH Threshold Limit Values: Skin designation**
- Benzene (CAS 71-43-2) Can be absorbed through the skin.
- n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

**Appropriate engineering controls**
- Explosion-proof general and local exhaust ventilation. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**
- Chemical respirator with organic vapor cartridge and full facepiece.

**Skin protection**
- Hand protection
  - Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**Skin protection**
- Other
  - Wear suitable protective clothing. Use of an impervious apron is recommended.

**Respiratory protection**
- Chemical respirator with organic vapor cartridge and full facepiece.

**Thermal hazards**
- Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**
- Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. **Physical and chemical properties**

**Appearance**
- Liquid.

**Physical state**
- Liquid.

**Form**
- Liquid.

**Color**
- Brown.

**Odor**
- Hydrocarbon. Rotten eggs. (Hydrogen sulfide odor).

**Odor threshold**
- Not available.

**pH**
- Not available.

**Melting point/freezing point**
- -99 °F (-72.78 °C) estimated

**Initial boiling point and boiling range**
- 85 - 500 °F @ 1 atmosphere

**Flash point**
- 32 - 200 °F

**Evaporation rate**
- Not available.

**Flammability (solid, gas)**
- Not applicable.

**Upper/lower flammability or explosive limits**
- **Flammability limit - lower (%)**
  - 1.1 % estimated
- **Flammability limit - upper (%)**
  - 5.9 % estimated
- **Explosive limit - lower (%)**
  - Not available.
- **Explosive limit - upper (%)**
  - Not available.

**Vapor pressure**
- 10 - 50 psi @ 100 °F

**Vapor density**
- (Air = 1)

**Relative density**
- 0.65 - 1.0 g/cm3
Solubility(ies)

Solubility (water) Insoluble (<0.1)
Partition coefficient 1.8 - 8
(n-octanol/water)
Auto-ignition temperature 230 - 255 °C
Decomposition temperature Not available.
Viscosity Not available.
Other information

Explosive properties Not explosive.
Oxidizing properties Not oxidizing.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability Material is stable under normal conditions.
Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.
Conditions to avoid Avoid heat, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials Strong oxidizing agents.
Hazardous decomposition products Carbon oxides. Sulfur oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact No adverse effects due to skin contact are expected.
Eye contact Causes serious eye irritation.
Ingestion Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Jaundice. Prolonged exposure may cause chronic effects.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude oil (CAS 8002-05-9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Oral LD50</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Contains Species</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Rabbit</td>
<td>14.1 ml/kg</td>
</tr>
<tr>
<td>Inhalation LC50</td>
<td>Rat</td>
<td>49000 mg/m³, 4 Hours</td>
</tr>
<tr>
<td>Oral LD50</td>
<td>Rat</td>
<td>5580 mg/kg</td>
</tr>
</tbody>
</table>
Contains Species Test Results

Benzene (CAS 71-43-2)

Acute
Oral
LD50 Rat 930 mg/kg

Skin corrosion/irritation
Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization
Not a respiratory sensitizer.

Skin sensitization
This product is not expected to cause skin sensitization.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Benzene (CAS 71-43-2) 1 Carcinogenic to humans.
Crude oil (CAS 8002-05-9) 3 Not classifiable as to carcinogenicity to humans.
Toluene (CAS 108-88-3) 3 Not classifiable as to carcinogenicity to humans.
Xylene (mixed isomers) (CAS 1330-20-7) 3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens
Benzene (CAS 71-43-2) Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Benzene (CAS 71-43-2) Cancer

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure
May cause damage to organs (Liver) through prolonged or repeated exposure.

Aspiration hazard
May be fatal if swallowed and enters airways.

Chronic effects
May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity
Toxic to aquatic life with long lasting effects.

Components Species Test Results

Crude oil (CAS 8002-05-9)

Aquatic
Fish LC50 Cutthroat trout (Oncorhynchus clarki) 2.1 - 4.3 mg/l, 96 hours

Contains Species Test Results

Toluene (CAS 108-88-3)

Aquatic
Acute
Crustacea EC50 Daphnia magna 11.5 mg/l, 48 hours
Fish LC50 Oncorhynchus kisutch 5.5 mg/l, 96 hours

Benzene (CAS 71-43-2)

Aquatic
Crustacea EC50 Water flea (Daphnia magna) 8.76 - 15.6 mg/l, 48 hours
Fish LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss) 5.9 mg/l, 96 hours

Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential
No data available.

Mobility in soil
No data available.

Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
13. Disposal considerations

**Disposal instructions**
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations**
Dispose in accordance with all applicable regulations.

**Hazardous waste code**
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**US RCRA Hazardous Waste U List: Reference**
- Benzene (CAS 71-43-2) U019
- Hydrogen sulfide (CAS 7783-06-4) U135
- Toluene (CAS 108-88-3) U220
- Xylene (mixed isomers) (CAS 1330-20-7) U239

**Waste from residues / unused products**
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

**DOT**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1267</th>
</tr>
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<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Petroleum crude oil</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
</tr>
<tr>
<td>Class</td>
<td>3</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Label(s)</td>
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</tbody>
</table>

**Special precautions for user**
Read safety instructions, SDS and emergency procedures before handling. Any re-classification or offer for shipment under alternate classification must comply with 49 CFR 173.41 and 173.21 Special provisions

<table>
<thead>
<tr>
<th>144, 357, T11, TP1, TP8</th>
</tr>
</thead>
</table>

**Packaging exceptions**
150

**Packaging non bulk**
201

**Packaging bulk**
243

**Note:** If Crude Oil has a Hydrogen Sulfide concentration in the vapor space over 100 ppm, Devon Energy recommends shipping as UN 3494, Petroleum sour crude oil, flammable, toxic, 3 (6.1), PGI

**IATA**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1267</th>
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</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Petroleum crude oil</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
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<tr>
<td>Class</td>
<td>3</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
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</tbody>
</table>

**Special precautions for user**
Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1267</th>
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<tr>
<td>UN proper shipping name</td>
<td>PETROLEUM CRUDE OIL</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>3</td>
</tr>
<tr>
<td>Class</td>
<td>3</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
</tbody>
</table>

**Special precautions for user**
Read safety instructions, SDS and emergency procedures before handling.
Note: If Crude Oil has a Hydrogen Sulfide concentration in the vapor space over 100 ppm, Devon Energy recommends shipping as UN 3494, Petroleum sour crude oil, flammable, toxic, 3 (6.1), PGI.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Benzene (CAS 71-43-2) Cancer

Central nervous system

Blood

Aspiration

Skin

Eye

respiratory tract irritation

Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

Benzene (CAS 71-43-2) LISTED

Crude oil (CAS 8002-05-9) LISTED

Hydrogen sulfide (CAS 7783-06-4) LISTED

n-Hexane (CAS 110-54-3) LISTED

Toluene (CAS 108-88-3) LISTED

Xylene (mixed isomers) (CAS 1330-20-7) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Immediate Hazard - Yes

Delayed Hazard - Yes

Fire Hazard - Yes

Pressure Hazard - No

Reactivity Hazard - No

SARA 302 Extremely hazardous substance

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>Reportable quantity (pounds)</th>
<th>Threshold planning quantity (pounds)</th>
<th>Threshold planning quantity, lower value (pounds)</th>
<th>Threshold planning quantity, upper value (pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen sulfide</td>
<td>7783-06-4</td>
<td>100</td>
<td>500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SARA 311/312 Hazardous chemical</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
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</table>

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude oil</td>
<td>8002-05-9</td>
<td>98 - 100</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>≥ 0.5</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>≥ 5</td>
</tr>
<tr>
<td>Xylene (mixed isomers)</td>
<td>1330-20-7</td>
<td>≥ 2</td>
</tr>
</tbody>
</table>

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Benzene (CAS 71-43-2)

Crude oil (CAS 8002-05-9)

n-Hexane (CAS 110-54-3)

Toluene (CAS 108-88-3)

Xylene (mixed isomers) (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Hydrogen sulfide (CAS 7783-06-4)

Safe Drinking Water Act (SDWA) Not regulated.
Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
Toluene (CAS 108-88-3) 6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
Toluene (CAS 108-88-3) 35 %WV

DEA Exempt Chemical Mixtures Code Number
Toluene (CAS 108-88-3) 594

US state regulations
WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Benzene (CAS 71-43-2)
Toluene (CAS 108-88-3)

US. Massachusetts RTK - Substance List
Benzene (CAS 71-43-2)
Crude oil (CAS 8002-05-9)
Hydrogen sulfide (CAS 7783-06-4)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (mixed isomers) (CAS 1330-20-7)

US. New Jersey Worker and Community Right-to-Know Act
Benzene (CAS 71-43-2)
Crude oil (CAS 8002-05-9)
Hydrogen sulfide (CAS 7783-06-4)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (mixed isomers) (CAS 1330-20-7)

US. Pennsylvania Worker and Community Right-to-Know Law
Benzene (CAS 71-43-2)
Crude oil (CAS 8002-05-9)
Hydrogen sulfide (CAS 7783-06-4)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (mixed isomers) (CAS 1330-20-7)

US. Rhode Island RTK
Benzene (CAS 71-43-2)
Crude oil (CAS 8002-05-9)
Hydrogen sulfide (CAS 7783-06-4)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (mixed isomers) (CAS 1330-20-7)

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).
16. Other information, including date of preparation or last revision

**Issue date**: 16-October-2015

**Revision date**: 07-December-2016

**Version #**: 04

**HMIS® ratings**
- Health: 2*
- Flammability: 4
- Physical hazard: 0

**NFPA ratings**

**Disclaimer**
Devon Energy cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.