1. Identification

Product identifier: 14# Natural Gasoline

Other means of identification: None.

Recommended use: Fuel

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 Category 1

Health hazards

Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Germ cell mutagenicity Category 1
Carcinogenicity Category 1A
Reproductive toxicity (fertility) Category 2
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation
Specific target organ toxicity, single exposure Category 3 narcotic effects
Specific target organ toxicity, repeated exposure Category 1
Aspiration hazard Category 1

Environmental hazards

Hazardous to the aquatic environment, acute hazard Category 2
Hazardous to the aquatic environment, long-term hazard Category 2

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 skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life. 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. Do not eat, drink or smoke when using this product. 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. Do NOT induce vomiting. Call a poison center/doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. 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. Static accumulator - Static accumulating flammable materials can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite material and vapor may cause flash fire (or explosion).

Supplemental information
None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopentane</td>
<td>78-78-4</td>
<td>10 - 35</td>
</tr>
<tr>
<td>Heptane</td>
<td>142-82-5</td>
<td>1 - 8.5</td>
</tr>
<tr>
<td>Methylcyclohexane</td>
<td>108-87-2</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>110-82-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>2-Methylpentane</td>
<td>107-83-5</td>
<td>7 - 13</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&lt; 2</td>
</tr>
<tr>
<td>Methylcyclopentane</td>
<td>96-37-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>2-Methyhexane</td>
<td>591-76-4</td>
<td>1 - 5</td>
</tr>
<tr>
<td>3-Methyhexane</td>
<td>589-34-4</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Pentane</td>
<td>109-66-0</td>
<td>15 - 40</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>5.5 - 14</td>
</tr>
<tr>
<td>Hexane (Other Isomers)</td>
<td>96-14-0</td>
<td>3 - 7</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Butane</td>
<td>106-97-8</td>
<td>0.02 - 0.7</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. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

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.
Precautions for safe handling

Environmental precautions

Methods and materials for containment and cleaning up

General information

General fire hazards

Specific methods

Suitable extinguishing media

5. Fire-fighting measures

Specific hazards arising from the chemical

Special protective equipment and precautions for firefighters

Fire fighting equipment/instructions

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

None known.

During fire, gases hazardous to health may be formed.

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

Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to flames with water until well after the fire is out.

Extremely flammable gas. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Methods and materials for containment and cleaning up

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. All equipment used when handling the product must be grounded. Provide adequate ventilation. Do not breathe gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. 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. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool dry place. 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>Components</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>3-Methylhexane (CAS 589-34-4)</td>
<td>PEL</td>
<td>2000 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 ppm</td>
</tr>
<tr>
<td>Cyclohexane (CAS 110-82-7)</td>
<td>PEL</td>
<td>1050 mg/m3</td>
</tr>
<tr>
<td>Heptane (CAS 142-82-5)</td>
<td>PEL</td>
<td>2000 mg/m3</td>
</tr>
<tr>
<td>Methylcyclohexane (CAS 108-87-2)</td>
<td>PEL</td>
<td>2000 mg/m3</td>
</tr>
<tr>
<td>n-Hexane (CAS 110-54-3)</td>
<td>PEL</td>
<td>1800 mg/m3</td>
</tr>
<tr>
<td>Pentane (CAS 109-66-0)</td>
<td>PEL</td>
<td>2950 mg/m3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>Ceiling</td>
<td>25 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>Ceiling</td>
<td>300 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methylhexane (CAS 591-76-4)</td>
<td>STEL</td>
<td>500 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>400 ppm</td>
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<tr>
<td>2-Methylpentane (CAS 107-83-5)</td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>500 ppm</td>
</tr>
<tr>
<td>3-Methylhexane (CAS 589-34-4)</td>
<td>TWA</td>
<td>500 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>STEL</td>
<td>2.5 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.5 ppm</td>
</tr>
<tr>
<td>Butane (CAS 106-97-8)</td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Cyclohexane (CAS 110-82-7)</td>
<td>TWA</td>
<td>100 ppm</td>
</tr>
<tr>
<td>Heptane (CAS 142-82-5)</td>
<td>STEL</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Hexane (Other Isomers)</td>
<td>TWA</td>
<td>400 ppm</td>
</tr>
<tr>
<td>(CAS 96-14-0)</td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Isopentane (CAS 78-78-4)</td>
<td>TWA</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Methylcyclohexane (CAS 108-87-2)</td>
<td>TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>n-Hexane (CAS 110-54-3)</td>
<td>TWA</td>
<td>500 ppm</td>
</tr>
</tbody>
</table>
### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentane (CAS 109-66-0)</td>
<td>TWA</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Toluene (CAS 108-88-3)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methylpentane (CAS 107-83-5)</td>
<td>Ceiling</td>
<td>1800 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>510 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>350 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
</tr>
<tr>
<td>3-Methylhexane (CAS 589-34-4)</td>
<td>Ceiling</td>
<td>1800 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>440 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>350 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85 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>Butane (CAS 106-97-8)</td>
<td>TWA</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>800 ppm</td>
</tr>
<tr>
<td>Cyclohexane (CAS 110-82-7)</td>
<td>TWA</td>
<td>1050 mg/m³</td>
</tr>
<tr>
<td>Heptane (CAS 142-82-5)</td>
<td>Ceiling</td>
<td>300 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1800 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>440 ppm</td>
</tr>
<tr>
<td>Hexane (Other Isomers) (CAS 96-14-0)</td>
<td>Ceiling</td>
<td>1800 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>510 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>350 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
</tr>
<tr>
<td>Methylcyclohexane (CAS 108-87-2)</td>
<td>TWA</td>
<td>1600 mg/m³</td>
</tr>
<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>TWA</td>
<td>375 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ppm</td>
</tr>
</tbody>
</table>

### Biological limit values

**ACGIH Biological Exposure Indices**

<table>
<thead>
<tr>
<th>Components</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>25 µg/g</td>
<td>S-Phenylmercapturic acid</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>25 µg/g</td>
<td>S-Phenylmercapturic acid</td>
<td></td>
<td></td>
</tr>
<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>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>
</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**

**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
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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

**Eye/face protection**
Wear safety glasses with side shields (or goggles).

**Skin protection**

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

**Skin protection**

**Other**
Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection**
In case of insufficient ventilation, wear suitable respiratory equipment.

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

**General hygiene considerations**
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**
Clear to cloudy liquid.

**Physical state**
Liquid.

**Form**
Liquid.

**Color**
Clear to cloudy.

**Odor**
Slight hydrocarbon.

**Odor threshold**
Not available.

**pH**
Not available.

**Melting point/freezing point**
Not available.

**Initial boiling point and boiling range**
60 °F (15.56 °C)

**Flash point**
-0.04 °F (-17.8 °C) Tag Closed Cup

**Evaporation rate**
> 1 BuAc

**Flammability (solid, gas)**
Flammable gas.

**Upper/lower flammability or explosive limits**
- **Flammability limit - lower (%)**
  1.3%
- **Flammability limit - upper (%)**
  7.1%

**Explosive limit - lower (%)**
Not available.

**Explosive limit - upper (%)**
Not available.

**Vapor pressure**
13.07 psia (38°C/ 100°F)

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

**Relative density**
0.66 at 60°F (Water=1)

**Solubility(ies)**
Solubility (water)
Slightly.
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. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
Thermal decomposition or combustion may liberate toxic gases or fumes.

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. May cause irritation to the respiratory system.

Skin contact
Causes skin irritation.

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. May cause respiratory irritation. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity
Not expected to be acutely toxic. May be fatal if swallowed and enters airways.

Components | Species | Test Results |
--- | --- | --- |
Cyclohexane (CAS 110-82-7) | | |
Acute | | |
Oral | | |
LD50 | Rat | 12705 mg/kg |
Heptane (CAS 142-82-5) | | |
Acute | | |
Inhalation | | |
LC50 | Rat | 103 mg/l, 4 Hours |
Isopentane (CAS 78-78-4) | | |
Acute | | |
Inhalation | | |
LC50 | Mouse | 1000 mg/l, 1 Hours |
| | | 450 mg/l, 2 Hours |
Toluene (CAS 108-88-3) | | |
Acute | | |
Dermal | | |
LD50 | Rabbit | 14.1 ml/kg |
Components | Species | Test Results
--- | --- | ---
**Inhalation**
LC50 | Rat | 49000 mg/m³, 4 Hours
Oral | Rat | 5580 mg/kg

**Skin corrosion/irritation**
Causes skin 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**
May cause genetic defects.

**Carcinogenicity**
May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity
Benzene (CAS 71-43-2) 1 Carcinogenic to humans.
Toluene (CAS 108-88-3) 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**
Suspected of damaging fertility.

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

Specific target organ toxicity - repeated exposure
Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Chronic effects
Causes damage to organs through prolonged or repeated exposure. Contains benzene. Human epidemiology studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-producing system and serious blood disorders, including leukemia. Animal tests suggest that prolonged and/or repeated overexposure to benzene may damage the embryo/fetus. The relevance of these animal studies to humans has not been fully established.

12. Ecological information

**Ecotoxicity**
Toxic to aquatic life with long lasting effects.

Components | Species | Test Results
--- | --- | ---
Cyclohexane (CAS 110-82-7)
Aquatic
Fish | LC50 | Fathead minnow (Pimephales promelas) 3.961 - 5.181 mg/l, 96 hours
Pentane (CAS 109-66-0)
Aquatic
Crustacea | EC50 | Daphnia 2.3 mg/l, 48 Hours
Fish | LC50 | Fish 3.1 mg/l, 96 Hours
Toluene (CAS 108-88-3)
Aquatic
Crustacea | EC50 | Water flea (Daphnia magna) 5.46 - 9.83 mg/l, 48 hours
Fish | LC50 | Pink salmon (Oncorhynchus gorbuscha) 6.86 - 8.48 mg/l, 96 hours

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

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Component</th>
<th>Partition coefficient n-octanol / water (log Kow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methylpentane (CAS 107-83-5)</td>
<td>3.74</td>
</tr>
<tr>
<td>3-Methylhexane (CAS 589-34-4)</td>
<td>4.66</td>
</tr>
<tr>
<td>Benzene (CAS 71-43-2)</td>
<td>2.13</td>
</tr>
<tr>
<td>Butane (CAS 106-97-8)</td>
<td>2.89</td>
</tr>
</tbody>
</table>
Partition coefficient n-octanol / water (log Kow)

Cyclohexane (CAS 110-82-7) 3.44
Heptane (CAS 142-82-5) 4.66
Hexane (Other Isomers) (CAS 96-14-0) 3.6
Isopentane (CAS 78-78-4) 2.3
Methylcyclohexane (CAS 108-87-2) 3.61
Methylcyclopentane (CAS 96-37-7) 3.37
Pentane (CAS 109-66-0) 3.39
Toluene (CAS 108-88-3) 2.73
n-Hexane (CAS 110-54-3) 3.9

Mobility in soil
This product is slightly water soluble and may disperse in soil.

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
D001: Waste Flammable material with a flash point <140 F
D018: Waste Benzene

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

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
UN number UN1203
UN proper shipping name Gasoline (Pentane RQ = 364 LBS, Isopentane RQ = 444 LBS)
Transport hazard class(es)
Class 3
Subsidiary risk -
Label(s) 3
Packing group I
Environmental hazards Yes
Marine pollutant
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
139, B33, B101, T8
Packaging exceptions
150
Packaging non bulk
202
Packaging bulk
242

IATA
UN number UN1203
UN proper shipping name Gasoline (Pentane, Isopentane)

Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group I
Environmental hazards No.
ERG Code 3H
Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.

IMDG
UN number UN1203
UN proper shipping name Gasoline, MARINE POLLUTANT (Pentane, Isopentane)
Transport hazard class(es)

Class 3
Subsidiary risk -
Packing group 1

Environmental hazards
Marine pollutant Yes
EmS F-E, S-E

Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.
Not established.

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

General information IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

15. Regulatory information

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

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)
Central nervous system
Blood
Aspiration
Skin
Eye
respiratory tract irritation
Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

2-Methylhexane (CAS 591-76-4) LISTED
2-Methylpentane (CAS 107-83-5) LISTED
3-Methylhexane (CAS 589-34-4) LISTED
Benzene (CAS 71-43-2) LISTED
Butane (CAS 106-97-8) LISTED
Cyclohexane (CAS 110-82-7) LISTED
Heptane (CAS 142-82-5) LISTED
Hexane (Other Isomers) (CAS 96-14-0) LISTED
Isopentane (CAS 78-78-4) LISTED
Methylocyclohexane (CAS 108-87-2) LISTED
Methylocyclopentane (CAS 96-37-7) LISTED
n-Hexane (CAS 110-54-3) LISTED
Pentane (CAS 109-66-0) LISTED
Toluene (CAS 108-88-3) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
Yes

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexane</td>
<td>110-82-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&lt; 2</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>5.5 - 14</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>
Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
- Benzene (CAS 71-43-2)
- n-Hexane (CAS 110-54-3)
- Toluene (CAS 108-88-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
- Butane (CAS 106-97-8)
- Isopentane (CAS 78-78-4)
- Pentane (CAS 109-66-0)

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

US. Massachusetts RTK - Substance List
- 2-Methylhexane (CAS 591-76-4)
- 2-Methylpentane (CAS 107-83-5)
- 3-Methylhexane (CAS 589-34-4)
- Benzene (CAS 71-43-2)
- Butane (CAS 106-97-8)
- Cyclohexane (CAS 110-82-7)
- Heptane (CAS 142-82-5)
- Hexane (Other Isomers) (CAS 96-14-0)
- Isopentane (CAS 78-78-4)
- Methylcyclohexane (CAS 108-87-2)
- Methylcyclopentane (CAS 96-37-7)
- n-Hexane (CAS 110-54-3)
- Pentane (CAS 109-66-0)
- Toluene (CAS 108-88-3)

US. New Jersey Worker and Community Right-to-Know Act
- 2-Methylpentane (CAS 107-83-5)
- 3-Methylhexane (CAS 589-34-4)
- Benzene (CAS 71-43-2)
- Butane (CAS 106-97-8)
- Cyclohexane (CAS 110-82-7)
- Heptane (CAS 142-82-5)
- Isopentane (CAS 78-78-4)
- Methylcyclohexane (CAS 108-87-2)
- Methylcyclopentane (CAS 96-37-7)
- n-Hexane (CAS 110-54-3)
- Pentane (CAS 109-66-0)
- Toluene (CAS 108-88-3)

US. Pennsylvania Worker and Community Right-to-Know Law
- 2-Methylhexane (CAS 591-76-4)
- 2-Methylpentane (CAS 107-83-5)
- 3-Methylhexane (CAS 589-34-4)
- Benzene (CAS 71-43-2)
- Butane (CAS 106-97-8)
- Cyclohexane (CAS 110-82-7)
- Heptane (CAS 142-82-5)
- Hexane (Other Isomers) (CAS 96-14-0)
- Isopentane (CAS 78-78-4)
- Methylcyclohexane (CAS 108-87-2)
- Methylcyclopentane (CAS 96-37-7)
- n-Hexane (CAS 110-54-3)
- Pentane (CAS 109-66-0)
- Toluene (CAS 108-88-3)
US. Rhode Island RTK
Benzene (CAS 71-43-2)
Butane (CAS 106-97-8)
Cyclohexane (CAS 110-82-7)
Isopentane (CAS 78-78-4)
n-Hexane (CAS 110-54-3)
Pentane (CAS 109-66-0)
Toluene (CAS 108-88-3)

US. California Proposition 65
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)

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>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>Yes</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</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>(EINECS)</td>
<td></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>No</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                  17-September-2015
Revision date               16-December-2015
Version #                   02

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

NFPA ratings

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