





















## 12. Ecological Information

<p><b>Persistence &amp; Degradability:</b> Not expected to persist in the environment.</p>	<p><b>Bioaccumulative Potential:</b> Not expected to bioaccumulate.</p>
<p><b>Mobility:</b> When released to soil, natural gas is expected to evaporate into the atmosphere.</p>	<p><b>Other Adverse Effects:</b> See below.</p>

**Terrestrial Fate:**

- Volatilization from soil surfaces is expected to be an important fate process.
- Photolysis and hydrolysis are not expected to be important in soil.
- Groundwater contamination is not expected.

**Aquatic Fate:**

- Spills will spread on the water surface and the majority will evaporate.
- Hydrolysis is not expected to be an important environmental fate.

**Atmospheric Fate:**

- Spilled/released natural gas will evaporate/dissipate rapidly.
- Unlike other VOCs (Volatile Organic Compounds) such as ethane, propane, butane, methane is not known to react with oxides of nitrogen (NO<sub>x</sub>) in the presence of sunlight, to form ozone O<sub>3</sub>, a pollutant in the lower atmosphere.
- However, methane is a potent Green House Gas with a Global Warming Potential about 21 times that of carbon dioxide.
- In general VOCs have short lifetimes in the atmospheres. A few VOCs, like ethane and acetone, are longer-lived and impact tropospheric chemistry on hemispheric scales. Ethane has an average lifetime in the atmosphere of 2 months. In the atmosphere, it is destroyed rapidly by reacting with hydroxide radicals. The average lifetime in the atmosphere is 9 years for methane.

**Eco Toxicity Tests:**

Chemical Name	Species	Test Method	LC50/ EC50/
iso-Pentane (CAS 78-78-4)	Daphnia magna (water flea)	Static test; 48 hours	EC50 = 2.3 mg/L
n-Pentane (CAS 109-66-0)	Daphnia magna (water flea)	Static test; 48 hours	LC50 = 9.74 mg/L
	Oncorhynchus mykiss (rainbow trout)	Semi-static test; 96 hours	LC50 = 9.87 mg/L
	Pimephales promelas (fathead minnow)	Semi-static test; 96 hours	LC50 = 11.59 mg/L
	Lepomis macrochirus (bluegill sunfish)	Semi-static test; 96 hours	LC50 = 9.99 mg/L

**13. Disposal Considerations**

**Waste Disposal:**

- Dispose of waste material at an approved waste treatment/disposal facility in accordance with applicable local, provincial, and federal regulations.
- Excess/waste butane can be disposed by incineration in a waste gas incinerator or flare.
- Natural gas can also be reused as fuel for boilers and heaters.

**14. Transport Information**

**TDG (Canada) CLASSIFICATION**

<b>UN NUMBER:</b>	UN1971
<b>PROPER SHIPPING NAME:</b>	Natural Gas, Compressed with high methane content
<b>CLASS:</b>	2.1
<b>PACKING GROUP:</b>	N/A
<b>LABEL/PLACARD:</b>	



**SPECIAL PROVISION:** None

**MARINE POLLUTANT:** No

**15. Regulatory Information**

**CANADA**

<b>Regulatory List</b>	<b>Chemical</b>
DSL Domestic Substance List	Ethane, Propane, n-Butane, Isobutane, Isopentane
E2 Environmental Emergencies	Methane, Ethane, Propane, n-Butane, Isobutane
NPRI National Pollutant Release Inventory	Propane, Butane (all isomers), Pentanes (all isomers) are under VOC Volatile Organic Compound group in NPRI

**16. Other Information**

**NFPA Hazard Rating:**  
Health 1, Flammability 4, Instability 0



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• Original:	May 1, 2020	Created
• 1 <sup>st</sup> revision	August 17, 2021	Address and phone number update

**Glossary**

- ACGIH** – American Conference of Governmental Industrial Hygiene
- DOT** – US Department of Transportation
- IARC** – International Agency for Research on Cancer
- IDLH** – Immediately Dangerous to Life and Health
- NIOSH** – National Institute for Occupational Safety & Health
- NTP** – National Toxicology Program
- OSHA** – Occupational Safety & Health Administration of the US Depart of Labour
- PEL** – Permissible Exposure Limit
- SARA** – Superfund Amendments and Reauthorization Act of 1986
- SCBA** – Self-Contained Breathing Apparatus
- STEL** – Short Term Exposure Limit
- TDG** – Canada Transportation of Dangerous Goods
- TRI** – US Toxic Release Inventory
- TSCA** – Toxic Substance Control Act
- TWA** – Time Weighed Average

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**~ End of Safety Data Sheet ~**