



1. Chemical Product and Company Identification

Product name NATURAL GASOLINE
MSDS# 0000001536
Product Use Fuel.
Supplier BP Canada Energy Company
 240 - 4 Avenue S.W.
 P.O. Box 200, Station M
 Calgary, Alberta T2P 2H8
 CANADA
EMERGENCY HEALTH INFORMATION: 1 (800) 447-8735
EMERGENCY SPILL INFORMATION: 1 (800) 424-9300
 CHEMTREC (USA)
OTHER PRODUCT INFORMATION 1 (866) 4 BP - MSDS
 (866-427-6737 Toll Free - North America)
 email: bpcares@bp.com

2. Composition / information on ingredients

Ingredient Name	CAS #	% by Weight	Exposure Limits
Natural gas condensates (petroleum)	64741-47-5	98-100	ACGIH TLV (United States, 2002). TWA: 5 mg/m ³ 8 hour(s). Form: Oil mist STEL: 10 mg/m ³ 15 minute(s). Form: Oil mist
Contains Benzene	71-43-2	1-5	ACGIH TLV (United States, 2002). Skin STEL: 2.5 ppm 15 minute(s). STEL: 8 mg/m ³ 15 minute(s). TWA: 0.5 ppm 8 hour(s). TWA: 1.6 mg/m ³ 8 hour(s). OSHA PEL (United States). STEL: 5 ppm 15 minute(s). TWA: 1 ppm 8 hour(s).
Hydrogen Sulfide	7783-06-4	0-0.1	ACGIH TLV (United States, 2002). STEL: 15 ppm 15 minute(s). TWA: 10 ppm 8 hour(s). STEL: 21 mg/m ³ 15 minute(s). TWA: 14 mg/m ³ 8 hour(s). OSHA PEL (United States, 1971). CEIL: 20 ppm PEAK: 50 ppm 10 minute(s). OSHA PEL 1989 (United States, 1989). Notes: See Table Z-2. STEL: 21 mg/m ³ 15 minute(s). STEL: 15 ppm 15 minute(s). TWA: 14 mg/m ³ 8 hour(s). TWA: 10 ppm 8 hour(s). OSHA PEL Z2 (United States, 2002). AMP: 50 ppm 10 minute(s). CEIL: 20 ppm

3. Hazards identification

Physical state Liquid.
Color Clear.
Emergency Overview DANGER!

Extremely flammable liquid and vapor.
 Vapor may cause flash fire.
 Vapor may contain hydrogen sulfide (H2S) gas which can be harmful or fatal if inhaled.
 Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness, and nausea, and may lead to unconsciousness or death.
 Harmful or fatal if liquid is aspirated into lungs.
 Contains: Benzene.
 Cancer hazard. Can cause cancer.
 Repeated or prolonged exposure to the substance can produce blood disorders.
 Causes eye irritation.
 Causes skin irritation.
 Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
 Do not ingest. If ingested do not induce vomiting. Avoid contact with skin and clothing. Do not breathe vapor or mist. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

Routes of Entry

Skin contact. Eye contact. Inhalation. Ingestion.

POTENTIAL HEALTH EFFECTS

Eyes	Causes eye irritation.
Skin	Causes skin irritation. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. Harmful on prolonged exposure. Contains material which can cause cancer.
Inhalation	May be fatal if inhaled. Vapors containing hydrogen sulfide may accumulate during storage or transport. May cause respiratory tract irritation. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness, and nausea, and may lead to unconsciousness or death. Harmful on prolonged exposure. Contains material which can cause cancer. Repeated or prolonged exposure to the substance can produce blood disorders.
Ingestion	Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs. Causes gastrointestinal irritation and diarrhea.

Medical Conditions Aggravated by Overexposure: Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

See Toxicological Information (section 11)

4. First-aid measures

Eye Contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin Contact	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
Ingestion	If swallowed, do NOT induce vomiting. Never give anything by mouth to an unconscious person. Aspiration hazard if swallowed- can enter lungs and cause damage. Get medical attention immediately.

5. Fire-fighting measures

Flammability of the Product	Extremely flammable.
Flash point	-40 °C Estimated. (May vary with source of crude)
Explosion Limits	LOWER: 1.1 % (May vary with source of crude) UPPER:13.0% (May vary with source of crude)
Products of Combustion	These products are: Hydrogen Sulfide (H2S) carbon oxides (CO, CO2), sulfur oxides (SO2, SO3...), Smoke as products of incomplete combustion.
Unusual fire/explosion hazards	Extremely flammable liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition and flash back. Runoff to sewer may create fire or explosion hazard. This material is not explosive as defined by established regulatory criteria.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. Do not use water jet. DO NOT FIGHT FIRE WHEN IT REACHES MATERIAL. Withdraw from fire and let it burn. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. First move people out of line-of-sight of the scene and away from windows.

6. Accidental release measures

Personal Precautions	Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5). Do not touch or walk through spilled material.
Environmental Precautions and Clean-up Methods	If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways. See Section 13 for Waste Disposal Information.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

7. Handling and storage

Handling	Keep away from heat, sparks and flame. Use only with adequate ventilation. Keep container closed. Do not ingest. Wash thoroughly after handling. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Avoid breathing vapor or mist.
Storage	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Vapors containing hydrogen sulfide may accumulate during storage or transport. Avoid breathing vapor or mist.

8. Exposure controls/personal protection

Occupational Exposure Limits

Natural gas condensates (petroleum)	ACGIH TLV (United States, 2002). TWA: 5 mg/m ³ 8 hour(s). Form: Oil mist STEL: 10 mg/m ³ 15 minute(s). Form: Oil mist
Benzene	ACGIH TLV (United States, 2001). Skin TWA: 0.5 ppm 8 hour(s). STEL: 2.5 ppm 15 minute(s). TWA: 1.6 mg/m ³ 8 hour(s). STEL: 8 mg/m ³ 15 minute(s). OSHA PEL (United States). STEL: 5 ppm 15 minute(s). TWA: 1 ppm 8 hour(s). OSHA PEL Z2 (United States, 2001). AMP: 50 ppm 10 minute(s).
HYDROGEN SULFIDE	ACGIH TLV (United States, 2002). STEL: 15 ppm 15 minute(s). TWA: 10 ppm 8 hour(s). STEL: 21 mg/m ³ 15 minute(s). TWA: 14 mg/m ³ 8 hour(s). OSHA PEL (United States, 1971). CEIL: 20 ppm PEAK: 50 ppm 10 minute(s). OSHA PEL 1989 (United States, 1989). Notes: See Table Z-2. See Table Z-2. STEL: 21 mg/m ³ 15 minute(s). STEL: 15 ppm 15 minute(s). TWA: 14 mg/m ³ 8 hour(s). TWA: 10 ppm 8 hour(s). OSHA PEL Z2 (United States, 2001). AMP: 50 ppm 10 minute(s). CEIL: 20 ppm

Control Measures	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Hygiene measures	Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
Personal Protection	
Eyes	Avoid contact with eyes. Chemical splash goggles.
Skin and Body	Do not get on skin or clothing. Wear clothing and footwear that cannot be penetrated by chemicals or oil.

Respiratory

Use only with adequate ventilation. Do not breathe vapor or mist. Air supplied respiratory protection approved by NIOSH should be worn whenever it is required for the worker's face to be within 3 feet of an open hatch. If operating conditions cause high vapor concentrations or TLV is exceeded, use NIOSH certified supplied-air respiratory.

Hands

Wear gloves that cannot be penetrated by chemicals or oil.

Consult your supervisor or S.O.P. for special handling directions

Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

Physical state	Liquid.
Odor	Hydrocarbon. or Rotten eggs. (May vary with source of crude)
Color	Clear.
Boiling Point / range	-22°C to 350°C
Specific Gravity	<1
Vapor Pressure	The highest known value is 10 kPa (75 mmHg) (at 40°C) (Benzene).
Solubility	Insoluble in cold water.

10. Stability and reactivity

Stability and Reactivity	The product is stable.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
Incompatibility with Various Substances	Chlorine, Fluorine, Highly reactive with oxidizing agents.
Hazardous Decomposition Products	Products of Combustion: sulfur oxides (SO ₂ , SO ₃ ...), carbon oxides (CO, CO ₂), Hydrogen Sulfide (H ₂ S), Smoke as products of incomplete combustion.
Hazardous Polymerization	Will not occur.

11. Toxicological information

Chronic toxicity

Carcinogenic Effects

CANCER HAZARD
CONTAINS MATERIAL WHICH CAN CAUSE CANCER Risk of cancer depends on duration and level of exposure.

Other information

Hydrogen sulfide (H₂S) gas may accumulate in storage tanks of bulk transport compartments containing this material. Contact with eyes causes painful conjunctivitis, sensitivity to light, tearing and clouding of vision. Inhalation of low concentrations causes a runny nose with a loss of sense of smell, labored breathing and shortness of breath. Direct contact with skin causes pain and redness. Other symptoms of exposure include profuse salivation, nausea, vomiting, diarrhea, giddiness, headache, dizziness, confusion, rapid breathing, rapid heart rate, sweating, weakness, sudden collapse, unconsciousness and death due to respiratory paralysis. Cardiac neurological effects have also been reported. Prolonged breathing (greater than one hour) of concentrations of H₂S around 50 ppm can produce eye and respiratory tract irritation. Levels of 250 to 600 ppm will result in fluid in the lungs, and concentrations around 1,000 ppm will cause unconsciousness and death in a short period of time. Since the sense of smell rapidly becomes insensitive to this toxic, colorless gas, odor cannot be relied upon as an indicator of concentrations of the gas. Always exercise caution when working around closed containers.

Benzene: Acute toxicity of benzene results primarily from depression of the central nervous system (CNS). Inhalation of concentrations over 50 ppm can produce headache, lassitude, weariness, dizziness, drowsiness, or excitation. Exposure to very high levels can result in unconsciousness and death.

Benzene: Long-term overexposure to benzene has been associated with certain types of leukemia in humans. In addition, the International Agency for Research on Cancer (IARC), the National Toxicology Program, and OSHA consider benzene to be a human carcinogen. Chronic exposures to benzene at levels of 100 ppm and below have been reported to cause adverse blood effects including anemia. Benzene exposure can occur by inhalation and absorption through the skin.

Inhalation and forced feeding studies of benzene in laboratory animals have produced a carcinogenic response in a variety of organs, including possibly leukemia, other adverse effects on the blood, chromosomal changes and some effects on the immune system. Exposure to benzene at levels up to

300 ppm did not produce birth defects in animal studies; however, exposure to the higher dosage levels (greater than 100 ppm) resulted in a reduction of body weight of the rat pups (fetotoxicity). Changes in the testes have been observed in mice exposed to benzene at 300 ppm, but reproductive performance was not altered in rats exposed to benzene at the same level.

Aspiration of this material into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this material.

12. Ecological information

Ecotoxicity	Ecological testing has not been conducted on this product by BP.
Mobility	This product is not likely to move rapidly with surface or groundwater flows because of its low water solubility of: <0.1%

13. Disposal considerations

Waste Information	Dispose of in accordance with all applicable local and national regulations. Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Labels should not be removed from containers until they have been cleaned.
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Consult your local or regional authorities.

14. Transport information

International transport regulations

Regulatory Information	UN number	Proper shipping name	Class	Packing Group	Label	Additional information
DOT Classification	UN3295	Hydrocarbons, liquids, n.o.s. (Benzene, Hydrogen Sulfide)	3	I	Not determined.	Reportable Quantity
TDG Classification	UN1267	PETROLEUM CRUDE OIL (Benzene, Hydrogen Sulfide)	3	I	Not determined.	
IMDG Classification	UN3295	Hydrocarbons, liquids, n.o.s. (Benzene, Hydrogen Sulfide)	3	I	Not determined.	-
IATA Classification	UN3295	Hydrocarbons, liquids, n.o.s. (Benzene, Hydrogen Sulfide)	3	I	Not determined.	-

15. Regulatory information

U.S. Federal Regulations	<p>US INVENTORY (TSCA): Listed on inventory.</p> <p>SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355): Hydrogen Sulfide SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370): NATURAL GASOLINE: Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard SARA 313 toxic chemical notification and release reporting: Benzene 3% CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4): Benzene: 10 lbs. (4.536 kg); Hydrogen Sulfide: 100 lbs. (45.36 kg);</p>
State Regulations	<p>Pennsylvania RTK: Benzene: (special hazard, environmental hazard, generic environmental hazard); Hydrogen Sulfide: (environmental hazard, generic environmental hazard) Massachusetts RTK: Benzene; Hydrogen Sulfide New Jersey: Benzene; Hydrogen Sulfide California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Benzene</p>
Inventories	<p>AUSTRALIAN INVENTORY (AICS): Listed on inventory.</p> <p>CANADA INVENTORY (DSL): Listed on inventory.</p> <p>CHINA INVENTORY (IECS): Listed on inventory.</p> <p>EC INVENTORY (EINECS): Listed on inventory.</p> <p>JAPAN INVENTORY (ENCS): Not determined.</p>

16. Other information

Label Requirements

DANGER!

Extremely flammable liquid and vapor.
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 Vapor may contain hydrogen sulfide (H₂S) gas which can be harmful or fatal if inhaled.
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Hazardous Material Information System (U.S.A.)

Health	*	3
Fire Hazard		4
Physical Hazard		0
Personal Protection		X

National Fire Protection Association (U.S.A.)



HISTORY

Date of issue 04/25/2003.
Date of Previous Issue No Previous Validation.
Prepared by Product Stewardship

Notice to Reader

NOTICE : This Material Safety Data Sheet is based upon data considered to be accurate at the time of its preparation. Despite our efforts, it may not be up to date or applicable to the circumstances of any particular case. We are not responsible for any damage or injury resulting from abnormal use, from any failure to follow appropriate practices or from hazards inherent in the nature of the product.