

SAFETY DATA SHEET



BITUMEN

000003000832

Version 3.1

Revision Date 2018/06/06

Print Date 2018/06/06

SECTION 1. IDENTIFICATION

Product name : BITUMEN

Synonyms : MacKay River Bitumen, FireBag Hot Bitumen, Dover Bitumen, Bitumen, Off-Spec Bitumen, Sales Oil, FB HB, FHB, MKB, Natural Asphalt

Product code : 100236

Manufacturer or supplier's details
SUNCOR ENERGY INC.
P.O. Box 2844, 150 - 6th Avenue South-West
Calgary Alberta T2P 3E3
Canada

Emergency telephone number : Suncor Energy: +1 403-296-3000;
Canutec Transportation: 1-888-226-8832 (toll-free) or 613-996-6666;
Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use : Raw product for oil refineries to produce fuels and other petroleum based organic products.

Prepared by : Product Safety: +1 905-804-4752

SECTION 2. HAZARDS IDENTIFICATION


Emergency Overview

Appearance	viscous liquid
Colour	black
Odour	Tarry odour. "Rotten egg" if H2S present, but odour is an unreliable warning, since it may deaden the sense of smell.

GHS Classification

Skin irritation : Category 2

GHS label elements

Hazard pictograms : 

Signal word : Warning

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Hazard statements : Causes skin irritation.

Precautionary statements : **Prevention:**
Wash skin thoroughly after handling.
Wear protective gloves.
Response:
IF ON SKIN: Wash with plenty of water.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash it before reuse.

Potential Health Effects

Primary Routes of Entry : Eye contact
Ingestion
Inhalation
Skin contact

Inhalation : May cause respiratory tract irritation.
Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Inhalation may cause central nervous system effects.
Hydrogen sulphide may be released and collect in the vapor space of process vessels and storage tanks.
In high doses hydrogen sulphide may produce pulmonary edema and respiratory depression or paralysis.

Skin : Causes skin irritation.

Eyes : May cause eye irritation.

Ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Aggravated Medical Condition : None known.

Other hazards

None known.

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

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Hazardous components

Chemical name	CAS-No.	Concentration
Bitumens	128683-24-9	90 - 100 %
Organo-sulphur compounds	7704-34-9	4 - 5 %

During storage or transit of hot bitumen, hydrogen sulphide may be generated., May contain Polycyclic Aromatic Hydrocarbons (PAHs).

SECTION 4. FIRST AID MEASURES

- If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary.
Seek medical advice.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.
- In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.
- If swallowed : Rinse mouth with water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
Seek medical advice.
- Most important symptoms and effects, both acute and delayed : Symptoms of hydrogen sulphide overexposure include respiratory tract irritation and shortness of breath.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing.
It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : No information available.
- Specific hazards during fire- : Cool closed containers exposed to fire with water spray.

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fighting

Hazardous combustion products : Carbon oxides (CO, CO₂), nitrogen oxides (NO_x), sulphur oxides (SO_x), hydrogen sulphide (H₂S), smoke and irritating vapours as products of incomplete combustion.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : For personal protection see section 8.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions.

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Prevent further leakage or spillage if safe to do so.
Remove all sources of ignition.
Soak up with inert absorbent material.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Use only with adequate ventilation.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and sources of ignition.
Keep container closed when not in use.
Hydrogen sulphide may accumulate in enclosed spaces.
Open tank car hatches with caution.

Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sun-

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light.
Hydrogen sulphide may be released and collect in the vapor space of process vessels and storage tanks.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Bitumens	128683-24-9	TWA	2 mg/m ³ (Bitumen fume)	Suncor Energy
hydrogen sulphide	7783-06-4	TWA	10 ppm 14 mg/m ³	CA AB OEL
		Ceiling	15 ppm 21 mg/m ³	CA AB OEL
		Ceiling	10 ppm	CA BC OEL
		TWA	10 ppm	CA ON OEL
		STEL	15 ppm	CA ON OEL
		TWAEV	10 ppm 14 mg/m ³	CA QC OEL
		STEV	15 ppm 21 mg/m ³	CA QC OEL
		TWA	1 ppm	ACGIH
		STEL	5 ppm	ACGIH

Engineering measures : Adequate ventilation to ensure that Occupational Exposure Limits are not exceeded.

Personal protective equipment

Respiratory protection : Concentration in air determines protection needed. Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : organic vapour cartridge or canister with a dust, fume or mist filter (R, or P series) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited.

Hand protection Material : natural rubber (latex), Viton(R). Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.

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Remarks	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	: Wear face-shield and protective suit for abnormal processing problems. Ensure that eyewash stations and safety showers are close to the workstation location.
Skin and body protection	: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Protective measures	: Wash contaminated clothing before re-use.
Hygiene measures	: Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: viscous liquid
Colour	: black
Odour	: Tarry odour. "Rotten egg" if H ₂ S present, but odour is an unreliable warning, since it may deaden the sense of smell.
Odour Threshold	: No data available
pH	: No data available
Pour point	: 21 °C (70 °F)
Boiling point/boiling range	: 230 - 1,000 °C (446 - 1,832 °F) Decomposition: No data available
Flash point	: 182 °C (360 °F) Method: Cleveland open cup
Fire Point	: No data available
Auto-Ignition Temperature	: > 245 °C (> 473 °F)
Evaporation rate	: No data available
Flammability	: Low fire hazard. This material must be heated before ignition will occur. Hydrogen sulphide may be released if the product is overheated.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available

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Relative vapour density	:	No data available
Relative density	:	1 - 1.1
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity		
Viscosity, kinematic	:	29116 cSt (40 °C / 104 °F)
Explosive properties	:	Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Conditions to avoid	:	No data available
Incompatible materials	:	Reactive with oxidising agents.
Hazardous decomposition products	:	May release COx, NOx, SOx, H2S, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact
Ingestion
Inhalation
Skin contact

Acute toxicity

Product:

Acute oral toxicity	:	Remarks: No data available
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	Remarks: No data available

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Skin corrosion/irritation

Product:

Remarks: No data available

Serious eye damage/eye irritation

Product:

Remarks: No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to bacteria : Remarks: No data available

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

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Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

National Regulations

TDG

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all of the information required by the HPR.

The components of this product are reported in the following inventories:

DSL On the inventory, or in compliance with the inventory

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SECTION 16. OTHER INFORMATION

For Copy of SDS : Internet: www.petro-canada.ca/msds
Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228
For Product Safety Information: 1 905-804-4752

Prepared by : Product Safety: +1 905-804-4752

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