

Safety Data Sheet

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name: Kerosene
Synonyms: hydrotreated kerosene, low-sulphur diesel fuel, hydrotreated light petroleum distillates, etc.
CAS# 68476-34-6; alternate CAS# - 64742-47-8, 64742-81-0, 8008-20-6 & others EC# 270-676-1; alternate EC# - 265-149-8, 265-184-9, 232-366-4 & others
Recommended use: Fuel, solvent, component of synthetic crude oil

Details of the supplier of the safety data sheet

Manufacturer: BOSS Lubricants Ltd.
 6303 30 St SE
 Calgary, Alberta, T2C 1R4
Information Phone: 1-800-844-9457
Website: www.bosslubricants.com

In an Emergency

Canada Call CANUTEC: (613) 996-6666
U.S.A. Call CHEMTREC (800) 424-9300

SECTION 2: HAZARDS IDENTIFICATION



GHS Class (Category)	<i>flammable</i> (3)	<i>skin irritant</i> (3)	<i>aspiration haz.</i> (1)	<i>aquatic chronic</i> (3)
Signal Words	WARNING	<i>no Signal Word</i> no Pictogram	WARNING	<i>no Signal Word</i> no Pictogram
Hazard Statements	<i>flammable liquid & vapour (H226)</i>	<i>causes mild skin irritation (H316)</i>	<i>may be fatal if swallowed and enters airways (H304)</i>	<i>harmful to aquatic life with long-lasting effects (H412)</i>

GHS Precautionary Statements for Labelling

P210: Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P240, P242: Ground or bond container and receiving equipment. Use only non-sparking tools.
P241, P243: Use explosion-proof electrical, ventilating and lighting equipment. Take precautionary measures against static discharge.
P260, P262: Do not breathe mist or vapours. Do not get in eyes, on skin or on clothing.



- P264:** Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear eye protection and protective gloves of neoprene, nitrile or "Viton".
P273, P391: Avoid release to the environment. Collect spillage.
P313 & P333: If skin irritation or rash occurs, get medical advice/attention.
P370, P378: In case of fire use dry powder or alcohol-resistant foam to extinguish.
P305, P351, P338: If in eyes, rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Canada – WHMIS **B 3, D 2B**
Key: **B 2** – Flash Point <38°C, **B 3** – Flash Point >38°C & <93°C
D 1 – Immediately Toxic, **D 2** – Chronic Toxicity
C – Oxidising Substance, **E** – Corrosive



SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Component	%	TWAEV / TLV mg/m ³	LD ₅₀ (mg/kg) ORAL	LD ₅₀ (mg/kg) SKIN	LC ₅₀ mg/m ³ INHALATION
Hydrotreated Kerosene	100%	200	>15,000	>2000	>5000

SECTION 4: FIRST AID MEASURES

- SKIN:** Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.
- EYES:** Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.
- INHALATION:** Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If breathing stops, administer artificial respiration and seek medical aid promptly.
- INGESTION:** Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.
Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

SECTION 5: FIRE FIGHTING MEASURES

- Flash Point:** 50°C / 122°F
Autoignition Temperature: 234-237°C / 453-459°F
Flammable Limits: 1.3% - 6%
Combustion Products: Carbon monoxide, nitrogen oxides, smoke, part oxidised hydrocarbon fragments
Firefighting Precautions: Foam, dry chemical, CO₂, water fog or spray to cool intact containers, water jet spreads flames; firefighters must wear SCBA
Static Charge Accumulation: Readily accumulates a static charge on agitation or pumping

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Leak Precaution:** Dike far ahead of liquid spill for collection, later disposal and prevent environmental contamination



Handling Spill: Ventilate contaminated area; recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep & pick up using plastic or aluminium shovel, & store in closed containers for recycling or disposal

SECTION 7: HANDLING AND STORAGE

Store in a cool, away from sources of ignition, heat and oxidising agents. Explosion-proof electrical and mechanical equipment (including lighting, switchgear and forklift trucks) plus non-sparking bronze or aluminum hand tools are recommended for use with or around this product. It is prudent to ground or electrically bond both the source container and the receiving container, and transfer pump before transferring contents. Avoid splashing by ensuring that the product nozzle is below the surface in the receiving container. Empty containers may contain a flammable / explosive vapour. Ensure that containers, whether empty or full, are tightly sealed unless in use.

Avoid generating or breathing product vapour. If vapour forms in use, install with adequate ventilation to control airborne titre to regulated limits. If dealing with a spill in a closed space, wear a suitable respirator with organic vapour cartridge.

Never cut, drill, weld or grind on or near this container. Avoid contact with skin and wash work clothes frequently. An eye bath and safety shower must be available near the workplace.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Ontario TWA EV	200mg/m ³ (as total hydrocarbon vapour)	Ontario STEV	not listed
ACGIH TLV	200mg/m ³ (as total hydrocarbon vapour)	ACGIH STEL	not listed
OSHA PEL	not listed	OSHA STEL	not listed
Ventilation	no special mechanical ventilation required due to low vapour pressure		
Hands	wear neoprene, nitrile or "Viton" gloves – other types may also protect; confirm suitability with supplier		
Eyes	safety glasses with side shields – always protect the eyes		
Clothing	special protective clothing is recommended if skin contact is likely		

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

NOTE: for Flash Point, Autoignition Temp, & Flammable Limits see Part 5.

Odour:	Mild kerosene odour
Appearance:	Clear, amber liquid
Odour Threshold:	Not known
Vapour Pressure:	<0.75mmHg / 0.1kPa (37.8°C / 100°F)
Evaporation Rate (Butyl Acetate = 1):	Not known – similar to high flash point mineral spirits
Vapour Density (air = 1):	.5
Boiling Range:	100°C – 400°C / 212°F – 752°F
Freezing Point:	Not known – -40°C / -40°F (Canadian General Standards Board specification)
Decomposition Temperature:	Not known
Specific Gravity:	0.85 (20/20°C)
Water Solubility:	typical kerosene values are around 1mg/litre
Also, soluble in:	Non-polar solvents (hydrocarbons), acetone, diethyl ether,
Log P _{o/w} (Octanol/H ₂ O partition):	not known – typical kerosene values are around 3-6
Viscosity:	not known – typical kerosene values are around 2-3 centistokes (20-30°C)
pH:	N/A
Molecular Weight:	mixture – variable; typical values are 180-200grams/mole

SECTION 10: STABILITY AND REACTIVITY

Dangerously Reactive with:	Strong oxidising agents
Also, Reactive with:	None known
Stability stable:	Will not polymerize
Decomposes in Presence of:	No decomposition triggers known
Decomposition Products:	None apart from Combustion Products, Part 5
Sensitive to Mechanical Impact:	No

SECTION 11: TOXICOLOGICAL INFORMATION

Effects, Acute Exposure

Skin Contact:	May irritate if exposure is prolonged
Skin Absorption:	Slight; no toxic effects likely by this route
Eye Contact:	Unlikely to irritate if eyes are washed promptly
Inhalation:	May irritate respiratory system – <i>low vapour pressure makes this unlikely</i>
Ingestion:	Ingestion of 100+ml may cause temporary diarrhoea – <i>not a route of industrial exposure</i>
LD₅₀ (oral):	15,000mg/kg (rat), 17,000mg/kg (guinea pig)
LD₅₀ (skin):	>2000 & >4000mg/kg (rabbit)
LC₅₀ (inhalation):	>5000mg/m ³ (rat)

Effects, Chronic Exposure

General:	Prolonged or repeated exposure may cause dermatitis due to removal of protective skin oils
Sensitising:	Not a sensitiser in humans or animals
Carcinogen/Tumorigen:	Not considered a tumorigen or a carcinogen in humans or animals*
Reproductive Effect:	No known effect in humans or animals
Mutagen:	No known effect on humans or animals
Synergistic With:	Not known

* *Carcinogenic activity depends on degree of hydrogenation. Moreover, some experimental animal cancers/tumours induced in testing with kerosene and similar products do not occur in humans.*

SECTION 12: ECOLOGICAL INFORMATION

Bioaccumulation:	Not a bioaccumulator
Biodegradation:	Aerobic biodegradation rates: 45% in 10 days, 35%, 57%, 59% (twice), 61% (twice) in 28 days
Abiotic Degradation:	Reacts with atmospheric hydroxyl radicals; estimated ½-life in air is unknown
Mobility in soil, water:	Water insoluble; immobile in soil and water

Aquatic Toxicity

LC₅₀ (Fish, 96hr):	2.5mg/litre (Oncorhynchus mykiss) ¹ , 25mg/litre (Oncorhynchus mykiss – water accommodated fraction = WAF) ¹ 21 & 65mg/litre (Oncorhynchus mykiss) ² , 3.2mg/litre (Menidia beryllina) ² , 57mg/litre (Pimephales promelas) ²
EC₅₀ (Crustacea, 48hr):	1.4, 1.9 & 21mg/litre (Daphnia magna – WAF) ¹ , 68 & 210mg/litre (Daphnia magna) ² ,
EC₅₀ (Algae):	1.3, 3.7, 4.2 & 8.3mg/litre (Pseudokirchnerella subcapitata – WAF) ¹ , 10, 22, 25 & 78mg/litre (Pseudokirchnerella subcapitata) ²
EC₅₀ (Bacteria):	678mg/litre (Tetrahymena pyriformis – QSAR calculation) ¹ , >1000mg/litre (Tetrahymena pyriformis – QSAR calculation) ²

NOTE: (a) Very water solubility makes testing for aquatic toxicity very challenging.
(b) There is much information available for compounds similar to this product; data for 2 were selected (see Ref #1 & #2).

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Do not flush to sewer, recycle solvent if possible, may be incinerated in approved facility

Containers: Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.
Pails must be vented and thoroughly dried prior to crushing and recycling.
IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months.
Replace at 60 months (5yrs). Steel containers must be inspected, pressure tested & recertified every 5 years.
Never cut, drill, weld or grind on or near this container, even if empty

SECTION 14: TRANSPORT INFORMATION

Canada TDG U.S.A. 49 CFR

PIN: UN- 1268
Shipping Name: Petroleum distillates N.O.S. (kerosene)
Class: 3
Packing Group: III
Marine Pollutant: *Not a marine pollutant*
ERAP: Not required
Reportable Quantity (RQ – USA): None



SECTION 15: REGULATORY INFORMATION

Canada DSL: On inventory
U.S.A. TSCA: On inventory
Europe EINECS: On inventory

This very common substance is on the chemical inventories of almost every country.

U.S.A. Regulations:

Allowable Tolerances: Residues of kerosene, USP reagent are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals. Use: solvent, cosolvent. Limit: none.

NIOSH Recommendations: Recommended Exposure Limit: 10 Hour Time-Weighted Average: 100 mg/cu m.



Threshold Limit Values: 8 hr Time Weighted Avg (TWA): 200 mg/cu m, (Application restricted to conditions in which there are negligible aerosol exposures). Skin. /Kerosene/Jet fuels, as total hydrocarbon vapor/ Excursion Limit Recommendation: Excursions in worker exposure levels may exceed three times the TLV-TWA for no more than a total of 30 min during a work day, and under no circumstances should they exceed five times the TLV-TWA, provided that the TLV-TWA is not exceeded. /Kerosene/Jet fuels, as total hydrocarbon vapor/ A3; Confirmed animal carcinogen with unknown relevance to humans. /Kerosene/Jet fuels, as total hydrocarbon vapor/

FIFRA Requirements: Residues of kerosene, USP reagent are exempted from the requirement of a tolerance when used in accordance with good agricultural practice as inert (or occasionally active) ingredients in pesticide formulations applied to animals. Use: solvent, cosolvent. Limit: none. As the federal pesticide law FIFRA directs, EPA is conducting a comprehensive review of older pesticides to consider their health and environmental effects and make decisions about their future use. Under this pesticide reregistration program, EPA examines health and safety data for pesticide active ingredients initially registered before November 1, 1984, and determines whether they are eligible for reregistration. In addition, all pesticides must meet the new safety standard of the Food Quality Protection Act of 1996. Pesticides for which EPA had not issued Registration Standards prior to the effective date of FIFRA, as amended in 1988, were divided into three lists based upon their potential for human exposure and other factors, with List B containing pesticides of greater concern and List D pesticides of less concern. Kerosene is found on List C. Case No: 3004; Pesticide type: Insecticide, Fungicide, Herbicide, Rodenticide, and Antimicrobial; Case Status: OPP is reviewing data from the pesticide's producers regarding its human health and/or environmental effects, or OPP is determining the pesticide's eligibility for reregistration and developing the Reregistration Eligibility Decision (RED) document.; Active ingredient (AI): Kerosene; AI Status: The active ingredient is no longer contained in any registered pesticide products ... "cancelled."

SECTION 16: OTHER INFORMATION

Revision Date: May 1, 2017

Summary of Changes: New SDS

References

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CFR: Code of Federal Regulations

DOT: United States Department of Transportation

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

HMIS: Hazardous Materials Identification System

IARC: International Agency for Research on Cancer

IATA: International Air Transportation Association

IDLH: Immediately Dangerous to Life or Health

IMDG: International Maritime Dangerous Goods

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

RTK: Right-to-Know

SARA: Superfund Amendments and Reauthorization Act

STEL: Short-term Exposure Limit

TLV: Threshold limit value

TSCA: Toxic Substances Control Act

TWA: Time weighted average

UN: United Nations

WHMIS: Workplace Hazardous Materials Information System

Disclaimer: This safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in the data sheet which we have received from outside sources and we believe the information to be correct, but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product in a safe manner and to comply with all



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