

Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 09.03.2020

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Firefly Safe & Green Lamp Oil

SECTION 1: Identification

Product identifier

Product name: Firefly Safe & Green Lamp Oil



Recommended use of the product and restriction on use

Relevant identified uses: Tiki Torch Fuel, Lamp Oil, Lantern Oil, Liquid Candle Oil, Solvent

Uses advised against: This product must not be used in applications other than the above without first seeking the advice of the supplier.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

Supplier

Fire Fly Fuels, Inc.

8150 Blaikie Ct

Sarasota, FL 34240 USA

+1 (941)-404-6820

www.FireflyFuel.com

Emergency telephone number:

United States

CHEMTREC

1-800-424-9300 (US/Canada)

+01 703-527-3887 (International)

SECTION 2: Hazard(s) identification

GHS classification:

Aspiration hazard, category 1

Label elements

Hazard pictograms:



Signal word: Danger

Hazard statements:

H304 May be fatal if swallowed and enters airways.

Precautionary statements:

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P331 Do NOT induce vomiting.

P405 Store locked up.

P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

Hazards not otherwise classified:

May form flammable/explosive vapor-air mixture

This material is a static accumulator

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If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air vapor mixtures can occur

Repeated exposure may cause skin dryness or cracking

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: Proprietary	Trade Secret	100

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not expected to be a health hazard when used under normal conditions

When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings

After inhalation:

Maintain an unobstructed airway

Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment

Loosen clothing as necessary and position individual in a comfortable position

After skin contact:

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention

After eye contact:

Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention

After swallowing:

Rinse mouth thoroughly

If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101 ° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Potential for chemical pneumonitis. Call a doctor or poison control center for guidance

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Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only

Unsuitable extinguishing media:

Do not use water in a jet

Specific hazards during fire-fighting:

Clear fire area of all non-emergency personnel

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke), carbon monoxide, unidentified organic and inorganic compounds

Flammable vapors may be present even at temperatures below the flash point

The vapor is heavier than air, spreads along the ground and distant ignition is possible

Will float and can be reignited on surface water

Special protective equipment for firefighters:

Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards

Special precautions:

Keep adjacent containers cool by spraying with water

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

Observe all relevant local and international regulations. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained

Avoid contact with skin, eyes and clothing. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Do not breathe fumes, vapor. Do not operate electrical equipment

Environmental precautions:

Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

For small liquid spills (< 1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely Remove contaminated soil and dispose of safely

For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow

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residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely

Dispose of contents / container in accordance with local regulations

Ventilate contaminated area thoroughly. If contamination of site occurs remediation may require specialist advice

Reference to other sections:

Sections 8 and 13

Section 15

SECTION 7: Handling and storage

Precautions for safe handling:

Avoid breathing mist or vapor.

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid contact with skin, eyes and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols.

Bulk storage tanks should be diked (bunded).

The vapor is heavier than air, spreads along the ground and distant ignition is possible.

Do not cut, drill, grind, weld or perform similar operations on or near containers.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.

Protect from physical damage.

Store in a cool, well-ventilated area.

Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Storage Temperature: Ambient.

Bulk storage tanks should be diked (bunded).

Locate tanks away from heat and other sources of ignition. Cleaning, inspection and maintenance of storage tanks is a specialist operation, which requires the implementation of strict procedures and precautions. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. Electrostatic charges will be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk. The vapors in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

No occupational exposure limits noted for the ingredient(s).

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.

Biological monitoring may also be appropriate for some substances.

For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analyzed by an accredited laboratory.

Appropriate engineering controls:

Always observe good personal hygiene measures, such as washing hands after handling the material and

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before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or subsequent recycle. The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Personal protection equipment

Eye and face protection:

If material is handled such that it could be splashed into eyes, protective eyewear is recommended. Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Skin protection is not required under normal conditions of use. For prolonged or repeated exposures use impervious clothing over parts of the body subject to exposure. If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to relevant Standard, and provide employee skin care programs. Wear antistatic and flame retardant clothing, if a local risk assessment deems it so.

Where hand contact with the product may occur the use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection. Longer term protection: Nitrile rubber gloves. Incidental contact/Splash protection: PVC, neoprene or nitrile rubber gloves. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Respiratory protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for organic gases and vapors [Type A boiling point >65°C (149°F)].

Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

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General hygienic measures:

- Avoid contact with skin, eyes and clothing.
- Wash hands before breaks and at the end of work.
- Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Colorless liquid
Odor	Odorless
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	Not determined or not available.
Initial boiling point/range	240 - 280 °C / 464 - 536 °F
Flash point (closed cup)	109 °C / 228 °F
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	7 %(V)
Lower flammability/explosive limit	0.5 %(V)
Vapor pressure	Not determined or not available.
Vapor density	Not determined or not available.
Density	< 800 kg/m ³ (15 °C / 59 °F)
Relative density	< 0.8
Solubilities	Insoluble.
Partition coefficient (n-octanol/water)	log Pow: > 6.5
Auto/Self-ignition temperature	> 200 °C I > 392 °F
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	<2 mm ² /s (25 °C / 77 °F)
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

Conductivity	Low conductivity: < 100 pS/m. The conductivity of this material makes it a static accumulator. A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m. Whether a liquid is nonconductive or semi-conductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, and antistatic additives can greatly influence the conductivity of a liquid.
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SECTION 10: Stability and reactivity

Reactivity:

Does not react under normal conditions of use and storage.

Chemical stability:

No hazardous reaction is expected when handled and stored according to provisions. Stable under normal

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conditions of use.

Possibility of hazardous reactions:

Reacts with strong oxidising agents.

Conditions to avoid:

Avoid heat, sparks, open flames and other ignition sources. In certain circumstances product can ignite due to static electricity.

Incompatible materials:

Strong oxidizing agents.

Hazardous decomposition products:

Hazardous decomposition products are not expected to form during normal storage.

Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases including carbon monoxide, carbon dioxide, sulphur oxides and unidentified organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

Route	Result
Oral	LD50 (Rat): > 5,000 mg/kg
Inhalation	LC50 greater than near-saturated vapour concentration.
Dermal	LD50 (Rabbit): > 2,000 mg/kg

Substance data: No data available.

Skin corrosion/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

Expected to be non-irritating to skin., Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis.

Substance data: No data available.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

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Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

Assessment:

May be fatal if swallowed and enters airways

Product data:

Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

Substance data: No data available.

Information on likely routes of exposure:

Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

Other information:

No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data:

Fish	LL50: > 100 mg/I
Aquatic invertebrates	EL50: > 100 mg/I
Aquatic Plants	EL50: > 100 mg/I
Bacteria	IC50: > 100 mg/I

Substance data: No data available.

Chronic (long-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

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Substance data: No data available.

Persistence and degradability

Product data:

Expected to be readily biodegradable. Oxidizes rapidly by photo-chemical reactions in air.

Substance data: No data available.

Bioaccumulative potential

Product data:

Has the potential to bioaccumulate.

Substance data: No data available.

Mobility in soil

Product data:

Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations Do not dispose into the environment, in drains or in water courses Waste product should not be allowed to contaminate soil or ground water, or be disposed of into the environment Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

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International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

	Listed
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Significant New Use Rule (TSCA Section 5): None of the ingredients are listed.

Export notification under TSCA Section 12(b): None of the ingredients are listed.

SARA Section 302 extremely hazardous substances: None of the ingredients are listed.

SARA Section 313 toxic chemicals: None of the ingredients are listed.

CERCLA: None of the ingredients are listed.

RCRA: None of the ingredients are listed.

Section 112(r) of the Clean Air Act (CAA): None of the ingredients are listed.

Massachusetts Right to Know:

	None of the ingredients are listed.	Not Listed
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New Jersey Right to Know:

	None of the ingredients are listed.	Not Listed
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New York Right to Know:

	None of the ingredients are listed.	Not Listed
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Pennsylvania Right to Know:

	None of the ingredients are listed.	Not Listed
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California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with OSHA HCS 2012 guidelines. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 1-1-0

HMIS: 1-1-0

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End of Safety Data Sheet