

Material Safety data sheet according to 1907/2006/EC, Article 31

SECTION 1: Identification of the substance/mixture and of the company

1.1 Product identifier

- Trade name: Lion S Oil
- Article number: 51-1625-0707
- CAS Number: 56388-49-9

• 1.2 Relevant identified uses of the substance or mixture and uses advised against

This is recommended as the standard diffusion pump oil in many Japanese electron microscopes. It is a naphthalene-based synthetic material and should not be mixed with other types of diffusion pump fluids. Application of the substance / the preparation: No further relevant information

• 1.3 Details of the supplier of the safety data sheet Supplier:

Oxford Instruments NanoAnalysis
Halifax Rd, High Wycombe HP12 3SE
United Kingdom
Tel: +44 (0) 1494 442255

- Further information obtainable from: Technical Support

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

- Classification according to Regulation (EC) No 1272/2008
- The substance is not classified, according to the CLP regulation.

• 2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008 Void
- Hazard pictograms Void, Signal word Void Hazard statements Void

• 2.3 Other hazards

- Results of PBT and vPvB assessment: PBT: Not applicable. vPvB: Not applicable

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation: Substances

- CAS No. Description
- 56388-49-9 Alkyl naphthalene

SECTION 4: First aid measures

4.1 Description of first aid measures

- General information: No special measures required.
- After inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a **POISON CENTRE** or doctor/physician if you feel unwell.

- After skin contact: Wash with plenty of soap and water.

If symptoms like blister, pain, etc. occur, get medical attention as necessary. After eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- **After swallowing:** Rinse mouth with water and give 1-2 glasses of water or milk.

Immediately get medical attention. Administer artificial respiration or oxygen as necessary.

Never give anything by mouth to an unconscious person. (If vomiting)

Rinse mouth with water thoroughly. Induce vomiting by sticking one finger down your throat, if possible and then immediately get medical attention.

- 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

- Hazards Wear protective equipment such as rubber gloves and tight-fitting safety goggles.

- 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Trade name: Lion S Oil

SECTION 5: Firefighting Measures

• 5.1 Extinguishing media

• Suitable extinguishing agents:

Use fire extinguishing methods suitable to surrounding conditions.

Dry powder, foam, carbon dioxide, sand.

• 5.2 Special hazards arising from the substance or mixture

Since combustion gas contains toxic gases such as carbon monoxide, do not breathe smoke during fire fighting.

• 5.3 Advice for firefighters Immediately shut off fuel supply. Extinguish fire from upwind. Evacuate unnecessary personnel to a safe area. Cool surrounding facilities, etc. with water spray.

Take necessary measures to prevent materials damaging to the environment from releasing by spraying water for extinguishing.

• Protective equipment:

Wear suitable protective equipment (gloves, glasses, mask) during fire fighting.

Extinguish fire from upwind and avoid inhalation of toxic gas.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Make sure to wear rubber gloves, safety glasses, protective clothing, etc. during clean-up.

If spilled in large quantities, evacuate personnel to a safe area.

The spilled area is easy to be slippery. Pay attention to it.

For an indoor place, provide sufficient ventilation until clean-up has been completed.

Prepare fire extinguishing materials to prevent fire. Do not walk through spills. Immediately eliminate all sources of ignition around the area and prepare extinguishing media. Use only non-sparking tools.

• 6.2 Environmental precautions: Do not discharge into rivers or sewers directly.

When diluted with large amounts of water, take care not to release to the environment without proper treatment of contaminated water.

• 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

For small spills, absorb with absorbent materials (earth, sand, dry sand, wastes, etc.) and collect

into an empty container that can be closed and then dispose of it later. Mop residues thoroughly with

wastes, rags, etc. For large spills, dike with earth and sand, etc. to prevent spills and lead them to a safe place for collection. Shovel or vacuum into an empty container.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling. No special measures required.

Provide eye wash facilities and safety shower for emergency near the workplace where the product

is handled. Provide the workplace with sufficient ventilation. Use local exhaust or general ventilation in a

workplace. Wear suitable protective equipment such as protective gloves, eye protection/face protection, protective mask, etc. Wash hands and face thoroughly after handling and gargle.

• Information about fire - and explosion protection:

Use of open flame is strictly prohibited. Use explosion-proof electrical equipment. Make sure to ground equipment, apparatus to take precautionary measures against static discharges.

• 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed and store in a well-ventilated area.

Use of open flame is strictly prohibited.

• Storage: Requirements to be met by storerooms and receptacles: Use container in compliance with standards.

• Information about storage in one common storage facility: Not required.

• Further information about storage conditions: None.

• 7.3 Specific end use(s) No further relevant information available

Trade name: Lion S Oil

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

- Additional information about design of technical facilities:
 If vapour, smoke or mist is generated, use local exhaust ventilation.
 Provide eye wash facilities and safety shower near the workplace where the product is handled.
 Use explosion-proof electrical equipment and take precautionary measures against static discharges for facilities.

- Ingredients with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

- Personal protective equipment: General protective and hygienic measures: Wash hands and face thoroughly after handling and gargle. Respiratory protection: Gas mask for organic solvent if necessary.
- Protection of hands: Protective gloves: The glove material has to be impermeable and resistant to the product/ the substance/ the preparation

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. Impermeable protective gloves (chemical-, oil-, solvent- resistant).

• Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection: Safety glasses with side shields (safety goggles or face protection as necessary).
- Body protection: Anti-static protective clothing with long sleeves

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- General Information: Appearance: Form: Liquid
 Colour: Light yellow Odour: Characteristic Odour threshold: Not determined.
- pH-value: Not determined.
- Change in condition Melting point/freezing point: Undetermined.
 Initial boiling point and boiling range: Undetermined.
- Flash point: 235 °C
- Flammability (solid, gas): Not applicable.
- Ignition temperature: 282 C
- Decomposition temperature: Not determined. Auto-ignition temperature: Not determined.
- Explosive properties: Product does not present an explosion hazard.
- Explosion limits: Lower: Not determined. Upper: Not determined.
- Vapour pressure: Not determined.
- Density at 20 °C: 0.903 g/cm³
- Relative density Not determined.
- Vapour density Not determined.
- Evaporation rate Not determined.
- Solubility in / Miscibility with water: Not miscible or difficult to mix.
- Partition coefficient: n-octanol/water: Not determined.
- Viscosity: Dynamic: Not determined.

Kinematic at 40 °C: 35~39 mm²/s VOC (EC) 0.00 % Solids content: 0.0 %

- 9.2 Other information Hardly soluble in ethanol.

- Additional information 1.93 J/(g °C)

SECTION 10: Stability and reactivity

10.1 Reactivity No self-reactivity.

- 10.2 Chemical stability Stable under normal temperature and pressure.
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- 10.6 Hazardous decomposition products: No dangerous decomposition products known.

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SECTION 11: Toxicological Information continued....

11.1 Information on toxicological effects

- Acute toxicity Based on available data, the classification criteria are not met.
- Specific symptoms in biological assay:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Additional toxicological information:
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological Information

12.1 Toxicity

- Aquatic toxicity: No further relevant information available.
- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- General notes: Not hazardous for water.
- 12.5 Results of PBT and vPvB assessment
- PBT: Not applicable. - vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal Considerations

• 13.1 Waste treatment methods

- Recommendation: Smaller quantities can be disposed of with household waste.

When the content is discarded, dispose of properly via a licensed industrial waste disposal contractor in compliance with relevant regulation.

- Recommendation: When empty contaminated container, package is discarded, remove contents completely and then dispose of properly via a licensed industrial waste disposal contractor in compliance with relevant regulation.

SECTION 14: Transport Information

14.1 UN-Number

- ADR, ADN, IMDG, IATA Void
- 14.2 UN proper shipping name
- ADR, ADN, IMDG, IATA Void
- 14.3 Transport hazard class(es)
- ADR, ADN, IMDG, IATA Class Void, 14.4 Packing group ADR, IMDG, IATA Void
- 14.5 Environmental hazards: Marine pollutant: No
- 14.6 Special precautions for user Not applicable.
- Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable. UN "Model Regulation": Void

SECTION 15: Ecological information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- Directive 2012/18/EU: Named dangerous substances - ANNEX I Substance is not listed.

• 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out

This information is based on our present knowledge and should assist the user with the safe handling of this material when properly applied. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Sales department