

## SAFETY DATA SHEET

Version 4.9  
 Revision Date 05/24/2016  
 Print Date 01/13/2018

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Product identifiers

Product name : Vacuum pump oil

Product Number : 494232  
 Brand : Aldrich  
 Index-No. : 649-454-00-7

CAS-No. : 64741-88-4

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

Identified uses : Laboratory chemicals, Synthesis of substances

#### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich  
 3050 Spruce Street  
 SAINT LOUIS MO 63103  
 USA

Telephone : +1 800-325-5832  
 Fax : +1 800-325-5052

#### 1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Carcinogenicity (Category 1A), H350

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)  
 H350 : May cause cancer.

Precautionary statement(s)  
 P201 : Obtain special instructions before use.  
 P202 : Do not handle until all safety precautions have been read and understood.  
 P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P308 + P313 : IF exposed or concerned: Get medical advice/ attention.  
 P405 : Store locked up.  
 P501 : Dispose of contents/ container to an approved waste disposal plant.

#### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

CAS-No. : 64741-88-4  
EC-No. : 265-090-8  
Index-No. : 649-454-00-7

#### Hazardous components

| Component  | Classification | Concentration |
|--|----------------|---------------|
| <b>Distillates (petroleum), solvent-refined heavy paraffinic</b> |                |               |
|  | Carc. 1A; H350 | <= 100 %      |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

##### General advice

Move out of dangerous area.

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

##### In case of skin contact

Wash off with soap and plenty of water.

##### In case of eye contact

Flush eyes with water as a precaution.

##### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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### 5. FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

No data available

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

No data available

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### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, mist or gas.  
For personal protection see section 8.

#### 6.2 Environmental precautions

No special environmental precautions required.

#### 6.3 Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

**7. HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510): Combustible liquids

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

**Components with workplace control parameters**

| Component   | CAS-No.    | Value   | Control parameters | Basis   |
|---|------------|---|--------------------|---|
| Distillates (petroleum), solvent-refined heavy paraffinic | 64741-88-4 | TWA   | 5.000000 mg/m3     | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants        |
|   |            | TWA   | 5.000000 mg/m3     | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants        |
|   | Remarks    | Upper Respiratory Tract irritation<br>Exposure by all routes should be carefully controlled to levels as low as possible.<br>Suspected human carcinogen |                    |   |
|   |            | TWA   | 5.000000 mg/m3     | USA. ACGIH Threshold Limit Values (TLV)   |
|   |            | Upper Respiratory Tract irritation<br>Not classifiable as a human carcinogen  |                    |   |
|   |            | TWA   | 5.000000 mg/m3     | USA. NIOSH Recommended Exposure Limits  |
|   |            | ST  | 10.000000 mg/m3    | USA. NIOSH Recommended Exposure Limits  |
|   |            | TWA   | 5 mg/m3            | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants        |
|   |            | TWA   | 5 mg/m3            | USA. ACGIH Threshold Limit Values (TLV)   |
|   |            | Upper Respiratory Tract irritation<br>Not classifiable as a human carcinogen  |                    |   |
|   |            | Upper Respiratory Tract irritation<br>Exposure by all routes should be carefully controlled to levels as low as possible.<br>Suspected human carcinogen |                    |   |
|   |            | TWA   | 5 mg/m3            | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                           |
|   |            | TWA   | 5 mg/m3            | USA. NIOSH Recommended Exposure Limits  |
|   |            | ST  | 10 mg/m3           | USA. NIOSH Recommended Exposure Limits  |
|   |            | PEL   | 5 mg/m3            | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|   |            | As sampled by method that does not collect vapor.   |                    |   |

## 8.2 Exposure controls

### Appropriate engineering controls

General industrial hygiene practice.

### Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

No special environmental precautions required.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |   |
|---|---|
| a) Appearance                                   | Form: clear, viscous liquid<br>Colour: amber                        |
| b) Odour  | odourless   |
| c) Odour Threshold                              | No data available   |
| d) pH   | No data available   |
| e) Melting point/freezing point                 | Pour point: -8.99 °C (15.82 °F)                                     |
| f) Initial boiling point and boiling range      | 389 °C (732 °F) - lit.  |
| g) Flash point                                  | 250 °C (482 °F) - Cleveland open cup                                |
| h) Evaporation rate                             | No data available   |
| i) Flammability (solid, gas)                    | No data available   |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 4.5 %(V)<br>Lower explosion limit: 0.45 %(V) |
| k) Vapour pressure                              | < 0.1 hPa (< 0.1 mmHg) at 20 °C (68 °F)                             |
| l) Vapour density                               | No data available   |
| m) Relative density                             | 0.88 g/cm <sup>3</sup> at 25 °C (77 °F)                             |
| n) Water solubility                             | insoluble   |
| o) Partition coefficient: n-octanol/water       | No data available   |
| p) Auto-ignition temperature                    | No data available   |
| q) Decomposition temperature                    | No data available   |

- r) Viscosity 92 mm<sup>2</sup>/s at 40 °C (104 °F) - 10.6 mm<sup>2</sup>/s at 100 °C (212 °F) -  
s) Explosive properties No data available  
t) Oxidizing properties No data available

**9.2 Other safety information**  
No data available

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**10. STABILITY AND REACTIVITY**

**10.1 Reactivity**

No data available

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

No data available

**10.4 Conditions to avoid**

Heat

**10.5 Incompatible materials**

Strong oxidizing agents Strong oxidizing agents

**10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.  
Other decomposition products - No data available  
In the event of fire: see section 5

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**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Acute toxicity**

No data available

LC50 Inhalation - Rat - 4 h - > 5.33 mg/l  
(OECD Test Guideline 403)

Dermal: No data available

No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation - 3 d  
(OECD Test Guideline 405)

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

IARC: 1 - Group 1: Carcinogenic to humans (Distillates (petroleum), solvent-refined heavy paraffinic)

NTP: Known to be human carcinogen The reference note has been added by TD based on the background information of the NTP. (Distillates (petroleum), solvent-refined heavy paraffinic)

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

**Reproductive toxicity**

No data available

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

Repeated dose toxicity      Rat - male and female - Dermal - NOAEL :  $\geq$  2,000 mg/kg - OECD Test Guideline 411

RTECS: PY8040500

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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**12. ECOLOGICAL INFORMATION**

**12.1 Toxicity**

Toxicity to fish                      static test LC50 - Pimephales promelas (fathead minnow) -  $>$  100 mg/l - 96 h (OECD Test Guideline 203)

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

No data available

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**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging**

Dispose of as unused product.

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**14. TRANSPORT INFORMATION**

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

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**15. REGULATORY INFORMATION**

**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Chronic Health Hazard

**Massachusetts Right To Know Components**

|   | CAS-No.    | Revision Date |
|---|------------|---------------|
| Distillates (petroleum), solvent-refined heavy paraffinic | 64741-88-4 | 1989-08-11    |

**Pennsylvania Right To Know Components**

|   | CAS-No.    | Revision Date |
|---|------------|---------------|
| Distillates (petroleum), solvent-refined heavy paraffinic | 64741-88-4 | 1989-08-11    |

**New Jersey Right To Know Components**

|   | CAS-No.    | Revision Date |
|---|------------|---------------|
| Distillates (petroleum), solvent-refined heavy paraffinic | 64741-88-4 | 1989-08-11    |

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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**16. OTHER INFORMATION**

**Full text of H-Statements referred to under sections 2 and 3.**

|       |                   |
|-------|-------------------|
| Carc. | Carcinogenicity   |
| H350  | May cause cancer. |

**HMIS Rating**

|                        |   |
|------------------------|---|
| Health hazard:         | 0 |
| Chronic Health Hazard: | * |
| Flammability:          | 1 |
| Physical Hazard        | 0 |

**NFPA Rating**

|                    |   |
|--------------------|---|
| Health hazard:     | 0 |
| Fire Hazard:       | 1 |
| Reactivity Hazard: | 0 |

**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

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