

## SAFETY DATA SHEET (SDS)

### PRODUCT NAME: DIFFUSION PUMP FLUID - EDWARDS L9

#### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

##### 1.1 Product identifier

Product name: Edwards L9 Diffusion Pump Fluid.  
Other means of identification: Lion L9 Fluid.  
Item numbers: H115-01-015, H115-01-016.

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

Identified use: Pump oil.  
Uses advised against: None.

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

###### UK contact details

Edwards, Innovation Drive, Burgess Hill, West Sussex,  
RH15 9TW, United Kingdom

General enquiries  
Tel: +44 (0)8459 212223  
Email: info@edwardsvacuum.com

###### US contact details

Edwards, 6416 Inducon Drive West, Sanborn,  
New York, 14132, USA

General enquiries  
Toll Free: 1-800-848-9800

##### 1.4 Emergency telephone number

Chemtrec: 1-800-424-9300

#### SECTION 2. HAZARDS IDENTIFICATION

##### 2.1 Classification of the substance or mixture

GHS classification: Substance.  
Classification according to  
Regulation (EC) No. 1272/2008: Not classified.  
Classification according to  
Directive 1999/45/EC: Not classified.

##### 2.2 Label elements

Hazard pictograms: Not applicable.  
Signal words: Not applicable.  
Hazard statements: Not applicable.  
Precautionary statements: Not applicable.

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### 2.3 Other hazards

PBT criteria: No data available.

vPvB criteria: No data available.

Other hazards which do not result in a classification: No data available.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

| Ingredient        | CAS No     | Hazard class*  | Risk phrase / Hazard Statements* |
|-------------------|------------|----------------|----------------------------------|
| Alkyl Naphthalene | 56388-49-9 | Not applicable | Not applicable                   |

\* Hazard class, Risk phrase and Hazard Statements. These columns are only completed for ingredients which are classified as hazardous under EU Directive No 1272/2008 (as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

Full text for the declared risk phrases and hazards statements is given in Section 16

### 3.2 Mixtures

Not applicable.

## SECTION 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

Eyes: Rinse thoroughly with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do so. Seek medical attention if symptoms persist.

Skin: Wash contaminated skin with plenty of soap and water. Seek medical attention if symptoms occur.

Ingestion/Oral: Thoroughly rinse out mouth with plenty of water. Provide the affected person with 1-2 glasses of water or milk. Never give anything by mouth to an unconscious person. Induce vomiting; the affected person should insert one finger down their throat. If breathing problems occur, a qualified individual should administer Oxygen or artificial respiration as indicated. Seek immediate medical attention.

Inhalation: Remove affected person to fresh air. If breathing problems occur, a qualified individual should administer Oxygen or artificial respiration as indicated. Seek immediate medical attention.

General advice: None.

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

Potential acute health effects:

Eyes: No data available.

Skin: No data available.

Ingestion / Oral: No data available.

Inhalation: No data available.

Over-exposure symptoms:

Eyes: No data available.

Skin: No data available.

Ingestion / Oral: No data available.

Inhalation: No data available.

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

No data available.

## SECTION 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media: Dry powder, foam, Carbon Dioxide and sand.

Unsuitable extinguishing media: No data available.

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

Fire and explosion hazard: No data available.

Hazardous combustion products Toxic gases (including Carbon Monoxide) are given off during combustion.

### 5.3 Advice for fire-fighters

Special precautions for fire-fighters: Extinguish fire from upwind.

Special protective equipment for fire-fighters: Firefighters should wear Self-Contained Breathing Apparatus (SCBA) with full face-piece operated in positive pressure mode.

For Flammability Properties - refer to Section 9.

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#### SECTION 6. ACCIDENTAL RELEASE MEASURES

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

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate non-essential staff, or those not equipped with individual personal protective equipment. Turn leaking containers leakside up to prevent the escape of the product. Do not touch or walk through spilled material; spilt product constitutes a slip hazard. Avoid contact with skin and eyes. For indoor spillage, provide sufficient ventilation until clean-up has been completed. Put on appropriate personal protective equipment (refer to Section 8).

For emergency responders: No data available.

##### 6.2 Environmental precautions:

Contain spill before washing area to prevent slip hazard. Eliminate sources of ignition. Prevent product from entering drains, sewers and watercourses.

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

For small spills, use absorbent material such as earth or sand and store recovered material in a suitable container. Mop any residue thoroughly.

For large spills, dyke with earth or sand and direct to a safe place for collection. Shovel or vacuum into a suitable container.

##### 6.4 Reference to other sections

Refer to Section 8 for information on personal protective equipment.

Refer to Section 13 for information on disposal considerations.

#### SECTION 7. HANDLING AND STORAGE

##### 7.1 Precautions for safe handling

Ensure personal protective equipment is used whenever handling the product, refer to Section 8. Handle away from sources of ignition. Use explosion proof electrical equipment, ground equipment and apparatus to take precautionary measures against static discharge.

Avoid eating and drinking in areas where the product is used. Practice good hygiene. Wash hands after use and prior to consuming food and drink.

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

Store in sealed containers, in a cool well-ventilated area, away from sources of ignition.

##### 7.3 Specific end use(s)

No special precautions required.

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### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1 Control parameters

| Substance       | ACGIH - TLV    | OSHA - PEL     | Occupational Exposure Limits EH40 (UK) |
|-----------------|----------------|----------------|--|
| None Identified | Not Applicable | Not Applicable | Not Applicable                         |

#### 8.2 Exposure controls

Appropriate engineering controls: If vapour, smoke or mist is generated, use local exhaust ventilation. Ensure that eyewash stations and safety showers are available close to the workstation location. Use explosion proof electrical equipment and take all anti-static precautions.

Individual protection measures:

Eye/Face Protection: Safety glasses with side shields, safety goggles or face shields in case of splashes.

Hand/Skin Protection: Wear suitable protective clothing such as impermeable gloves (chemical, oil and solvent resistant) and overalls/coveralls appropriate to the risk at the specific workplace.

Respiratory Protection: Wear breathing apparatus, suitable for protection against organic solvents where significant amounts of oil and mist are present.

Hygiene Measures: Practice good hygiene. Wash face, hands and any exposed skin thoroughly after handling and gargle. Remove all soiled and contaminated clothing. Do not eat or drink while handling the product.

Other/General Protection: Wear anti-static long-sleeved working clothes.

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#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

|   |   |  |  |                    |
|---|---|--|--|--------------------|
| Appearance                                | Pale yellow liquid                                | Melting point / freezing point               | No data available                        | °C / °F            |
| Odour                                     | Slight characteristic                             | Initial boiling point and boiling range      | No data available                        | °C / °F            |
| Odour threshold                           | Not data available                                | Flash point                                  | 235 / 455<br>(Cleveland Open Cup)        | °C / °F            |
| pH  | Not applicable                                    | Upper/lower flammability or explosive limits | No data available                        | °C / °F            |
| Evaporation rate                          | No data available                                 | Vapour pressure                              | No data available                        | Torr               |
| Flammability (solid, gas)                 | No data available                                 | Vapour density                               | No data available                        | g/cm <sup>3</sup>  |
| Solubility(ies)                           | Insoluble in water.<br>Hardly soluble in Ethanol. | Relative density                             | 0.903-0.906<br>15°C(59°F) /<br>4°C(39°F) | g/l                |
| Partition coefficient:<br>n-octanol/water | No data available                                 | Auto-ignition temperature                    | 282 / 539                                | °C / °F            |
| Explosive properties                      | No data available                                 | Decomposition temperature                    | No data available                        | °C / °F            |
| Oxidising properties                      | No data available                                 | Viscosity (kinematic)                        | 35-39 @<br>40 °C / 104 °F                | mm <sup>2</sup> /s |

##### 9.1 Other information

None.

#### SECTION 10. STABILITY AND REACTIVITY

##### 10.1 Reactivity

No self-reactivity.

##### 10.2 Chemical stability

Stable under normal conditions of use.

##### 10.3 Possibility of hazardous reactions

No data available.

##### 10.4 Conditions to avoid

Heat and sources of ignition.

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### 10.5 Incompatible materials

No data available.

### 10.6 Hazardous decomposition products

Toxic gases (including Carbon Monoxide) are given off during combustion.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

|   |                    |
|---|--------------------|
| Acute toxicity:   | No data available. |
| Irritation:   | No data available. |
| Corrosivity:  | No data available. |
| Sensitisation:  | No data available. |
| Repeat dose toxicity:                                   | No data available. |
| Carcinogenicity:  | No data available. |
| Mutagenicity:   | No data available. |
| Specific Target Organ Toxicity (STOT) - single exposure | No data available. |
| STOT - repeated exposure                                | No data available. |
| Aspiration hazard                                       | No data available. |
| Toxicity for reproduction:                              | No data available. |

### Information on likely routes of exposure

No data available.

### Symptoms related to the physical, chemical and toxicological characteristics

|                         |                    |
|-------------------------|--------------------|
| Eye Effects:            | No data available. |
| Skin Effects:           | No data available. |
| Ingestion/Oral Effects: | No data available. |
| Inhalation Effects:     | No data available. |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

No data available.

### Other information

No data available.

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### SECTION 12. ECOLOGICAL INFORMATION

#### 12.1 Toxicity

No data available.

#### 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: No data available.

vPvB: No data available.

#### 12.6 Other adverse effects

No data available.

### SECTION 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

Product: Dispose of the product in compliance with all applicable local and national regulations.

Packaging: Dispose of the packaging in compliance with all applicable local and national regulations.

### SECTION 14. TRANSPORT INFORMATION

#### 14.1 UN number

| ADR/RID        | IMDG           | IATA           | United States DOT |
|----------------|----------------|----------------|-------------------|
| Not applicable | Not applicable | Not applicable | Not applicable    |

#### 14.2 UN proper shipping name

| ADR/RID        | IMDG           | IATA           | United States DOT |
|----------------|----------------|----------------|-------------------|
| Not applicable | Not applicable | Not applicable | Not applicable    |



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### 14.3 Transport hazard class

| ADR/RID        | IMDG           | IATA           | United States DOT |
|----------------|----------------|----------------|-------------------|
| Not applicable | Not applicable | Not applicable | Not applicable    |

### 14.4 Packing group

| ADR/RID        | IMDG           | IATA           | United States DOT |
|----------------|----------------|----------------|-------------------|
| Not applicable | Not applicable | Not applicable | Not applicable    |

### 14.5 Environmental hazards

| ADR/RID        | IMDG           | IATA           | United States DOT |
|----------------|----------------|----------------|-------------------|
| Not applicable | Not applicable | Not applicable | Not applicable    |

### 14.6 Special precautions for user

| ADR/RID        | IMDG           | IATA           | United States DOT |
|----------------|----------------|----------------|-------------------|
| Not applicable | Not applicable | Not applicable | Not applicable    |

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

No data available.

## SECTION 15. REGULATORY INFORMATION

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

#### European

This product has been classified in accordance with EU Regulation No 1907/2006 (REACH) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply: No.

German Federal Water Management Act: No data available.

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#### United States

Materials contained in this product are not on the U.S. Toxic Substances Control Act (TSCA).

#### SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and 40 CFR Part 372.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

#### Canadian

WHMIS Classification: No data available.

Ingredients in this product are not included in the Canadian DSL.

#### 15.2 Chemical safety assessment

No data available.

### SECTION 16. OTHER INFORMATION

This SDS is compiled in accordance with ANSI Z400.1, Regulation (EC) No 1907/2006 (as amended by Regulation No 453/2010) concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

#### 16.1 Full text of abbreviated statements and phrases

Not applicable.

#### 16.2 NFPA / HMIS hazard codes

| NFPA Hazard codes |                   | HMIS Hazard codes |                   | Rating System       |
|-------------------|-------------------|-------------------|-------------------|---------------------|
| Health            | No data available | Health            | No data available | 0 = No Hazard       |
| Flammability      | No data available | Flammability      | No data available | 1 = Slight Hazard   |
| Instability       | No data available | Reactivity        | No data available | 2 = Moderate Hazard |
|                   |                   |                   |                   | 3 = Serious Hazard  |
|                   |                   |                   |                   | 4 = Severe Hazard   |

#### 16.3 Sources of information for this data sheet

- Lion Corporation "Lion Diffusion Pump Oil S" Material Safety Data Sheet. Issuing Date: 7th April 2008. Revision Date: 2nd August 2010.

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### 16.4 Glossary

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ANSI - American National Standards Institute; CAS No. - Chemical Abstracts Service number; Chemtrec - Chemical Transportation Emergency Centre (US); DSL - Domestic Substances List; EH40 (UK) - HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA - Emergency Planning and Community Right-to-Know Act; EU European Union; GHS - Globally Harmonized System of Classification and Labelling of Chemicals; HMIS - Hazardous Material Information Service; IATA - International carriage of dangerous goods by air; IBC - International Bulk Chemical; IMDG - International carriage of dangerous goods by sea; LD - Lethal Dose; MARPOL 73/78 - International Convention for the Prevention of Pollution from Ships, 1973 as modified by the protocol of 1978; NFPA - National Fire Protection Association; OSHA - Occupational Safety and Health Administration; PBT - Persistent, Bioaccumulative, Toxic chemical; PEL - Permissible Exposure Limit; REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - International carriage of dangerous goods by rail; SARA (Title III) - Superfund Amendments and Reauthorization Act; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; SDS - Safety Data Sheet; STEL - Short Term Exposure Limit, 15 minute reference period; STOT - Specific Target Organ Toxicity; SCBA - Self-Contained Breathing Apparatus; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Average, 8 hour reference period; US DOT - US Department of Transportation; vPvB - Very Persistent, Very Bioaccumulative chemical; WHMIS - Workplace Hazardous Materials Information System.

### 16.5 Revisions:

November 2008 - Data sheet updated to reflect the latest supplier safety information.

June 2010 - Data sheet updated to reflect current regulatory information.

June 2012 - Data sheet updated to reflect current regulatory information.

November 2012 - European and US contact details updated.

December 2014 - Data Sheet updated to conform to Regulation (EC) No 1907/2006 (as amended by Regulation 453/2010) and GHS.

January 2016 - Contact details updated. Revision date not changed to preserve 2-yearly SDS review date.

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