

PRODUCT NAME : Mechanical Pump Oil - 45

1. Product and Company Identification

Product Name: Edwards No 45 Oil

Synonyms: Edwards Q45

Item Numbers : H110-22-013, H110-22-015 H01800001, H01800003, H01800005

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2. Composition/Information on Ingredients

| Ingredient | % Weight | CAS No | Hazard class* | Risk phrase* |
|-----------------|----------|------------|----------------|----------------|
| Polyalphaolefin | 100 | 68037-01-4 | Not applicable | Not applicable |

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive (67/548/EEC, 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".

3. Hazards Identification

EMERGENCY OVERVIEW

There is the possibility of explosion if gas mixtures are being pumped which contain oxygen at a concentration more than 4% above that in air. Prolonged and repeated exposure to oil products can be detrimental to health. Particular issues of concern are inhalation of oil mist and contact with the skin.

For short and long term exposure effects see Section 11 Toxicological data.

Eye Effects: The product is not classified as an irritant by ocular application.

Skin Effects: The product is not classified as a primary irritant or as a corrosive by dermal application.

Ingestion/Oral Effects: The product is not classified as toxic by oral administration.

Inhalation Effects: The product may be considered non-hazardous by inhalation for all practicable purposes unless there is the possibility of extended exposure to high concentrations of oil mist. Aspiration of small amounts of oil into the lungs from vomiting following ingestion may cause lung swelling and fluid retention (edema). See Section 8 Exposure controls/personal protection and Section 11 Toxicological data.

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MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

| NFPA Hazard codes | | HMIS Hazard codes | | Rating System |
|-------------------|------|-------------------|---|---------------------|
| Health | 0 | Health | 0 | 0 = No Hazard |
| Flammability | 1 | Flammability | 1 | 1 = Slight hazard |
| Instability | 0 | Reactivity | 0 | 2 = Moderate Hazard |
| Special hazard | None | | | 3 = Serious Hazard |
| | | | | 4 = Severe hazard |

4. First Aid Measures

Eyes: Flush with water. If irritation occurs, seek medical attention.

Skin: Wash with soap and water. If irritation occurs, seek medical attention.

Ingestion/Oral: DO NOT induce vomiting due to aspiration hazard. If victim is conscious give water to dilute. DO NOT give sodium bicarbonate, fruit juice or vinegar. Contact a physician.

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

Other Information: None.

5. Fire Fighting Measures

Extinguishing Media: Water fog, chemical foam or carbon dioxide. Direct water stream may cause violent frothing.

Fire and Explosion Hazard: Incomplete combustion may produce carbon monoxide.

Special Protective Equipment for Fire Fighters: Fire fighters should wear a self-contained breathing apparatus (SCBA) which meets appropriate standards operated in positive pressure mode and full turn out gear when there is a possibility of fumes or hazardous decomposition products..

For Flammability Properties - see Section 9

6. Accidental Release Measures

Spills should be dealt with as follows:

- Small spill : May be wiped up with a rag.
- Large spill : Prevent product from entering the soil, drains, sewers and watercourses. Pick up spilt material with a suitable adsorbent.
- If product enters any water courses or sewers, conform with relevant local/government regulations.

7. Handling and Storage

Handling : The product is unlikely to present a significant health hazard when properly used in the recommended application and good standards of industrial and personal hygiene are maintained.

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Storage : No special storage required. However, keep the product in a well ventilated, dry atmosphere. Store in the original containers.

8. Exposure Controls/Personal Protection
Exposure Limits

| Ingredient | ACGIH - TLV - | OSHA - PEL | Occupational Exposure Limits EH40 (UK) |
|-----------------|---|---|--|
| Polyalphaolefin | 5 mg/m ³ - 8H TWA** 10 mg/m ³ - STEL (as oil mist, mineral) | 5 mg/m ³ - 8 H TWA (as oil mist, mineral) | 5 mg/m ³ - 8 H TWA 10 mg/m ³ - STEL (as oil mist, mineral) |

** As sampled by a method which does not collect vapour.

Personal Protection:

| | |
|---------------------------|---|
| Engineering Measures: | Ensure good ventilation under all working conditions. Ventilation must be sufficient to ensure that oil mist must be kept below the level indicated above. Local exhaust from mechanical pumps should be via a mist filter. Avoid pumps exhausting into the workspace. |
| Respiratory Protection: | None is required unless significant amounts of oil mist are present. |
| Hand/Skin Protection: | Wear gloves made of oil-impermeable rubber. |
| Eye/Face Protection: | Wear protective goggles with side shields in case of splashing. |
| Hygiene Measures: | Avoid contact with skin. Do not eat or smoke whilst using the product. Wash hands before eating or smoking. |
| Other/General Protection: | There is the possibility of explosion if gas mixtures are being pumped which contain oxygen at a concentration more than 4% above that in air. Do not use Edwards No 45 oil in conditions where oil mist and an oxygen enriched atmosphere are in contact with an ignition source (such as a hot surface). In this situation, use an alternative pump fluid, such as perfluoropolyether (PFPE). |

9. Physical and Chemical Properties

| | | | | |
|----------------------------|--|------------------------|-------------------|-------|
| Appearance and Odour | Colourless liquid with a faint petroleum odour | Boiling Point | 455/851 | °C/°F |
| pH (as supplied) | Neutral/value | Freezing Point | No data available | °C/°F |
| Solubility in Water | No data available | Auto Ignition | No data available | °C/°F |
| Volatile Content by Volume | No data available | Flash Point | >268/514 | °C/°F |
| Specific Gravity | 0.83 | | | |
| Vapour Pressure (mbar) | < 0.0013 @ 20°C | Vapour Pressure (Torr) | < 0.001 @ 68°F | |

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10. Stability and Reactivity

Stability: Stable.

Material/Conditions to Avoid: Avoid continuous exposure to temperatures $>200^{\circ}\text{C}/392^{\circ}\text{F}$.

Hazardous Decomposition: Incomplete combustion may produce carbon monoxide.

11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 3 Hazards Identification.

Animal Data:

LD50 value: Acute oral : >5.0 g/kg (male and female sprague-dawley rats)

LC50 value: Inhalation : 4.68 mg/l (1 h) (rats). Note that this is an estimated value for a similar compound and is considered toxic. In order to determine this value, an extremely heavy mist of oil was required. The heavy mists at the necessary concentration made visibility difficult and would be difficult to work in for a period of time. It was reported that histopathological changes may compound related toxicity effect.

Carcinogenicity:

No known tumorigenic, reproductive, carcinogenic or mutagenic effects.

12. Ecological Information

No information available.

13. Disposal Considerations

Proper waste disposal procedures are dependent on the product's end-use. Check applicable local legislation governing treatment, storage and disposal of your process effluents.

14. Transport Information

This product is not regulated as dangerous under transport regulations.

| PARAMETER | EUROPEAN | CANADIAN TDG | UNITED STATES DOT |
|-----------------------|----------------|----------------|-------------------|
| Proper Shipping Name | Not applicable | Not applicable | Not applicable |
| Hazard Class | Not applicable | Not applicable | Not applicable |
| Identification Number | Not applicable | Not applicable | Not applicable |
| Shipping Label | Not applicable | Not applicable | Not applicable |

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15. Regulatory Information

European Regulatory Information

This product has been classified in accordance with the Dangerous Substances Directive (67/548/EEC, as amended) and the Preparations Directive (88/379/EEC, as amended), implemented in the UK as the Chemical (Hazard Information and Packing) Regulations 1994 (CHIP, as amended).

Classified as dangerous to supply : No

Risk Phrases : Not applicable

Safety Phrases : Not applicable

Symbols : None

United States Regulatory Information

All ingredients contained in this product are included on the EPA TSCA Chemical Substance Inventory.

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 Regulatory Information

All ingredients contained in this product are included on the Canadian DSL.

WHMIS Classification: Not Applicable

16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and the EU Safety Data Sheet Directive 91/155/EEC.

Sources of information for this data sheet:

- Inland Material Data Sheet for Inland 45 Oil. Issue date : 24 February 1998
- Edwards Material Data Sheet for Edwards No 45 Oil. Publication number : P110-00-070. Issue B. Date : June , 1997
- National Library of Medicine (NLM) electronic databases (HSDB, RTECS, CHEMID, Toxline)

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Glossary : **CAS**, Chemical Abstracts Service; **NFPA**, National Fire Protection Association; **HMIS**, Hazardous Material Information Service; **LD**, Lethal Dose; **LC**, Lethal Concentration; **ACGIH**, American Conference of Governmental Industrial Hygienists; **TLV**, threshold limit value; **OSHA**, Occupational Safety and Health Administration, US department of Labour; **PEL**, Permissible exposure limit; **EH40 (UK)**, HSE Guidance Note EH40 Occupational exposure limits; **PPM**, parts per million; **TWA**, Time-Weighted Average; **STEL**, Short Term Exposure Limit; **Canadian TDG**, Canadian Transportation of Dangerous Goods; **US DOT**, US Department of Transportation. **HSDB**, Hazardous Substances Data Bank; **RTECS**, Registry of Toxic Effects of Chemical Substances; **CHEMID**, Chemical Identification; **DSL**, Domestic Substances List ; **TSCA**, Toxic Substances Control Act Public Law 94-469; **CERCLA**, Comprehensive Environmental Response, Compensation and Liability Act; **EPCRA**, Emergency Planning and Community Right-to-Know Act; **CAA**, Clean Air Act; US, **SARA (Title III)**, Superfund Amendments and Reauthorization Act.; **SARA 313**, Superfund Amendments and Reauthorization Act, Section 313; **EHS**, Extremely Hazardous Substance; **WHMIS**, Workplace Hazardous Materials Information System.

Revisions

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