# Vickers Laboratories Ltd - Safety Data Sheet 0505

**(in accordance with regulation (EU) 2015/830 and regulation (EC) 1272/2008)**

Revision: 1.1 Revision date: 16 April 2021
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## Section 1. Identification

**1.1 Product Identifier** 0505

Product Name POTASSIUM HYDROXIDE 0.5M (IN ETHANOL)

CAS Number Mixture
REACH Registration No A registration number is not available as the substance or its uses are exempt, the annual tonnage does not require a registration or the registration is envisaged for a later date.

**1.2 Relevent identified uses of the substance or mixure & uses advised against**

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

**1.3 Supplier** Vickers Laboratories Ltd

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## Section 2. Hazards Identification

**2.1 Classification of the substance or mixture**

**Classification according to regulation 1272/2008/EC**

| | |
|---|---|
| Flammable liquid, category 2 | H225: Highly flammable liquid and vapour. |
| Skin corrosion/irritation, category 1B | H314: Causes severe skin burns and eye damage. |
| Spec target organ tox - single, category 2 | H371: May cause damage to organs. |

**2.2 Label elements**

**Labelling according to regulation 1272/2008/EC**

Signal word Danger

Hazard Pictograms

| | |
|---|---|
| Hazard Statements | Highly flammable liquid and vapour. Causes severe skin burns and eye damage. May cause damage to organs. |
| Precautionary Statements | Keep away from heat / sparks/open flames/hot surfaces - No smoking. Store in a well ventilated place. Keep container tightly closed. Take precautionary measures against static discharge. Wear protective gloves / protective clothing / eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |

## Section 3. Composition

### 3.2 Mixtures

| Component | CAS No. | EEC No. | REACH No. | Conc w/w | CLP Classification (1272/2008/CE) |
|---|---|---|---|---|---|
| Ethanol | 64-17-5 | 200-578-6 | 01-2119457610-43-XXXX | 92% | Flam. Liq. 2,Eye Irrit. 2 |
| Methanol | 67-56-1 | 200-659-6 | 01-2119433307-44-XXXX | 4% | Flam. Liq. 2,Acute Tox. 3 (O),Acute Tox. 3 (D),Acute Tox. 3 (I),STOT SE 1 |
| Potassium hydroxide | 1310-58-3 | 215-181-3 | 01-2119487136-33-XXXX | 2.8% | Skin Corr. 1A,Acute Tox. 4 (O) |

## Section 4. First Aid

### 4.1 Description of first aid measures

| | |
|---|---|
| Eyes | Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY. |
| Skin | Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. |
| Inhalation | Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY. |
| Ingestion | If conscious give plenty of water to drink. Do not induce vomiting. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY. |
| Personal protection for first aiders | Wear protective gloves / eye protection. |

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

No further relevant information available.

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

No further relevant information available.

## Section 5. Fire Fighting

### 5.1 Extinguishing media

| | |
|---|---|
| Extinguishing Media | Water spray, alcohol resistant foam, dry powder or carbon dioxide. Use water spray to keep fire exposed containers cool. |
| Unsuitable Media | Do not use water jet. |

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

| | |
|---|---|
| Hazards | Vapour-air mixtures are explosive. |

### 5.3 Advice for firefighters

| | |
|---|---|
| Advice for firefighters | Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus. |

## Section 6. Accidental Release Measures

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

| | |
|---|---|
| Personal Protection | Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so. Beware : vapour is heavier than air and will tend to accumulate at low spots. |

### 6.2 Environmental precautions

| | |
|---|---|
| Enviromental | Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs. |

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

| | |
|---|---|
| Major Spillage | Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water. |
| Minor Spillage | Contain and absorb on inert material. Transfer absorbent to container for removal. Allow solvent to evaporate in remote area, then dispose of absorbent as solid chemical waste. Wash area down with copious amounts of water. |

### 6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

## Section 7. Storage & Handling

### 7.1 Precautions for safe handling

All transfer systems should be earthed to prevent accumulation of static electricity. Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

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

Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use. Keep well separated from oxidising agents.

### 7.3 Specific end use(s)

See section 1.2.

## Section 8. Workplace Exposure & Personal Protection

### 8.1 Control parameters

| Component | CAS No | Concentration | Workplace Exposure Limits | | | |
|---|---|---|---|---|---|---|
| | | | Long Term (8hr TWA) | | Short Term 15min period) | |
| Ethanol | 64-17-5 | 92% | 1000.0 ppm | 1920.0 mg/m-3 | - | - |
| Methanol | 67-56-1 | 4% | 200.0 ppm | 266.0 mg/m-3 | 250.0 ppm | 333.0 mg/m-3 |
| Potassium hydroxide | 1310-58-3 | 2.8% | - | - | - | 2.0 mg/m-3 |

Exposure data source(s) IOELV: Indicative Occupational Exposure Limit Value.

### 8.2 Exposure controls

| | |
|---|---|
| Respiratory Protection | Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus. |
| Hand Protection | Use solvent resistant gloves. |
| Eye Protection | Use tightly fitting chemical splash proof glasses or goggles. |
| Skin Protection | Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn. |
| Special Hazards | No special precautions required. |

## Section 9. Physical & Chemical Properties

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| Appearance | Clear colourless liquid. |
| Odour | Fresh and characteristic. |
| pH | 14 @ 20°C |
| Boiling Point | 78.3°C |
| Melting Point | -112.3°C |
| Flash Point | 12°C (Closed cup) |

| | |
|---|---|
| Upper Flammable Limit | 19% |
| Lower Flammable Limit | 3.3% |
| Auto Ignition | 363°C |
| Explosive Properties | Moderate/severe in confined spaces. |
| Oxidising Properties | No. |
| Vapour Pressure | 59mmHg @ 20°C |
| Relative Density | 0.7893 |
| Water Solubility | Completely miscible in water. |

**9.2 Other information**

No data available.

## Section 10. Stability & Reactivity

| | | |
|---|---|---|
| **10.1** | Reactivity | No data available. |
| **10.2** | Chemical Stability | Stable under normal conditions |
| **10.3** | Possibility of hazardous reactions | No data available. |
| **10.4** | Conditions to Avoid | Hot surfaces, naked flames or other sources of ignition. |
| **10.5** | Incompatable Materials | Strong oxidising agents. Nitric acid. Silver nitrate, potassium perchlorate, chromyl chloride, chromium trioxide and permanganic acid. Peroxides, potassium permanganate, sodium, potassium, platinum, potassium tertiary butoxide. Reacts with aluminium and zinc to produce extremely flammable hydrogen gas. |
| **10.6** | Hazardous Decomposition Products | None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide. |

## Section 11. Toxicological Information

**11.1 Information on toxicological effects**

| | |
|---|---|
| Eyes | The liquid will cause burns. Damage can range from severe irritation and corneal scarring to permanent blindness. |
| Skin | Contact with the liquid will not lead to immediate pain but damage begins at once. Severe ulceration and scarring may occur in serious cases. |
| LD50 Skin | Not available |
| Ingestion | Low order of acute toxicity. Fatal dose in man 300-400ml. Ingestion of large amounts will produce central nervous system depression. Symptoms may include nausea, vomiting muscular incoordination and loss of consciousness. Aspiration during swallowing or vomiting may injure lungs. |
| LD50 Oral | Not available |
| Inhalation | Exposure to vapour concentrations above the occupational exposure limits may produce irritation of the eyes and respiratory tract. High concentrations of vapour may produce central nervous system depression and unconsciousness. Symptoms will be similar to those following ingestion. |
| LD50 Inhalation | Not available |
| TCLo | Not available |
| Carcinogenicity | Not considered to be a carcinogen. |
| Mutagenicity | Not considered to be a mutagen. |
| Reproductive Effects | Some evidence for foetoxicity and tetragenecity has been observed in experimental animals treated with high doses of ethanol during gestation. |
| Other Information | Contains methanol. This will not constitute a special problem since ethanol is preferentially metabolised. Chronic intoxication may however produce damage to the optic nerve. |

## Section 12. Ecological

| | | |
|---|---|---|
| **12.1** | Toxicity | Ethanol is readily biodegradable after 15 days in non-acclimated fresh water. 75% biodegradability occurs after 20 days in salt water. |
| | LC50 Algal | Not available |
| | LC50 Crustacea | Not available |
| | LC50 Fish | Not 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 & vPvB assessment | Assessment not required. |
| **12.6** | Other adverse effects | None known at present. |

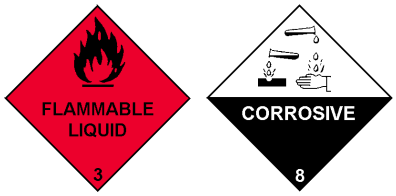
## Section 13. Disposal Considerations

**13.1 Waste treatment methods**

| | |
|---|---|
| Disposal Methods | Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste. Never dispose of into water courses or sewerage systems due to high risk of explosion. |
| Contaminated Packaging | Use a licensed waste disposer. Do not attempt to burn any residual liquids due to risk of explosion. |

## Section 14. Transport Information

| | | |
|---|---|---|
| **14.1** | **UN Number** | 2924 |
| **14.2** | **Proper Shipping Name** | Flammable liquid, corrosive, N.O.S. (Ethanol, Potassium Hydroxide) |
| **14.3** | **Transport classes** | |
| | UN classification | 3 |
| | Subsidiary hazard(s) | 8 |
| | Transport category | 2 |
| | ADR Hazard ID | 60 |
| | Tunnel Restriction Code | D/E |
| **14.4** | **Packing Group** | II |
| **14.5** | **Environment hazards** | See section 12. |
| **14.6** | **Special precautions for user** | No special precautions required. |
| **14.7** | **Transport in bulk** | Not transported in bulk. |




## Section 15. Regulatory Information

**15.1 Safety, health and environment regulations specific for subtance/mixture.**

**Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)**

| | |
|---|---|
| Classification | Flammable liquid, category 2; Skin corrosion/irritation, category 1B; Spec target organ tox - single, category 2 |
| Signal word | Danger |
| Hazard Pictograms |  |
| Hazard Statements | H225, H314, H371<br>Highly flammable liquid and vapour. Causes severe skin burns and eye damage. May cause damage to organs. |
| Precautionary Statements | P210, P403+P233, P243, P280, P305+P351+P338, P304+P340<br>Keep away from heat / sparks/open flames/hot surfaces - No smoking. Store in a well ventilated place. Keep container tightly closed. Take precautionary measures against static discharge. Wear protective gloves / protective clothing / eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do and continue rinsing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |

**15.2 Chemical safety assessment**

Assessment not required.

## Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

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