# Vickers Laboratories Ltd - Safety Data Sheet 0866

**(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** 0866

Product Name BARIUM METAL (in paraffin liquid)

CAS Number 7440-39-3
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.

Molecular Formula $Ba = 137.33$

**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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UNITED KINGDOM

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**1.4 Emergency Telephone** (08:00-16:30) +44(0) 113 2362811
(24hr) 112
(Have this document to hand)

## Section 2. Hazards Identification

**2.1 Classification of the substance or mixture**

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

| | |
|---|---|
| Flammable solid, category 2 | H228: Flammable solid. |
| Contact with water > flam gas, category 2 | H261: In contact with water releases flammable gas. |
| Skin corrosion/irritation, category 2 | H315: Causes skin irritation. |
| Serious eye damage/irritation, category 2 | H319: Causes serious eye irritation. |
| Spec target organ tox - single, category 3 | H335: May cause respiratory irritation. |

**2.2 Label elements**

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

Signal word Danger

Hazard Pictograms

| | |
|---|---|
| Hazard Statements | Flammable solid. In contact with water releases flammable gas. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. |
| Precautionary Statements | Keep away from heat / sparks/open flames/hot surfaces - No smoking. Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. Protect from moisture. Wear protective gloves / protective clothing / eye protection / face protection. Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. In case of fire: Evacuate area. |
| Supplemental Hazard Information (EU) | Reacts violently with water. |

## Section 3. Composition

### 3.1 Substances

| Component | CAS No. | EEC No. | REACH No. | Conc w/w | CLP Classification (1272/2008/CE) |
|---|---|---|---|---|---|
| Barium | 7440-39-3 | 231-149-1 | | <100% | Flam. Sol. 2,Water-react. 2,Skin Irrit. 2,Eye Irrit. 2,STOT SE 3 (I) |

## 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. If discomfort persists OBTAIN MEDICAL ATTENTION. |
| Skin | Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. If discomfort persists OBTAIN MEDICAL ATTENTION. |
| Inhalation | Remove from exposure. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. |
| Ingestion | Wash out the patients mouth thoroughly with water. If conscious give plenty of water to drink. Do not induce vomiting. 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 | Dry chemical powder. |
| Unsuitable Media | Water spray. Do not use carbon dioxide. |

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

| | |
|---|---|
| Hazards | Water spray. A flammable solid. Reacts with water to produce explosive hydrogen gas. |

### 5.3 Advice for firefighters

| | |
|---|---|
| Advice for firefighters | Consider all other materials in the vicinity. |

## Section 6. Accidental Release Measures

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

| | |
|---|---|
| Personal Protection | Evacuate area immediately. Wear goggles, respirator, rubber boots and heavy rubber gloves. Ensure no sources of ignition. |

### 6.2 Environmental precautions

| | |
|---|---|
| Enviromental | 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 | Cover area of spill with lime. Allow time for the hydrolysis to take place. Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete. |
| Minor Spillage | Shovel/sweep up into container for removal 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

Avoid contact with skin and eyes. Do not breath dust. Do not allow to contaminate clothing.

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

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

Well ventilated, cool, dry storage .

### 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) | |
| Barium | 7440-39-3 | <100% | - | - | 0.5 ppm | - |

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

### 8.2 Exposure controls

| | |
|---|---|
| Respiratory Protection | Wear NIOSH/MSHA-approved respirator. |
| Hand Protection | Wear 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 | Yellowish-white or grey chunks. |
| Odour | No specific odour. |
| pH | Not applicable |
| Boiling Point | 1640°C |
| Melting Point | 725°C |
| Flash Point | Not applicable |
| Upper Flammable Limit | Not applicable |
| Lower Flammable Limit | Not applicable |
| Auto Ignition | Not applicable |

| | |
|---|---|
| Explosive Properties | Reacts with water to produce explosive hydrogen gas. |
| Oxidising Properties | No. |
| Vapour Pressure | 10mmHg@1094°C |
| Relative Density | 3.8560 |
| Water Solubility | Not specified. |

**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 | No specific conditions. |
| **10.5** | Incompatable Materials | Strong oxidising agents. Acids. Water. oxygen. chlorinated solvents. |
| **10.6** | Hazardous Decomposition Products | In combustion emits toxic fumes. |

## Section 11. Toxicological Information

**11.1 Information on toxicological effects**

| | |
|---|---|
| Eyes | Contact with the solid or dust will be irritating to the eyes. |
| Skin | Contact with the solid or dust will be irritating to the skin. |
| LD50 Skin | Not available |
| Ingestion | Toxic if swallowed. May cause damage to central nervous system and kidneys. |
| LD50 Oral | Not available |
| Inhalation | Inhalation of dust will produce irritation of the eyes, nose, throat and respiratory tract. Inhalation of the dust can result in symptoms similar to those due to ingestion. |
| LD50 Inhalation | Not available |
| TCLo | Not available |
| Carcinogenicity | Not considered to be a carcinogen. |
| Mutagenicity | Not considered to be a mutagen. |
| Reproductive Effects | None identified. |

## Section 12. Ecological

| | | |
|---|---|---|
| **12.1** | Toxicity | Marine and/or freshwater pollutant. Do not allow to enter drinking water supplies. The following applies to Barium Compounds: biological effects; Fish, lethal from 158mg/l. Salmon lethal from 158mg/l: L.Idus LC50: 870mg/l [both as BaCl2]. Barium ions are toxic for aquatic organisms: algae: Sc. quadricauda toxic from 34mg/l: Crustaceans toxic from 29mg/l. |
| | 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 via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations. |
| Contaminated Packaging | Dispose of via an authorised waste disposal contractor to an approved waste disposal site, observing all local and national regulations. |

## Section 14. Transport Information

| | | |
|---|---|---|
| **14.1** | **UN Number** | 1400 |
| **14.2** | **Proper Shipping Name** | Barium |
| **14.3** | **Transport classes** | |
| | UN classification | 4.3 |
| | Subsidiary hazard(s) | None |
| | Transport category | 2 |
| | ADR Hazard ID | 423 |
| | 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 solid, category 2; Contact with water > flam gas, category 2; Skin corrosion/irritation, category 2; Serious eye damage/irritation, category 2; Spec target organ tox - single, category 3 |
| Signal word | Danger |
| Hazard Pictograms |  |
| Hazard Statements | H228, H261, H315, H319, H335<br>Flammable solid. In contact with water releases flammable gas. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. |
| Precautionary Statements | P210, P223, P231+P232, P280, P335+P334, P370+P380<br>Keep away from heat / sparks/open flames/hot surfaces - No smoking. Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. Protect from moisture. Wear protective gloves / protective clothing / eye protection / face protection. Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. In case of fire: Evacuate area. |
| Supplemental Hazard Information (EU) | EUH014<br>Reacts violently with water. |

**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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