

## SECTION 1 – IDENTIFICATION

**Product Identifier:** 0.05M Potassium Hydroxide Solution  
Ultra Pure Grade

**Catalogue Number:** 1314

**Other means of identification:** Not available

**Recommended use of the chemical and restrictions on use:**  
For R&D use only. Not for pharmaceutical, household or other uses.

### Supplier Information:

Axil Scientific Pte Ltd  
2 Tukang Innovation Grove  
#06-01, JTC MedTech Hub  
Singapore 618305

Tel: +65 6775 7318  
Email: [custcare@axilscientific.com](mailto:custcare@axilscientific.com)

Apical Scientific Sdn Bhd  
No 7-1 to 7-4 Jalan SP 2/7  
Taman Serdang Perdana, Seksyen 2  
Seri Kembangan 43300  
Selangor Darul Ehsan, Malaysia  
Tel: +603 8943 3252  
Email: [custcare@apicalscientific.com](mailto:custcare@apicalscientific.com)

### Emergency phone number:

Monday – Friday, 8:00 a.m. to 6:00 p.m.  
+65 6775 7318 (Singapore)  
+603 8943 3252 (Malaysia)

## SECTION 2 – HAZARDS IDENTIFICATION

### GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

**Other hazards** - None

## SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

**Chemical Identity:** Potassium Hydroxide  
**Synonyms:** Caustic potash  
Potassium hydrate  
**Molecular Formula:** KOH  
**Molecular Weight:** 56.11 g/mol

Component	Classification	Concentration
<b>Potassium hydroxide</b>		
CAS-No: 1310-58-3 EC-No: 215-181-3	Met. Corr. 1; Acute Tox. 4; Skin Corr. 1; Eye Dam. 1; H290, H302, H314	< 1 %

## SECTION 4 – FIRST-AID MEASURES

### Eye Contact

Flush eyes with water as a precaution.

### Skin Contact

Immediately wash skin thoroughly with soap and copious amounts of water.

### Inhalation

Remove to fresh air. If not breathing, give artificial respiration or if breathing is difficult, give oxygen.

### Ingestion

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

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

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

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

Data not available.

## SECTION 5 – FIRE-FIGHTING MEASURES

### Extinguishing Media

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

### Special hazards arising from the substance or mixture

No data available.

### Advice for firefighters

Wear self-contained breathing apparatus for fire-fighting if necessary.

### Further information

No data available.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.

### Environmental precautions

No special environmental precautions required.

### Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

## SECTION 7 – HANDLING AND STORAGE

### Precautions for safe handling

No data available

### Conditions for safe storage, including any incompatibilities

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

## SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

### Occupational Exposure Limits

Component	CAS-No.	Value	Control parameters	Basis
Potassium hydroxide	1310-58-3	PEL (short-term)	2 mg/m <sup>3</sup>	Singapore. Workplace Safety and Health Act – First Schedule Permissible Exposure Limits of Toxic Substances

### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice.

### Eye/ Face Protection

Safety glasses with side-shields tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Where contact with the eyes is likely, use chemical goggles.

### Skin/ Hand 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### Body protection

Impervious clothing. Type of protective equipment must be selected based on the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory Protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- a) **Appearance** Clear colourless solution
- b) **Odour** Odourless

c)	<b>Odour Threshold</b>	Not available
d)	<b>pH</b>	Not available
e)	<b>Melting/freezing point</b>	Not available
f)	<b>Initial boiling point and boiling range</b>	Not available
g)	<b>Flash point</b>	Not available
h)	<b>Evaporation rate</b>	Not available
i)	<b>Flammability (solid, gas)</b>	Not available
j)	<b>Upper/lower flammability or explosive limits</b>	Not available
k)	<b>Vapour pressure</b>	Not available
l)	<b>Vapour density</b>	Not available
m)	<b>Relative density</b>	1.000 g/cm <sup>3</sup>
n)	<b>Water solubility</b>	Not available
o)	<b>Partition coefficient: n-octanol/water</b>	Not available
p)	<b>Autoignition temperature</b>	Not available
q)	<b>Decomposition temperature</b>	Not available
r)	<b>Viscosity</b>	Not available

## SECTION 10 – STABILITY AND REACTIVITY

### Reactivity

No data available.

### Chemical stability

No data available.

### Possibility of hazardous reactions

No data available.

### Conditions to avoid

No data available.

### Incompatible materials

Water, Light metals, Alkali metals, Metals, Organic materials, Copper, reacts violently with; vigorous reaction with; Halogens, Nitro compounds, Magnesium, Azides, Contact with Aluminium, Tin and Zinc liberates hydrogen gas. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts.

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

## SECTION 11 – TOXICOLOGICAL INFORMATION

### Acute toxicity

No data available

### Skin corrosion/irritation

No data available

### Serious eye damage/eye irritation

No data available

### Respiratory or skin sensitization

No data available

### Germ cell mutagenicity

No data available

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

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

### Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

### Signs and Symptoms of Exposure

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

### Additional Information

RTECS: Not available

## SECTION 12 – ECOLOGICAL INFORMATION

**Toxicity**

No data available.

**Persistence and degradability**

No data available.

**Bioaccumulative potential**

No data available.

**Mobility in soil**

No data available.

**Results of PBT and vPvB assessment**

No data available.

**Other adverse effects**

No data available.

**SECTION 13 – DISPOSAL CONSIDERATIONS**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product

**SECTION 14 – TRANSPORT INFORMATION**

**UN Number**

ADR/RID: 1814

IMDG: 1814

IATA-DGR: 1814

**UN Proper Shipping Name:**

ADR/RID: Potassium hydroxide solution

IMDG: Potassium hydroxide solution

IATA-DGR: Potassium hydroxide solution

**Transport Hazard Class(es)**

ADR/RID: 8

IMDG: 8

IATA-DGR: 8

**Packing Group**

ADR/RID: II

IMDG: II

IATA-DGR: II

**Environmental Hazards**

ADR/RID: no

IMDG: marine pollutant: no

IATA-DGR: no

**Special Precaution for Users**

Based on chemical properties, choose appropriate tools and conditions of transport. Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

**Incompatible materials**

Water, Light metals, Alkali metals, Metals, Organic materials, Copper, reacts violently with:, vigorous reaction with:, Halogens, Nitro compounds, Magnesium, Azides, Contact with aluminum, tin and zinc liberates hydrogen gas. Contact with n formation of shock-sensitive salts.

## SECTION 15 – REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

### Notification status

<b>AICS:</b>	On the inventory, or in compliance with the inventory
<b>DSL:</b>	All components of this product are on the Canadian DSL.
<b>ENCS:</b>	Not in compliance with the inventory – Water
<b>IECSC:</b>	On the inventory, or in compliance with the inventory
<b>ISHL:</b>	Not in compliance with the inventory – Water
<b>KECI:</b>	On the inventory, or in compliance with the inventory
<b>NZIoC:</b>	On the inventory, or in compliance with the inventory
<b>PICCS:</b>	On the inventory, or in compliance with the inventory

## SECTION 16 – OTHER INFORMATION

**Date of Issue:** JULY 11, 2008

**Date of Revision:** FEBRUARY 23, 2022

*The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. 1st BASE Pte Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.*