

**MATERIAL SAFETY DATA SHEET**

**VIVANTIS TECHNOLOGIES SDN BHD  
REVONGEN CORPORATION CENTER**

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**SECTION 1: CHEMICAL IDENTIFICATION**

Catalogue Number: PB0735-1L; PB0750-500ML

Product Name: 0.05M Sodium hydroxide; 1 M Sodium hydroxide

**Intended Use:**

For research use only. Not for use in diagnostic procedures.

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**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name    | CAS No.   | %     |
|------------------|-----------|-------|
| Water            | 7732-18-5 | 96.16 |
| Sodium hydroxide | 1310-73-2 | 3.84  |

See actual entry in RTECS for complete information.

**SECTION 3: HAZARDS IDENTIFICATION**

**GHS Classification**

Skin corrosion/irritation – Category 1B  
 Serious eye damage/eye irritation – Category 1

**GHS Label elements, including precautionary statements**



Signal word: Danger

**Hazard statements**

H314 Causes severe skin burns and eye damage

**Precautionary statements**

P260 Do not breathe mist, spray, and vapors.  
 P264 Wash exposed skin thoroughly after handling  
 P280 Wear eye protection, face protection, protective clothing, protective gloves.  
 P301+P330+P331 If swallowed, rinse mouth. Do not induce vomiting.  
 P303+P361+P353 If on skin, remove/take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P305 + P351 + P338 If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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|      |   |
|------|---|
| P310 | Immediately call a poison center or doctor/physician.                             |
| P363 | Wash contaminated clothing before reuse.  |
| P405 | Store locked up.  |
| P501 | Dispose of contents/container to comply with local, state and federal regulations |

## SECTION 4: FIRST-AID MEASURES

In case of eye contact, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

In case of skin contact, immediately call a poison center or doctor/physician. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of inhalation, move to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

In case of ingestion, rinse mouth. Do not induce vomiting. Immediately call a poison center or doctor/physician.

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE FIGHTING MEASURES

Not flammable.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use dry powder, carbon dioxide, water spray, sand or foam.

Do not use heavy water stream.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and fully protective gear.

Hazardous decomposition products formed under fire conditions: Corrosive vapors

Flash point:

Not determined.

Explosion data – sensitivity to mechanical impact:

Not sensitive.

Explosion data – sensitivity to static discharge:

Not sensitive.

Hazardous reactivity:

Release of highly flammable gases/vapors (hydrogen) when reacts with (some) metals

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact. Wash contaminated clothes. Evacuate unnecessary personnel. Keep containers closed.

For environmental precautions, avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

For containment, take up liquid spill into absorbent material.

For cleaning up, carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### SECTION 7: HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practice.

Do not get in eyes, on skin, or on clothing. Remove contaminated clothing immediately. Use corrosion proof equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe spray, vapors, mist.

Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

Keep container tightly closed in a cool and well-ventilated place. Do not store under direct sunlight.

Keep only in the original container.

Incompatible with strong acids, metal and metal powder.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| Component        | Control parameters                       |
|------------------|--|
| Sodium hydroxide | Ceiling (ACGIH): 2 mg/m <sup>3</sup>     |
|                  | TWA (OSHA PEL): 2 mg/m <sup>3</sup>      |
|                  | US IDLH: 10 mg/m <sup>3</sup>            |
|                  | Ceiling (NIOSH REL): 2 mg/m <sup>3</sup> |

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|  |  |
|--|--|
| Personal protective equipment                                  | Gloves. Safety glasses. Protective clothing. Head/neck protection. Chemical resistant apron. |
| Respiratory protection   | Respiratory protection not required in normal conditions                                     |
| Eye protection   | Chemical goggles or face shield  |
| Hand protection  | Wear chemically resistant protective gloves. Wear protective gloves.                         |
| Skin and body protection                                       | Wear suitable protective clothing.   |
| Thermal hazard protection                                      | Not necessary.   |
| Other information  | Do not eat, drink or smoke during use.   |
| Use engineering controls such as emergency eye wash fountains. |  |

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

|  |                          |
|--|--------------------------|
| Appearance:                              | Clear/Colorless          |
| Physical state:                          | Liquid                   |
| Odor:                                    | Odorless                 |
| Odor threshold:                          | No information available |
| Density:                                 | No information available |
| pH:                                      | pH ≤ 14                  |
| Melting point:                           | No information available |
| Freezing point:                          | No information available |
| Initial Boiling point:                   | No information available |
| Boiling point:                           | No information available |
| Flash point:                             | Not applicable           |
| Autoignition temperature:                | No data available        |
| Decomposition temperature:               | No information available |
| Upper Flammability limit in air:         | No data available        |
| Lower Flammability limit in air:         | No data available        |
| Explosive properties:                    | No information available |
| Oxidizing properties:                    | No information available |
| Solubility:                              | Soluble in water         |
| Partition coefficient (n-octanol/water): | No data available        |
| Vapor pressure:                          | No data available        |
| Vapor density:                           | No data available        |
| Evaporation rate:                        | No data available        |
| Specific gravity:                        | 1.04 g/ml                |
| Viscosity:                               | Kinetic (1.18 cSt)       |

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**SECTION 10: STABILITY AND REACTIVITY**

Stable under recommended storage conditions.

|                                   |  |
|-----------------------------------|--|
| Materials to avoid:               | Metals, strong acids.                                      |
| Hazardous decomposition products: | Sodium oxide, corrosive vapors (thermal decomposition).    |
| Hazardous polymerization:         | Hazardous polymerization does not occur                    |
| Conditions to avoid:              | Incompatible materials. Extremely high or low temperature. |

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Acute toxicity**

Likely routes of exposure: Skin and eye contact

**Water**

Oral LD50: Rat –  $\geq 90000$  mg/kg

Inhalation LC50: No data available

**Sodium hydroxide**

Dermal LD50: Rabbit – 35156 mg/kg

|  |   |
|--|---|
| Skin corrosion/irritation:                           | Causes severe skin burns and eye damage. pH: $\geq 14$                            |
| Serious eye damage/eye irritation:                   | Causes serious eye damage. pH: $\geq 14$  |
| Respiratory or skin sensitization:                   | Not classified (Based on available data, the classification criteria are not met) |
| Germ cell mutagenicity:                              | Not classified (Based on available data, the classification criteria are not met) |
| Carcinogenicity:                                     | Not classified (Based on available data, the classification criteria are not met) |
| Reproductive toxicity:                               | Not classified (Based on available data, the classification criteria are not met) |
| Teratogenicity:                                      | No data available   |
| Aspiration hazard:                                   | Not classified (Based on available data, the classification criteria are not met) |
| Potential Adverse human health effects and symptoms: | Based on available data, the classification criteria are not met.                 |
| STOT – single exposure:                              | Not classified (Based on available data, the classification criteria are not met) |
| STOT – repeated exposure:                            | Not classified (Based on available data, the classification criteria are not met) |

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|   |  |
|---|--|
| Symptoms/effects after inhalation:                | Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.   |
| Symptoms/effects after skin contact:              | Caustic burns/corrosion of the skin.   |
| Symptoms/effects after eye contact:               | Causes serious eye damage.   |
| Symptoms/effects after ingestion:                 | Abdominal pain. Bleeding of the gastrointestinal tract. Burns to the gastric/intestinal mucosa. Nausea. Possible esophageal perforation. |
| Symptoms/effects upon intravenous administration: | Not available.   |
| Chronic symptoms:                                 | Not available.   |

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

## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity

The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

|       |  |
|-------|--|
| LC50: | Fish 1 – 1182 mg/L<br>Salmo gairdeneri – 45.4 mg/L – 96hrs<br>Static system – 45.4 mg/L – 96hrs<br>Fresh water – 45.4 mg/L – 96hrs |
|-------|--|

|       |   |
|-------|---|
| EC50: | Daphnia 1 – 1052 mg/L<br>Ceriodaphnia sp. – 40.4 mg/L – 48hrs |
|-------|---|

|                                   |  |
|-----------------------------------|--|
| Persistence and biodegradability: | Not applicable.  |
| Biochemical oxygen demand:        | Not applicable (inorganic)                             |
| Chemical oxygen demand:           | Not applicable (inorganic)                             |
| ThOD:                             | Not applicable (inorganic)                             |
| Bioaccumulative potential:        | No data available. Not established.                    |
| Mobility in soil:                 | No (test) data on mobility of the substance available. |
| Other adverse effects:            | May cause pH changes in aqueous ecological systems.    |
| Other information:                | Avoid release to the environment.                      |

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**SECTION 13: DISPOSAL CONSIDERATIONS**

Dispose waste material in accordance with federal, state and local environmental regulations. Avoid release to the environment.

**SECTION 14: TRANSPORT INFORMATION**

**DOT (US)**

UN No.: UN1824  
 Proper shipping name: Sodium hydroxide solution  
 Transport hazard class(es): 8- Class 8 – corrosive material 49 CFR 173.136  
 Packaging group: II – Medium Danger  
 Hazard labels: 8 – Corrosive



Environmental hazards: No  
 Special precautions for user: No data available

**SECTION 15: REGULATORY INFORMATION**

**United States Federal Regulations**

**SARA Section 313/312 Hazard Classes**

Health hazard – Skin corrosion or irritation  
 Health hazard – Serious eye damage or eye irritation

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

RQ (Reportable quantity, section 304 of EPA's List of Lists): 1000 lb

**US State Regulations**

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.

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## **SECTION 16: OTHER INFORMATION**

The information contained in this MSDS relates only to the material(s) designed and does not relate to use(s) in combination with any other material, process(es) and /or chemical reaction(s). Vivantis Technologies Sdn. Bhd. provides this information in good faith, from sources believed to be accurate; however, Vivantis assumes no liability for its accuracy or completeness, and thus shall not be held liable for any damage resulting from handling or from contact with the above product.

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