

# MATERIAL SAFETY DATA SHEET

## Sodium Hydroxide

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Date of Issue: 21 Sept 06

### STATEMENT OF HAZARDOUS NATURE

Hazardous according to criteria of Worksafe Australia

### COMPANY DETAILS

**Company:** ProSciTech  
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### IDENTIFICATION SECTION

<b>Product Name</b>	Sodium Hydroxide
<b>Other Names</b>	Not available
<b>Product Code</b>	C200, C2005
<b>U.N. Number</b>	UN1823
<b>Dangerous Goods Class and Subsidiary Risk</b>	8 None allocated
<b>Hazchem Code</b>	2X
<b>Poison Schedule</b>	S6
<b>Use</b>	Common caustic solution

### Physical Description and Properties

<b>Appearance</b>	White, deliquescent, odourless pellets
<b>Boiling Point/Melting Point</b>	BP 1388°C; MP 318°C
<b>Vapour Pressure</b>	0
<b>Specific Gravity</b>	2.1
<b>Flash Point</b>	Not applicable
<b>Flammability Limits</b>	Not determined
<b>Solubility in water</b>	1111g/L, approx.54% @ 20°C

### Other Properties

#### Ingredients

Chemical Name	CAS Number	Proportion
Sodium hydroxide NaOH	1310-73-2	99 – 100%

## HEALTH HAZARD INFORMATION

### Health Effects:

#### *Acute*

<b>Swallowed:</b>	Will cause severe irritation and chemical burns to the gastrointestinal tract. Symptoms include severe abdominal pain, vomiting and diarrhoea.
<b>Eye:</b>	Corrosive. Can cause permanent eye damage and blindness. Severe pain and tearing.
<b>Skin:</b>	Will cause severe irritation and chemical burns in contact with the skin, which can result in tissue destruction.
<b>Inhaled:</b>	Dusts and mists will cause severe irritation and chemical burns to the respiratory tract.

### First Aid:

<b>Swallowed:</b>	Do not induce vomiting. Immediately wash out mouth with water and then give plenty of water to drink. Seek immediate medical attention.
<b>Eye:</b>	Immediately flush eyes with plenty of water for approximately 20 minutes holding eyelid open. Call a doctor immediately.
<b>Skin:</b>	Remove all contaminated clothing. Wash gently and thoroughly with water for 15 minutes. Ensure contaminated clothing is washed before re-use or discard. If contact is more than of minor nature, seek medical attention.
<b>Inhaled:</b>	Remove the source of contamination or move the victim to fresh air. Ensure airways are clear and have a qualified person give oxygen through a face mask if breathing is difficult. If victim has stopped breathing begin artificial respiration, or if heart has stopped, cardiopulmonary resuscitation.
<b>First Aid Facilities:</b>	Safety showers, eye wash and normal washroom facilities.
<b>Advice to Doctor:</b>	Corrosive. May cause stricture. If lavage is performed, endotracheal and/or esophagosopic control is suggested. Material is strong alkali. If skin burns are present, treat as any thermal burn after decontamination. Eye irrigation may be necessary for extended period of time to remove as much alkali as possible. Duration of irrigation and treatment is at the discretion of attending medical personnel. No specific antidote. Supportive care suggested. Treatment based on judgement of attending physician and reaction of patient.

## PRECAUTIONS FOR USE

<b>Exposure Standards:</b>	TWA 2mg/m <sup>3</sup> . Permissible exposure limit (PEL) 2mg/m <sup>3</sup>
<b>Engineering Controls:</b>	Where dust is generated the use of a mechanical exhaust ventilation system is recommended.
<b>Personal Protection:</b>	Protection of hands: the use of Nitrile or Neoprene gloves is recommended. Eye protection: The use of face shields, chemical goggles or safety glasses with side shield protection complying with AS/NZS 1337 is recommended. Body protection: The use of plastic apron, sleeves overalls and rubber boots is recommended. Where ventilation is inadequate the use of a Class P1 or P2 respirator complying with AS/NZS 1715 and 1716 is recommended.
<b>Flammability:</b>	Not flammable under conditions of use.

## SAFE HANDLING INFORMATION

<b>Storage and Transport:</b>	Requirements to be met by storerooms and containers: Provide alkali-resistant floor. Unsuitable material for container: aluminium, zinc, tin, lead, glass. Do not store together with acids, oxidisers and chlorinated organic compounds. This product is hydroscopic. Protect from humidity and keep away from water. Protect for carbon dioxide. Store upright in cool, dry well ventilated area in well sealed containers. Remove closure carefully to release possible internal pressure. <b>UN1823 Hazard group: 8 Packaging group: II Correct shipping name: Sodium hydroxide, solid.</b> This material is a Class 8 Corrosive Substance according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Class 8 – Corrosive Substances are incompatible in a placard load with any of the following: Class 1, Explosives.
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Class 4.3, Dangerous when wet substances. Class 5.1, Oxidising agents and Class 5.2, Organic peroxides. Class 6, Toxic substances (where the toxic substances are cyanides and the corrosives are acids). Class 7, Radioactive substances.

Class 8 substances are incompatible with food and food packaging in any quantity.

**Spills and Disposal:**

Wear protective equipment. Keep unprotected persons away. Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Sweep or vacuum material avoiding dust generation. Ensure adequate ventilation. Dispose of contaminated material as waste. Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose in accordance with local, state and federal EPA waste regulations. Neutralisation is the preferred method of disposal.

**Fire/Explosion Hazard:**

Solutions may react with aluminium and other soft metals to generate hydrogen which is flammable and/or explosive if ignited.

Suitable extinguishing agents: Carbon dioxide; fire-extinguishing powder; dry sand; cement.

Wear self-contained breathing apparatus. Wear full protective suit.

**Hazardous Reaction**

Heat generated upon dilution with water. Dilute only by adding to water with agitation. Do not add water to sodium hydroxide.

<b>OTHER INFORMATION</b>
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**Incompatibilities  
(Materials to avoid)**

Incompatible with strong oxidising agents and strong acids, organic materials, aluminium, tin, zinc and nitro compounds. Absorbs CO<sub>2</sub> from air. Can react with moisture from air.

**Animal Toxicity Data:**

Skin (rabbit): severe irritation 500mg/24H. Eyes (rabbit): severe irritation 1mg/30sec rinse.