

#### **SECTION 1 – IDENTIFICATION**

Product Identifier:	Sodium Hydroxide Pellets ACS Grade
<b>•</b> • • • •	4 = 0.0

Catalogue Number: 1530

Other means of identification: Caustic soda

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

### **Supplier Information:**

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# 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:**

Corrosive to metals, Category 1 Skin corrosion, Category 1 Serious eye damage, Category 1

#### GHS Hazard Pictogram(s):



Signal Word: Danger

#### Hazards statements:

H290: May be corrosive to metals. H314: Causes severe skin burns and eye damage. H318: Causes serious eye damage.



#### **Precautionary statements:**

#### Prevention

P234: Keep only in original container.
P260: Do not breathe dust/fume/gas/mist/vapour/spray.
P264: Wash thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/ face protection.

#### Response

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340+P310: IF INHALED: Remove victim to fresh air and keep at rest position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P390: Absorb spillage to prevent material damage.

Disposal

P501: Dispose of contents/container in accordance with federal, state and local environmental regulations.

# **SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS**

Chemical Identity:	Sodium Hydroxide
Synonyms:	Caustic Soda
Molecular Formula:	NaOH
Molecular Weight:	40.0 g/mol

Component	Classification	Concentration	
Sodium Hydroxide			
CAS-No: 1310-73-2 EC-No: 215-185-5	Met. Corr. 1; 1; H290, H314, H318	≤ 100 %	

# **SECTION 4 – FIRST-AID MEASURES**

#### **General Advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

# Eye Contact

Immediately flush eyes with copious amounts of water for at least 15 minutes. Consult a physician.

#### **Skin Contact**

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

#### Inhalation

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

#### Ingestion

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.



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

Spasm, inflammation and edema of the larynx. Spasm, inflammation and edema of the bronchi. Pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

# Indication of immediate medical attention and special treatment needed

Data not available.

#### **SECTION 5 – FIRE-FIGHTING MEASURES**

#### **Extinguishing Media**

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

**Special Exposure Hazards** 

Sodium oxides.

#### **Special Fire-fighting Procedures**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

#### **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

# **Personal Precautions**

Prevent skin/eye contact. Avoid dust formation. Evacuate personnel to safe areas. Avoid breathing dust.

#### **Environmental Precautions**

Prevent further leakage or spillage if safe to do so. Do not allow material into sewers and drainage systems.

#### Methods for Cleaning Up

Sweep up, or if in solution form, soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**SECTION 7 – HANDLING AND STORAGE** 

### Precautions for safe handling

Prevent skin/eye contact. Use personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Avoid breathing dust. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent spillage.

#### **SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION**

#### **Occupational Exposure Limits**

Component	CAS-No.	Value	Control parameters	Basis
Sodium hydroxide	1310-73-2	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**

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### **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**

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### **Respiratory Protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

# Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

<b>SECTION 9 – PHYSICAL</b>	AND CHEMICAL	PROPERTIES
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- a) Appearance Translucent pellet
- b) Odour

Odourless

Page 4 of 8 SDS-1530\_Sodium Hydroxide Pellets



c)	Odour Threshold	Not available
d)	рН	13.0 – 14.0 (1M; H <sub>2</sub> O, 25 °C)
e)	Melting/freezing point	323 °C
f)	Initial boiling point and boiling range	1,309 °C
g)	Flash point	Not applicable
h)	Evaporation rate	Not available
i)	Flammability (solid, gas)	Not available
j)	Upper/lower flammability or explosive limits	Not available
k)	Vapour pressure	< 24 hPa at 20 °C
I)	Vapour density	1.38 (Air = 1.0)
m)	Relative density	2.13 g/cm <sup>3</sup> (25 °C)
n)	Solubility (ies)	1,260 g/L (H <sub>2</sub> O, 20°C)
0)	Partition coefficient: n-octanol/water	Not available
p)	Autoignition temperature	Not available
q)	Decomposition temperature	Not available
r)	Viscosity	Not available

# SECTION 10 - STABILITY AND REACTIVITY

# **Reactivity** Data not available.

# Chemical stability Stable.

**Possibility of hazardous reactions** Data not available.

Conditions to avoid Data not available.



#### Incompatible material

Strong oxidizing agents, Strong acids, Organic materials

#### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sodium oxides

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

#### Acute toxicity Data not available

Skin corrosion/irritation Causes severe burns – 24 hr [Rabbit]

### Serious eye damage/eye irritation

Corrosive - 24 hr [Rabbit]

# Respiratory or skin sensitization

Will not occur

Germ cell mutagenicity Data not 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**

Data not available.

# Specific target organ toxicity - single exposure

Data not available.

Specific target organ toxicity – repeated exposure Data not available.

# Aspiration hazard

Data not available.

Other information RTECS: WB4900000

### **SECTION 12 – ECOLOGICAL INFORMATION**

#### Toxicity

Toxicity to fish (LC50): 125 mg/L – 96 hr [Gambusia affinis] 45.4 mg/L – 96 hr [Oncorhynchus mykiss]

Toxicity to daphnia and other aquatic invertebrates (Immobilization EC50): 40.38 mg/L – 48 hr [Daphnia]



## Persistence and degradability

Biodegradable Methods for determining biological degradability not applicable to inorganic substances.

# **Bioaccumulative potential**

Data not available.

Mobility in soil Data not available.

# Other adverse effect

Harmful to aquatic life.

# **SECTION 13 – DISPOSAL CONSIDERATIONS**

# Product

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

# Contaminated packaging

Dispose off as unused product.

SECTION 14 – TRANSPORT INFORMATION					
<b>UN Number</b> ADR/RID: 1823	3	IMDG: 1823	IATA-DGR: 1823		
<b>UN Proper Sh</b> ADR/RID: IMDG: IATA-DGR:	IMDG: Sodium hydroxide, solid				
Transport Haz ADR/RID: 8	zard Class(es)	IMDG: 8	IATA-DGR: 8		
Packing Grou ADR/RID: II	p	IMDG: II	IATA-DGR: II		
Environmenta ADR/RID: no	al Hazards	IMDG: marine pollutant: no	IATA-DGR: no		
Special Precaution for Users Data not available					

## **SECTION 15 – REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture Data not available

# **SECTION 16 – OTHER INFORMATION**

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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. Axil Scientific Pte Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.