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SALES & SERVICES

Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE SUPPLIER

1.1 Product identifiers

Product name : SODIUM HYDROXIDE

1.2 Other means of identification

Caustic soda micropearl, Sodium hydroxide pearl, Lye, Sodium hydrate, Caustic soda, NaOH

1.3 Recommended use of the product and restrictions on use

Chemical manufacture; acid neutralisation; pulp and paper, aluminium, detergent, and textile processing; vegetable oil refining; reclaiming rubber; etching and electroplating; food additive

1.4 Details of supplier of the safety data sheet

Company	: AGent Sales & Services Pty Ltd
Street address	: 38 May Holman Drive, Bassendean, Western Australia 6054
Telephone	: (+61 8) 6270 4500 / 1300 833 844
Fax	: (+61 8) 6270 4544

1.5 Emergency telephone number

Telephone : 1800 995 539

2. HAZARDS IDENTIFICATION

2.1 GHS Classification

Corrosive to metals (Category 1)
Skin corrosion/irritation (Category 1A)
Serious eye damage/eye irritation (Category 1)

2.2 GHS Label elements, including precautionary statements

Pictogram :

Signal word : Danger

Hazard statement(s)

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

Precautionary statement(s)

Prevention

P234	Keep only in original container.
P260	Do not breathe dust / fume / gas / mist / vapours / spray.
P264	Wash hands 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): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363	Wash contaminated clothing before re-use.
P304+P340+P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338+P310 IF IN EYES: 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.

P390 Absorb spillage to prevent material damage.

Storage

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner..

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Classification	Concentration (%)
Sodium hydroxide	1310-73-2	Met. Corr 1; Skin Corr. 1A; Eye Dam. 1; H290; H314	≤ 100

For the full text of the H-Statements mentioned in this section, see Section 16

4. FIRST AID MEASURES

4.1 Description of First Aid measures

General advice

Contact the Poisons Information Centre (Phone: Australia 131 126; New Zealand 0800 764 766) or consult a doctor/physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

In case of skin contact

Remove contaminated clothing and wash affected areas with lots of water / shower. Consult a doctor/physician. Launder clothing before reuse.

In case of eye contact

Immediately rinse thoroughly with plenty of running water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses, if easy to do. Continue rinsing. Seek immediate medical assistance.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Immediately after swallowing: give lots of water to drink. Seek immediate medical assistance.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in Section 2.2 and/or Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Can cause corneal burns.

4.4 First Aid facilities

Eye wash facilities and safety shower should be available.

5. FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

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

5.2 Special hazards arising from the chemical

Not combustible. May liberate toxic fumes in fire (sodium oxide).

5.3 Special protective equipment and precautions for fire fighters

Wear self-contained breathing apparatus (SCBA) and suitable protective clothing if risk of exposure to products of decomposition. Prevent fire extinguishing water from contaminating surface water or the ground water system.

5.4 Hazchem code
2W

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid dust formation. Avoid breathing dust, vapours, mist or gas. Ensure adequate ventilation. Work up wind. Evacuate personnel to safe areas.
For personal protection see Section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. If contamination of sewers or waterways has occurred, advise local emergency services. Observe all local and national regulations.

6.3 Methods and materials for containment and cleaning up
Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal. Caution - heat may be evolved on contact with water.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid formation of dust and aerosols. Avoid skin and eye contact and breathing in dust. Keep out of reach of children. There is a risk of splash-back causing injury if Pearl Caustic Soda is added to HOT water.
For precautions see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well ventilated place. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for spills.

This material is classified as a Dangerous Goods Class 8 Corrosive Substance by the criteria of the ADG Code and must be stored and handled in accordance with the relevant regulations.

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Chemical Name	TWA – Peak Limitation		STEL		Carcinogen Category	Notices
	ppm	mg/m^3	ppm	mg/m^3		
Sodium hydroxide (1310-73-2)	-	2	-	-	-	-

As published in "*Workplace Exposure Standards for Airborne Contaminants, 16 December 2019"* by SWA.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Biological Limits
None allocated for this product.

8.2 Exposure controls

Appropriate engineering controls
Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Keep containers closed when not in use. If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be

considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Personal protective equipment (PPE)
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods and environmental factors.

Eye/face protection
Wear face shield, chemical goggles or safety glasses with side shield protection. See Australian Standards (AS/NZS 1336 & 1337).

Skin protection
Handle with rubber gloves and wear protective clothing (splash apron or equivalent chemical impervious outer garment and rubber boots) appropriate for the risk of exposure. See Australian Standards (AS 2161 & 2919 and AS/NZS 2210). 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. Wash and dry hands. Wash contaminated clothing and other protective equipment before storage or re-use.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination or type ABEK respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. See Australian Standards (AS/NZS 1715 & 1716).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Form : Solid, pearl
	Colour : White
Odour:	Odourless
Odour Threshold:	No data available
pH:	14 @ 5% solution
Melting Point:	318ºC
Boiling Point / Range	1390ºC
Decomposition Temperature:	No data available
Evaporation Rate:	No data available
Flash Point:	Not applicable
Flammability Limits:	Not applicable
Relative Density:	2.13 g/cm^3
Vapour Density (air=1):	No data available
Vapour Pressure:	No data available
% Volatiles:	50
Solubility in water:	ca 1,260 g/L @ 20ºC

10. STABILITY AND REACTIVITY

10.1 Reactivity
Reacts violently with acids. Reacts exothermically on dilution with water.

10.2 Chemical stability
Stable under normal storage conditions. Hygroscopic . Slowly absorbs moisture from air.

10.3 Possibility of hazardous reactions
May react violently with strong acids. In contact with water, reaction may generate enough heat to ignite combustible materials. In contact with metals, reaction may produce flammable and explosive hydrogen gas. May react with organohalogen compounds to form spontaneously combustible compounds. May react explosively in contact with nitro and chloro organic compounds.

10.4 Conditions to avoid
Avoid dust generation. Avoid exposure to moisture. Avoid contact with foodstuffs.

10.5 Incompatible materials
Incompatible with ammonium salts, acids, chlorinated hydrocarbons, aluminium, zinc, lead, tin, and their alloys.

10.6 Hazardous decomposition products
None.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral, rabbit - 325 mg/kg

Skin corrosion/irritation
Skin, rabbit – 500 mg / 24h SEVERE

Serious eye damage/eye irritation
Eye, rabbit – 0.05 mg / 24h SEVERE
Eye, rabbit – 1mg / 30s rinsed SEVERE

Respiratory or skin sensitisation
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 (STOT) - single exposure
No data available

Specific target organ toxicity (STOT) - repeated exposure
No data available

Aspiration hazard
No data available

Health Effects
No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Eye contact : A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.

Skin contact : Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.

Ingestion : Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.

Inhalation : Breathing in mists or aerosols will produce respiratory irritation. Inhalation of high concentrations may result in coughing, wheezing, laryngitis, shortness of breath, spasm, inflammation and oedema of the larynx, the bronchi, pneumonitis and pulmonary oedema and damage to the mucous membrane.

11.2 Information on possible routes of exposure
The substance can be absorbed into the body by skin & eye contact, ingestion and by inhalation.

11.3 Additional Information
RTECS: WB4900000

12. ECOGICAL INFORMATION

12.1 Ecotoxicity
Avoid contaminating waterways.

Toxicity to fish:
LC_{50} Gambusia affinis (Mosquito fish) - 125 mg/L - 96 h
LC_{50} Oncorhynchus mykiss (Rainbow trout) - 45.4 mg/L - 96 h

Toxicity to daphnia & other aquatic invertebrates
EC_{50} - Daphnia (Water flea) - 40.38 mg/L - 48 h

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 Other adverse effects
Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods and containers
Ensure waste disposal conforms to relevant local, state and federal authority waste disposal regulations. All empty packaging should be disposed of as unused product.

13.3 Special precautions for landfill or incineration
Contact a specialist disposal company or the local waste regulator for advice. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to an approved waste facility. Processing, use or contamination of this product may change the waste management options.

14. TRANSPORT INFORMATION

Classified as **DANGEROUS GOODS** by the criteria of the ADG Code for transport by road or rail.
Classified as **DANGEROUS GOODS** by the criteria of the IMDG Code for transport by sea.
Classified as **DANGEROUS GOODS** by the criteria of the IATA Code for transport by air.

14.1 UN number

ADG : 1823	**IMDG :** 1823	**IATA :** 1823

14.2 Proper shipping name
ADG : SODIUM HYDROXIDE, SOLID
IMDG : SODIUM HYDROXIDE, SOLID
IATA : SODIUM HYDROXIDE, SOLID

14.3 Transport hazard class

ADG : 8 Corrosive	**IMDG :** 8 Corrosive	**IATA :** 8 Corrosive

14.4 Packing group

ADG : II	**IMDG :** II	**IATA :** II

14.5 Environmental hazards

ADG : No	**IMDG Marine Pollutant :** No	**IATA :** No

14.6 Special precautions for users No data

14.7 Hazchem code

ADG : 2W	**IMDG EMS :** F-A, S-B

14.8 Dangerous goods initial emergency response guide (SAA/SNZ HB76:2010) 37

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
Poisons Schedule : 6

Carcinogen classification under WHS Regulations 2011, Schedule 10
Not listed

Notification status
AICS On the inventory or in compliance with the inventory.

16. OTHER INFORMATION

Key / legend to abbreviations and acronyms used in the MSDS

ADG	Australian Dangerous Goods
ASCC	Australian Safety and Compensation Council
DEC	Department of Environment and Conservation
IARC	International Agency for Research on Cancer
NOHSC	National Occupational Health and Safety Commission
SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons
Eye Dam.	Serious eye damage
Met. Corr.	Corrosive to metals
Skin Corr.	Skin corrosion
TWA	Time weighted average
STEL	Short term exposure level
SWA	Safe Work Australia
Peak Limitations	A ceiling concentration that should not be exceeded over a measurement period, which should be as short as possible, but not exceeding 15 minutes
EC_{50}	Effective concentration that induces a response halfway between the baseline and maximum after a specified time
LD_{50}	Lethal dose 50. The single dose of a substance that causes the death of 50% of an animal population from exposure to the substance by any route other than inhalation
LC_{50}	Lethal concentration that kills 50% of an animal population within a specified time
TD Lo	The lowest dose of a substance known to have produced signs of toxicity
RTECS	Registry of Toxic Effects of Chemical Substances
g/L	Grams per litre
g/cm^3	Grams per cubic centimetre
mg/m^3	Milligrams per cubic metre
mg/kg	Milligrams per kilogram
pH	Relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline
WHS	Work Health and Safety

Literature references

“Workplace Exposure Standards for Airborne Contaminants, 16 December 2019” by Safe Work Australia.

Reason(s) for Issue:

May 2020	Update Contact Details
April 2022	Review to align with 7th Revised Edition GHS

Disclaimer

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