SAFETY DATA SHEET

CHESSER CHEMICALS Pty Ltd
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ABN Number: 67 008 262 039

Product: CAUSTIC SODA

HAZARDOUS according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals

SIGNAL WORD: DANGER

☎Emergency Response No: CHEMWATCH 1800 951 288

RECOMMENDED PPE

Health hazards

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
AUH071	Corrosive to the respiratory tract

1 IDENTIFICATION

IDENTIFICATION

Product Code:	CSS
Product Name:	CAUSTIC SODA
Other Names:	Sodium hydroxide; Sodium hydrate; White caustic
Product Use:	Strong alkali.
Restrictions on use:	Use according to Directions; avoid contact with acids. Mixing with water will produce heat. Use appropriate PPE.

COMPANY DETAILS

Company:	CHESSER CHEMICALS Pty Ltd
ABN Number:	67 008 262 039
Address:	124 Days Road FERRYDEN PARK SA 5010
Telephone Number:	(08) 8406 0000
Facsimile Number:	(08) 8406 0099
Emergency Telephone Number:	CHEMWATCH 1800 951 288

Other Information: This information summarises our best knowledge on the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

2 HAZARD IDENTIFICATION

HAZARDOUS according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals

Classification of the substance or mixture:

Eye Corrosion	- Category 1
Skin Corrosion/Irritation	- Category 1
Corrosive to Metals	- Category 1

SIGNALWORD:

DANGER

Corrosion

HAZARD STATEMENTS

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
AUH071	Corrosive to the respiratory tract

Precautionary Statements

Prevention

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

Response

P303 P361 P353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P310	Immediately call a POISON CENTRE 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.
P301 P330 P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P363	Wash contaminated clothing before reuse.
P304 P340	IF INHALED: Remove victim to fresh air and keep comfortable for breathing.

Storage

P406	Store in corrosive resistant container with a resistant inner liner.
P405	Store locked up.

Disposal

P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

Poisons Schedule (SUSMP): S6 Poison

3 COMPOSITION

Ingredients

Chemical Entity	**CAS Number**	**Proportion**	**Risk Phrases**
SODIUM HYDROXIDE	[1310-73-2]	≥99%	H312 H314 H318

4 FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed If swallowed: Rinse mouth, then (slowly) drink plenty of water or milk (no more than 2 glasses for an adult). Do NOT induce vomiting. If vomiting occurs, lean victim forward or place on their left side (head down position) to maintain an open airway and prevent aspiration. Keep victim warm and quiet. Immediately call a Poison Centre or doctor/physician. Never give anything by mouth to an unconscious person.

Eye	Eye contact: Immediately flush eyes with running water for at least 15 minutes, holding eyelids apart and away from the eye. Remove contact lenses, if present and easy to do. Continue rinsing. Injury should be irrigated for 20 – 30 minutes. Immediately call a Poison Centre or doctor/physician.
Skin	Skin contact: Immediately remove contaminated clothing and shoes. Flush skin (and hair) with running water for 20 - 30 minutes. For minor skin contact, avoid spreading material onto unaffected skin. Immediately call a Poison Centre or doctor/physician. Wash contaminated clothing and shoes before reuse.
Inhaled	If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Apply resuscitation if victim is not breathing. Do not use direct mouth-to-mouth method if victim ingested or inhaled the substance; use alternative respiratory method or proper respiratory device. Administer oxygen if breathing is difficult.
Advice to Doctor	Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves. Treat symptomatically and supportively.

Medical Conditions Aggravated by Exposure No information available.

5 FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.
Flammability Conditions	Non-combustible. Material does not burn.
Extinguishing Media	Use extinguishing media suitable for the surrounding fire. Use dry chemical, CO2, foam or water spray - Do NOT use water jets.
Fire and Explosion Hazard	Containers may explode when heated. Contact with metals may evolve flammable hydrogen gas. Contact with moisture or water may generate sufficient heat to ignite combustible substances; spattering and boiling may occur.
Hazardous Products of Combustion	Fire or heat will produce irritating, toxic, and/or corrosive gases.
Special Fire Fighting Instructions	Runoff from fire control or dilution water may be toxic and/or corrosive and pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) with a full face-piece, in positive pressure mode. Fully encapsulating, gas-tight suits should be worn for maximum protection. Structural fire-fighter's uniform is recommended for fire situations ONLY - it is NOT effective for spills.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	2W

6 ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames). Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin and eyes. Do NOT breathe dust.
Clean Up Procedures	Sweep spilled substance into suitable containers for later disposal. Prevent dust cloud. Do NOT get water inside containers.
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Dike and clean up all spills immediately.

Decontamination	Small spills or residues can be flushed with plenty of water. Dilute acid (such as Acetic acid) may be used to neutralise residual traces after flushing.
Environmental Precautionary Measures	Drains for storage or work areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
Personal Precautionary Measures	Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection. Structural fire fighter's uniform is NOT effective for spills.

7 HANDLING AND STORAGE

Handling	Eyewash fountains and facilities for quickly drenching the body should be provided within the immediate work area for emergency use. Handle in accordance with good industrial hygiene and safety practice. Use only in a well ventilated area. Do NOT breathe dusts or mists. Wear protective gloves/protective clothing/eye protection/face protection. Do NOT allow wash water from cleaning or process equipment to enter drains - It may be necessary to collect all wash water for treatment before disposal.
Storage	Store locked up. Store in an area with a corrosion resistant concrete floor. Store in a cool, dry, well-ventilated area. Keep container tightly closed. Protect from any possible contact with water/moisture. Store away from incompatible materials - oxidising substances, organic peroxides, strong acids, food and food packaging. Keep away from heat and ignition sources.
Container	Keep only in the original container; or in a suitable corrosive resistant container with a resistant inner liner. Do NOT use aluminium, galvanised, zinc or tin-plated containers.

8 EXPOSURE CONTROL / PERSONAL PROTECTION

General	Australia: Sodium hydroxide (CAS No. 1310-73-2) has an exposure standard of 2 mg/m3, time weighted average (TWA) (Peak limitation). Peak limitation notice: A maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time - which does not exceed 15 minutes. Immediately dangerous to life or health concentration (IDLH): 10 mg/m3.
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	Use local exhaust ventilation to prevent the chemical from entering the breathing zone of any worker. Air monitoring is recommended to ensure control measures in place are working effectively.
Personal Protection Equipment	Respiratory protection: In case of dust or aerosol formation, use a respirator with an approved filter. Filter type: Particulate. In conditions where exposure potential is high, wear a full-face air-supplied breathing apparatus and full protective suit.
Hand protection:	Wear impervious gloves - Suitable materials: PVC neoprene, natural or butyl-rubber. Unsuitable material: leather.
Eye protection:	Wear a full face shield or properly fitted chemical goggles in combination with respiratory protection. Skin/body protection: Impervious clothing/chemical resistant apron and boots. Suitable materials: PVC, neoprene.

Special Hazards Precautions	To avoid violent reaction, ALWAYS add material to water, and NEVER water to material.
Work Hygienic Practices	Do not eat, drink or smoke during work. Wear appropriate personal protective clothing/equipment to prevent skin and eye contact. Immediately wash skin when it becomes contaminated. Work clothing that becomes wet or significantly contaminated should be removed and replaced. Workers whose clothing may have become contaminated should change into uncontaminated clothing before leaving the work premises.

. 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Odour	Odourless
Colour	White, translucent
pH	>14
Vapour Pressure	0 torr (@ 20 °C)
Relative Vapour Density	No Data Available
Boiling Point	1390 °C
Freezing Point	No Data Available
Specific Gravity	2.130 (Water = 1)
Flash Point	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Octanol Water Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	Contact with moisture or water may generate sufficient heat to ignite combustible substances
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible. Material does not burn.
Reactions That Release Gases or Vapours	- Fire or heat will produce irritating, toxic, and/or corrosive gases.
Release of Invisible Flammable Vapours and Gases	Contact with metals such as aluminium, zinc, tin and lead may evolve flammable hydrogen gas.
Melting Point	No Data Available
Appearance	Flake, pearl, prill, beads, blocks
Evaporation Rate	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Auto Ignition Temp	No Data Available
Solubility	111 g/10 ml 20°C

10 STABILITY AND REACTIVITY

General Information	CORROSIVE. The substance is a strong base - it reacts violently with acids.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	- Avoid heat and ignition sources. - Protect from any possible contact with water/moisture.
Materials to Avoid	Avoid oxidising substances, organic peroxides, strong acids, food and food packaging. Avoid contact with aluminium, tin, zinc, copper and their alloys.
Hazardous Decomposition Products	- Fire or heat will produce irritating, toxic, and/or corrosive gases. - Contact with metals may evolve flammable hydrogen gas.
Hazardous Polymerisation	Will not occur.

11 TOXICOLOGICAL INFORMATION

General Information

- Critical health effects: Sodium hydroxide is corrosive to the skin, eyes, gastrointestinal and respiratory tracts.
- Toxicokinetics: The constituents of sodium hydroxide (sodium ion and hydroxide ions) are normal physiological constituents. Accordingly, systemic health effects, such as repeated dose toxicity, carcinogenicity and reproductive toxicity are not expected. The available data support this conclusion.
- Acute toxicity: No acute oral studies are available in animals to establish a median lethal dose (LD_{50}). Sodium hydroxide has low to moderate acute dermal toxicity (no reliable LD_{50} data). Sodium hydroxide can be absorbed into the body by inhaling the aerosol form (no LC_{50} data available). Observance in humans: Cases of fatality due to ingesting (liquid) sodium hydroxide have been reported in humans, caused by oesophageal and gastric injury.
- Corrosion/irritation: Sodium hydroxide is corrosive to the skin, eyes and respiratory tract and corrosive following ingestion. It causes deep penetrating burns and necrosis. The skin is discoloured and becomes brown or black.
  There could be recurring skin breakdown over a long period.
- Sensitisation: Not considered a skin sensitiser.
- Repeated dose toxicity: No animal data are available on repeated dose toxicity studies on oral or dermal exposure. Observance in humans: Obstructive airway disease has been reported in a factory worker following chronic occupational exposure to sodium hydroxide mist.
- Genotoxicity: In vitro and in vivo genotoxicity tests indicate no evidence for mutagenic activity.
- Carcinogenicity: No information available.
- Reproductive/developmental toxicity: The effect of sodium hydroxide on fertility is not known. No valid studies are available regarding effects on fertility or developmental toxicity in animals after oral, dermal or inhalation exposure. Sodium hydroxide is not expected to be systemically available in the body under normal handling and use conditions, and for this reason it can be stated that the substance will not reach the foetus nor reach male/female reproductive organs.

Carcinogen Category None

12 ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity to Fish: 96 hr LC_{50}: 4.16 mg/l Toxicity to Algae or other aquatic plants: 96 hr EC_{50}: 1,034.1 mg/l Toxicity to Crustacea: 384 hr EC_{50}: 27,901.6 mg/l Toxicity to Fish: 96 hr NOEC: 56 mg/l
Persistence/Degradability	Water/soil: Low persistence.

	Air: Low persistence.
Mobility	Soil: KOC = 14.3 (Low mobility).
Environmental Fate	Avoid release to the environment. Drains for storage or work areas should have retention basins for pH adjustments and dilution of spills/residues before discharge or disposal of material.
Bioaccumulation Potential	Bioaccumulation: LogKow = -3.8796 (Low potential).
Environmental Impact	No Data Available

14 TRANSPORT INFORMATION

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

UN No: 1823
Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name: SODIUM HYDROXIDE, SOLID
Hazchem or Emergency Action Code: 2W

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN No: 1823
Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name or Technical Name: SODIUM HYDROXIDE, SOLID
IMDG EMS Fire: F-A
IMDG EMS Spill: S-B

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 1823
Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name or Technical Name: SODIUM HYDROXIDE, SOLID

15 REGULATORY INFORMATION

Poisons Schedule	S6
EPG	8A1
AICS Name	SODIUM HYDROXIDE

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

Classification of the substance or mixture:

Eye Corrosion	- Category 1
Skin Corrosion/Irritation	- Category 1
Corrosive to Metals	- Category 1

Hazard Statement(s):

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
AUH071	Corrosive to the respiratory tract

16 OTHER INFORMATION

Literature References No data available.
Sources for Data No data available.

Legend to Abbreviations and Acronyms

<	less than
>	greater than
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstracts Service (Registry Number)
cm^2	square centimetres
CO_2	Carbon Dioxide
COD	Chemical Oxygen Demand
deg C (°C)	degrees Celsius
ERMA	Environmental Risk Management Authority
G	gram
g/cm^3	grams per cubic centimetre
g/l	grams per litre
HSNO	Hazardous Substance and New Organism

IDLH	Immediately Dangerous to Life and Health
Immiscible	liquids are insoluble in each other
Kg	kilogram
kg/m^3	kilograms per cubic metre
LC50	LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50	LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals
Ltr	Litre
m^3	cubic metre
mbar	millibar
mg	milligram
mg/24H	milligrams per 24 hours
mg/kg	milligrams per kilogram
mg/m^3	milligrams per cubic metre
Misc	miscible
Miscible	liquids form one homogeneous liquid phase regardless of the amount of either component present
mm	millimetre
mPa.s	milli Pascal per second
N/A	Not Applicable
NOHSC	National Occupational Health and Safety Commission
OECD	Organization for Economic Co-operation and Development
PEL	Permissible Exposure Limit
ppb	parts per billion
ppm	parts per million
ppm/2h	parts per million per 2 hours
ppm/6h	parts per million per 6 hours
RCP	Reciprocal Calculation Procedure
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
tne	tonne
TWA	Time Weighted Average
ug/24H	micrograms per 24 hours
UN	United Nations (number)
Wt	weight

Date Prepared:
Monday 22nd January 2024 Version: 1.1 Supersedes: Monday 25th March 2019

Include AUH071 Corrosive to the respiratory tract

Update CHEMWATCH Phone Number

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