FOR FURTHER INFORMATION, PLEASE REGER TO THE SDS

Issue: November 16

PRODUCT: Caustic Soda/Caustic Potash Blend

Other Names: Hydrocarbon Solvent

Uses: Industrial Application

UN No.	1823
Dangerous Goods	8
Subsidiary Risk	N/A
Pack Group	II
Hazchem	2w
Poison Schedule	6

Hazardous Nature: This product is classified as hazardous under Australian Code for the Transport of Dangerous Goods

Physical Characteristics (Typical) — Section 9 of SDS

Appearance	White, deliquescent flakes, pellets
Boiling Point/ Range (°C):	318-323
Specific Gravity/ Density (g/ml @	2.10
Chemical Stability:	Stable at room temperature and pressure

Product Ingredients — Section 3 of SDS

Chemical Entity	CAS Number	Proportion (%)
Sodium Hydroxide	1310-73-2	99-100

For further Risk and Safety information, please refer to the full SDS.

DEFINITIONS

Dangerous Goods	Products that are classified as Dangerous for Storage and Transport: these products are allocated a UN No., with accompanying Class, Pack Group, and Sub. Risk, if required. Products that do not have a specific description under the code, but have low flash points, or such, must be classified under their most significant risk, eg. Flammable Goods N.O.S. (Not otherwise specified), UN 1993
Poisonous Substance	Products that are classified under the poisons schedule are a poisonous substance. The proportion of the poison in the product will determine its numerical classification.
Hazardous Substance	Products are considered to be Hazardous if they pose an intrinsic risk to human or environmental health, such as mutagens (able to change DNA), teratogens (able to result in birth defects), carcinogens (able to generate cell abnormalities), etc. Materials are not hazardous substances if they pose risks such as potential for misuse, like flammability, or explosions when heated and ignited.

SUMMARY INFORMATION ONLY

1. IDENTIFICATION

Product Name	**Caustic Soda/Caustic Potash Blend**
Other Names	No Data Available
Uses	Freezing point suppressant. No Data Available
Chemical Family	No Data Available
Chemical Formula	Caustic Soda/Caustic Potash Blend No Data Available
Chemical Name	
Product Description	

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Sydney Solvents	3/10 Production Place Jamisontown NSW, 2750	02 4722 5060

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre		Westmead NSW 1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre		New Zealand 0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) 6

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories

Corrosive to Metals - Category 1
Acute Toxicity (Oral) - Category 4
Skin Corrosion/Irritation - Category 1A
Serious Eye Damage/Irritation - Category 1

Pictograms

Signal Word Danger

Hazard Statemen

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautio

Prevention	**P234**	Keep only in original container.
	P264	Wash exposed skin thoroughly after handling.
	P280	Wear protective gloves/protective clothing/eye
Response	**P303 + P361 + P353**	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
	P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P312	Call a POISON CENTER or doctor/physician if
	P390	Absorb spillage to prevent material damage.
Storage	**P405**	Store locked up.
Disposal	**P501**	Dispose of contents/container in accordance with local / regional / national / international regulations

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications		**6.1D**	Substances that are acutely toxic - Harmful
	Health Hazards	**8.1A**	Substances that are corrosive to metals
		8.2A	Substances that are corrosive to dermal tissue UN PGI
		8.3A	Substances that are corrosive to ocular tissue
		9.1D	Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action
	Environmental Hazards	**9.3C**	Substances that are harmful to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
	H2O	7732-18-5	53.8 %
Sodium Hydroxide	NaOH	1310-73-2	41.4 %
Potassium Hydroxide	KOH	1310-58-3	4.8 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed Rinse mouth. Do NOT induce vomiting. If within a few minutes after ingestion, one small glass of water may be given to drink. Refer immediately for medical attention.

Eye First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Skin Remove contaminated clothes. Rinse skin with plenty of water or shower for at least 15 minutes. Refer immediately for medical attention.

Inhaled Fresh air, rest. Refer immediately for medical attention. Move victim to fresh air. Call emergency medical service. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth methods if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult. Consult a doctor or call POISON CONTROL centre. Take the product container or safety data sheet with you.

Advice to Doctor Indication of immediate medical attention and special treatment needed : Give artificial respiration if victim is not breathing but not mouth to mouth. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. Obtain immediate medical attention.

Medical Conditions Aggravated by Exposure Serious local effects by all routes of exposure- inhalation, ingestion, skin and/or eye contact. Acute toxicity, irritation eyes, skin, respiratory system; cough, sneezing; eye, skin burns; vomiting, diarrhoea.

5. FIRE FIGHTING MEASURES

General Measures If safe to do so, remove containers from the path of fire.

Flammability Conditions No Data Available

Extinguishing Media In case of fire in the surroundings, use appropriate extinguishing media. Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn or burns with difficulty.) Use water in flooding quantities as fog. Apply water from as far a distance as possible. Use "alcohol" foam, dry chemical or carbon dioxide. Keep run-off water out of sewers and water sources.

Fire and Explosion Hazard Non-combustible liquid. Not considered to be a fire hazard or an explosion hazard.

Hazardous Products of Combustion Hazardous decomposition products may include noxious and toxic fumes of carbon monoxide and carbon dioxide.

Special Fire Fighting Instructions Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

Personal Protective Equipment Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit.
Please note: Structural fire fighters uniform will provide limited protection.

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** 2X

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure Hazards from spills and leaks should be minimized by an adequate supply of water for washing-down. Adequate ventilation should be provided in areas where caustic soda mist or dust is present. For the protection of the eyes, safety goggles should be worn, as well as face shields, if complete face protection is necessary. Eyewash fountains and safety showers must be available at any location where eye and/or skin contact can occur. Protection against mist or dust of this compound can be provided by filter or dust-type respiratory protective equipment. Safety shoes are recommended.

Clean Up Procedures	Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Sweep spilled substance into covered plastic containers. Carefully collect remainder. Then store and dispose of according to local regulations.
Containment	Stop leak if safe to do so.
Environmental Precautionary Measures	The most favorable course of action is to use an alternative chemical product with less inherent propensity for occupational harm/injury/toxicity or environmental contamination. Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in soil or water; effects on animal and plant life; and conformance with environmental and public health regulations
Evacuation Criteria	Evacuate all unnecessary personnel.

Personal Precautionary Measures Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Plastics and plastic-lined steel are now available as construction materials. Mild steel is adequate for almost all caustic-handling applications. Keep container closed when not in use. Exercise great care in handling potassium hydroxide, as it rapidly destroys tissue. Do not handle with bare hand. Wash hands thoroughly after any skin contact. Avoid inhalation or contact with eye and skin. Do not ingest.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Protect from direct sunlight, moisture and static discharges. Do NOT allow material to dry out. Avoid heat, freezing and ultra- violet light. Keep away from food, drink, and animal feeding stuffs. This product has a UN classification of 3266 and a Dangerous Goods Class 8 (Corrosive) according to The Australian Code for the Transport of Dangerous goods By Road and Rail.
Container	Store only in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Safe Work Australia, TWA :

Sodium Hydroxide, 2 Peak limitation, 2 mg/m3, 8 hours
Potassium Hydroxide, 2 Peak limitation, 2 mg/m3, 8 hours
Sodium Hydroxide, 2mg/m3 (ceiling value) Potassium Hydroxide, 2mg/m3 (ceiling value)

Exposure Limits No Data Available

Biological Limits No information available on biological limit values for this product.

Engineering Measures A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.

Personal Protection Equipment RESPIRATOR: Wear a positive-pressure,self-contained breathing apparatus for planned entry into unknown concentrations or in case of emergency (AS1715/1716).
EYES: Safety glasses with side shields (AS1336/1337). HANDS: Wear impervious protective gloves (AS2161).
CLOTHING: Flame-retardant coveralls and anti-static footwear (AS3765/2210).

Work Hygienic Practices No Data Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Liquid

Appearance	Clear solution
Odour	No specific odour
Colour	Colourless
pH	13.0 - 14.0
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Soluble
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	1.48-1.49
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition 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 Data Available
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

Chemical Stability	Soluble in water. Dissolution can liberate enough heat to cause steaming and spattering and ignite adjacent combustible material Slowly absorbs carbon dioxide from the air to give solid products as crusts or precipitates. Water soluble. Dilution with water liberates heat, possibly enough to cause local boiling and spattering. Generates considerable heat when solution is mixed with acid. Acids, water, metals (when wet), halogenated hydrocarbons, maleic anhydride [Note: Heat is generated if KOH comes in contact with water & carbon dioxide from the air].

Conditions to Avoid	Avoid excessive heat, direct sunlight, moisture, static discharges and high temperatures
Materials to Avoid	Incompatible with strong oxidising agents, bases, mineral acids and sources of ignition.
Hazardous Decomposition Products	No Data Available
Hazardous Polymerisation	Hazardous Polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Sodium Hydroxide: LD50 Oral (Rat), 140-340 mg/kg Sodium Hydroxide: LC50 inhalation (Mouse), 39,000 mg/m3/4 hrs. Potassium Hydroxide: LD50 Oral (Rat), 265 mg/kg Caustic Blend : Not known to be a skin sensitizer. There is no risk for developmental toxicity and no risk for toxicity to reproduction. Both in vitro and in vivo genetic toxicity tests indicated no evidence for a mutagenic activity. No confirmed data available on carcinogenicity. STOT- single exposure and repeated exposure not known. Potassium Hydroxide : Not known to be a skin sensitizer. No evidence for a mutagenic activity. No risk for reproductive toxicity is expected. There is no evidence KOH to be carcinogenic in exposure situations that are relevant for man. STOT- single exposure and repeated exposure not known.
Eye Irritant	The substance is very corrosive to the eyes.
Skin Irritant	Caustic Blend : The substance is corrosive to the skin. Repeated or prolonged contact with skin may cause dermatitis. When caustic soda comes into contact with the skin it does not usually cause immediate pain, but it does start to cause immediate damage. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Effects of contact may be delayed.
Ingestion	Corrosive on ingestion. Caustic dusts are irritating to the upper respiratory system. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed. Corrosive on ingestion. Swallowing caustic alkalis /potassium hydroxide/ causes immediate burning pain in the mouth, throat, and stomach, and the lining membranes become swollen and detached. Vomiting and purging may occur.
Inhalation	The substance is corrosive to the respiratory tract. Prolonged exposure to high concentrations may cause discomfort and ulceration of nasal passages. Effects of contact or inhalation may be delayed.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	Sodium Hydroxide : LC50; freshwater, static, Carassius auratus (Goldfish), 160 mg/L for 24 hrs. Potassium Hydroxide :LC50, Carassius auratus (Goldfish), 224 mg/L for 24 hrs.
Persistence/Degradability	Sodium Hydroxide : Sodium persists indefinitely in the environment. The hydroxyl ion can be neutralized by acids, it can form complexes or it can be precipitated. Biological oxygen demand: None. Potassium Hydroxide : Biodegradation and Photodegredation: Not available.
Mobility	Sodium Hydroxide : The high water solubility and low vapour pressure indicate that NaOH will be found predominantly in water. In soil, mobility depends directly on the importance of the liquid phase of the soil and the possibility to form metal hydroxo-complexes with metal solid species. Potassium Hydroxide : The high water solubility and low vapour pressure indicate that KOH will be found predominantly in the aquatic environment. KOH is present in the environment as potassium and hydroxyl ions, which implies that it will not adsorb on particulate matter or surfaces and will not accumulate in living tissues.
Environmental Fate	Adverse effects on the aquatic environment are not expected due to production or use of NaOH.
Bioaccumulation Potential	Sodium Hydroxide : Considering its high water solubility, NaOH is not expected to bioconcentrate in organisms. Potassium Hydroxide : Not applicable.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. Incinerate at an approved site following all local regulations. This material may be suitable for approved landfill.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG

Proper Shipping Name	Corrosive Liquid, Basic, Inorganic NOS (Sodium hydroxide, Potassium hydroxide)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	274

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	Corrosive Liquid, Basic, Inorganic NOS (Sodium hydroxide, Potassium hydroxide)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	274

Land Transport (New Zealand)
ADR Code

Proper Shipping Name	Corrosive Liquid, Basic, Inorganic NOS (Sodium hydroxide, Potassium hydroxide)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	37 Toxic And/Or Corrosive Substances Non-Combustible
UN Number	3266
Hazchem	2X

Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	Corrosive Liquid, Basic, Inorganic NOS (Sodium hydroxide, Potassium hydroxide)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
ERG	154 Substances - Toxic and/or Corrosive (Non-Combustible)
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Sea Transport
IMDG

Proper Shipping Name	Corrosive Liquid, Basic, Inorganic NOS (Sodium hydroxide, Potassium hydroxide)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	274
EMS	F-A, S-B
Marine Pollutant	No

Air Transport
IATA

Proper Shipping Name	Corrosive Liquid, Basic, Inorganic NOS (Sodium hydroxide, Potassium hydroxide)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	3266
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information No Data Available

Poisons Schedule (Aust) 6

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR001547

National/Regional Inventories

Australia (AICS)	Not Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined

Europe (REACh)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Not Determined
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes CAUSOD0100, CAUSOD0101, CAUSOD0105

Revision 1

Revision Date 01 Jan 2016

Reason for Issue New SDS

Key/Legend

< Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm2 Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit
g Grams
g/cm3 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 insoluable in each other. inHg Inch of Mercury
inH2O Inch of Water
K Kelvin
kg Kilogram
kg/m3 Kilograms per Cubic Metre

lb Pound
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 or L Litre
m3 Cubic Metre mbar Millibar mg Milligram
mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m3 Milligrams per Cubic Metre
Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH2O Millimetres of Water
mPa**.s** Millipascals per Second.

N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health **NOHSC** National Occupational Heath and Safety Commission **OECD** Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours **psi** Pounds per Square Inch
R Rankine
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
wt Weight