Material Safety Data Sheet

1. IDENTIFICATION OF MATERIAL AND SUPPLIER

PRODUCT NAME: COBRA

Synonyms: None

Recommended Use: Aluminium fin cleaner

Supplier: Minehan Agencies Pty Ltd

Address: 29 Camuglia Street GARBUTT Townsville Queensland Australia 4814

Telephone: (07) 4774 4626

Facsimile: (07) 4774 4616

E-mail: inquiry@minehanagencies.com.au

Emergency telephone number: 0408 777 800 (24Hrs Australia)

2. HAZARDS IDENTIFICATION

This product is classified as:

Hazardous Substance according to criteria of the National Occupational Health and Safety Commission (NOHSC).

Dangerous Goods according to the Australian Dangerous Goods Code (ADG Code).

Approved Criteria Classification (Calculated).	**CORROSIVE R35, RESPIRATORY IRRITANT R37 Safety Phrases S1/2, S36/37/39**
SUSDP Classification	**Poison S6** (Sodium Hydroxide)
ADG Classification	**Class 8 (Corrosive Liquid NOS.)**
Un Number	**1760**

EMERGENCY OVERVIEW

COLOUR	Pale blue
PHYSICAL DESCRIPTION	LIQUID
ODOUR	Faint
MAJOR HEALTH HAZARD	Severe burns, permeant eye damage Respiratory tract damage.

POTENTIAL HEALTH EFFECTS

Inhalation: Short term exposure. Corrosive, irritation, nausea, vomiting, difficulty breathing, headache, drowsiness, symptoms of drunkenness, lung congestion. **Long term Exposure**. Possible lung and respiratory tract damage , may trigger pre-existing respiratory complaints.

Skin Contact: Short term exposure. Severe burns, redness and irritation. **Long term exposure**. Permanent scaring. Prolonged exposure to a diluted form may cause irritation, redness and dermatitis.

Eye Contact: Short term exposure. Severe irritation, serious eye damage. **Long-term exposure**. Permanent damage to eyes including blindness.

Ingestion: **Short term exposure**. Severe burns to mouth, oesophagus and stomach. Headaches, nausea, and severe abdominal pain may result. **Long-term exposure**. Permanent Gastrointestinal damage.

Carcinogen Status

NOHSC	Not Classified
NTP	Not Classified
IARC	Not Classified

3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL ENTITY	CAS No	PROPORTION W/W %
Sodium Hydroxide	1310-73-2	5-10%
Potassium Hydroxide	1310-58-3	5-10%
Sodium Gluconate	527-07-1	1-5%
Cocoimido Betaine	61789-40-0	1-5%
Other ingredients determined not to be hazardous		to 100%

4. FIRST AID MEASURES

Poison Information Centres in each State capital city can provide additional assistance for Scheduled Poisons: Phone (Australia 13 1126).

Inhalation: Remove victim from exposure. Remove contaminated clothing and loosen remaining clothing. Perform artificial respiration if needed. Allow patient to assume most comfortable position and keep warm. Seek medical attention.

Skin Contact: Remove contaminated clothing. Wash contaminated skin for at least 15-20mins with of water, or until no evidence of the chemical remains (this product will feel slippery or soapy on the skin.). If swelling, redness, blistering, or irritation occurs seek medical advice. Wash clothing before re-use.

Eye Contact: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. If present, remove contact lenses. Seek medical attention. **Note to Physician**. Can cause corneal burns.

Ingestion: Immediately rinse mouth with water. Do NOT induce vomiting. Seek urgent medical attention.

Notes to Physician: Treat symptomatically. Suggest intubation BEFORE any emesis due to foaming properties of this product.

5. FIRE FIGHTING MEASURES

Flash Point: Not a Flammable or Combustible liquid.

Fire and Explosion Hazard: Non-combustible material. Closed containers exposed to heat may explode.

Specific Hazards: Corrosive Liquid. May produce explosive, flammable gas when in contact with aluminium, zinc and other light metals. Releases ammonia gas in contact with ammonium salts or ammonia solutions.

Fire Fighting: Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dam for later disposal. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. **Suitable Extinguishing Media:** Not combustible, however, if material is involved in a major fire use water fog to keep drums cool. Use foam, CO_2 or dry chemical powder to extinguish surrounding fire.

Hazardous Decomposition in Products: On burning may emit fumes including carbon monoxide, carbon dioxide, and partially burned hydrocarbons. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of combustion.

Hazchem Code: 2R

6. ACCIDENTAL RELEASE MEASURES

Alkaline liquid. Stop leak if possible without personal risk. Wear protective equipment to prevent personal injury (see section 8). **Small spills (< 5L)** Cover with an absorbent material (soil, sand or other inert material). Collect and seal in properly labelled containers for disposal. Hose down area with large amounts of water. Caution, Slip Hazard. **Large spills (>5L)** Prevent run off into drains and waterways. Dam material. Cover with absorbent material. Collect and seal in properly labelled containers for disposal. Neutralise residual material with a mild acid (citric or acetic). Hose down area with large amounts of water. Keep unnecessary people away, isolate hazard area and deny entry. If contamination of sewers or waterways has occurred, advise local emergency services.

7. HANDLING AND STORAGE

Store in a well-ventilated area. Store in a cool, dry place and out of direct sunlight. Store away from foodstuffs and strong acids. Store in original containers. Do not store in aluminium containers. Keep containers closed when not in use – check regularly for leaks. This material is a Scheduled Poison and a Class 8 Corrosive liquid and must be stored, maintained and used in accordance with the relevant regulations. Handle using good industrial hygiene practices (see section 8 on personal protection).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits: No value has been assigned for this specific material by NOHSC. However exposure limits for ingredients are shown below

Ingredient	TWA	STEL	Notices
Sodium Hydroxide	2ppm	5ppm	
Potassium Hydroxide	2 ppm	5ppm	

TWA – the Time-Weighted Average airborne concentrations over an eight hour working day, for a five day week over an entire working life.

STEL (Short Term Exposure Limit) – the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight hour work day. According to current knowledge, these concentrations should neither impair the health of, nor cause undue discomfort to, nearly all workers.

Sk Notice – absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

Sen Notice-Sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to minute levels of that substance.

These 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. 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 Limit Value: No biological limit allocated.

Engineering Controls: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards and prevent exposure to vapours, mists and fumes. Use in well ventilated area. Keep containers closed when not in use.

Personal Protection Equipment
Respirator Type (AS 1716): If inhalation risk exists, wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Eye Protection: Safety glasses with side shields or goggles should be worn as described in Australian Standard AS/NZS 1337 – Eye Protectors for Industrial Applications.

Glove Type: Impervious PVC or rubber gloves should be worn.

Clothing: Suitable protective clothing should be worn eg: cotton overalls buttoned at neck and wrist.

Work/Hygienic Practices: Avoid skin and eye contact. Always wash hands before smoking, eating, drinking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid		Water Solubility	Soluble
Colour	Pale Blue		Vapour Pressure	Unknown
Odour	Faint		Vapour Density	Above 1 (air =1)
Boiling Point	>100°C		Evaporation Rate	Slower than butyl acetate
Melting Point	NA		% Volatiles	75%
Freezing Point	Unknown		Flash Point	Not Flammable
Specific Gravity	1.17g/ml (water =1)		Flammability Limits	NA
Ph (neat)	13+		Ignition Temperature	NA

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Conditions to Avoid: Avoid contact with incompatible materials.

Incompatibilities: Strong Oxidising Agents, Strong Acids, Light Metals (Al, Sn, Pb, Zn)
Explosive reactions may occur with strong oxidising agents.
Violent heat producing reactions may occur with strong acids.
An explosive, flammable gas (Hydrogen gas) is produced when in contact with light metals.

Hazardous Decomposition: Thermal decomposition products include, sulphur dioxide, carbon dioxide, carbon monoxide, and Nitrous oxides.

Polymerisation: Will not polymerise.

11. TOXICOLOGICAL INFORMATION

Cobra

Local Effects: Corrosive and Toxic: Inhalation, skin, eyes, and ingestion.
Target Organs: Eyes, Skin, and Respiratory System.

Classification of Hazardous Ingredients

Ingredients	R Phrases
Sodium Hydroxide	R35, R41 R20/21/22
Potassium Hydroxide	R35, R41 R20/21/22

Individual Ingredient Information

Sodium Hydroxide

Irritation Data: Skin Human, Patch test, 0.2ml of 0.5% soln, irritating for 55% of volunteers. Eye Rabbit, 0.004-0.2% non-irritant, 0.4% mild, 1.2% corrosive.

Toxicity Data: Repeated dose; no valid studies available. However under normal safe handling conditions and use (ie non-irritating) Sodium Hydroxide is not expected to be systemically available in the body.

Local Effects: Causes severe burns to eyes and skin. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns.

Acute Toxicity Level: Dependant on concentration and dose. Lethality has been reported for animals at doses 240-400mg/Kg. Fatal ingestion and fatal dermal exposure has been reported in humans. One person who ingested 10g of Sodium Hydroxide (equivalent to 65mls of Cobra) in water suffered transmural necrosis of the esophageus and stomach and died 3 days after admission to hospital. A 42-year-old female swallowed approximately 30mls of 16% Sodium Hydroxide solution (equivalent to 30mls Cobra), it resulted in a 9cm stricture of the esophageus which was treated by gastric antral patch esophagoplasty.

Target Organs: Eyes, skin, mucous membranes, respiratory system

Sodium Hydroxide cont

Mutagenic Data: Both *in vitro* and *in vivo* genetic toxicity tests indicated no evidence for a mutagenic activity.

Reproduction Effects Data: It can be stated that the substance will neither reach the foetus nor reach the male and female reproductive organs, which shows that there is no risk for developmental toxicity and no risk for toxicity to reproduction

Ref: OECD SIDS Initial Assessment Report, Sodium Hydroxide, Paris, 26-28 March 2002.

Potassium Hydroxide

Irritation Data: Skin Human, 50mg/24hour severe. Skin Rabbit, 50mg/24hour severe. Eye Rabbit, 1mg/24hour moderate.

Toxicity Data: LD 50 oral rat 273mg/Kg

Local Effects: Causes severe burns to eyes and skin. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns.

Acute Toxicity Level: Very similar to data for sodium hydroxide (see above).

Target Organs: Eyes, skin, mucous membranes, respiratory system

Mutagenic Data: Cytogenetic analysis: hamster ovary 12mmol/L, rat (Ascites tumours 1800mg/Kg.

Reproduction Effects Data: It can be stated that the substance will neither reach the foetus nor reach the male and female reproductive organs, which shows that there is no risk for developmental toxicity and no risk for toxicity to reproduction

12. ECOLOGICAL INFORMATION

General Statement: Do not allow large quantities (>20L) of this product to enter the waterways. Strong alkaline effect will be detrimental to aquatic life.

Ecotoxicity: The hazard of this product for the environment is due to the high Sodium & Potassium Hydroxide content (pH effect). The effect of Sodium & Potassium Hydroxide on an organism depends on the buffer capacity of the aquatic or terrestrial ecosystem. LC50 values of acute toxicity tests with aquatic organisms ranged between 33 and 189 mg/L.

Persistence and Degradability: No specific information available for this product.

Mobility: Very mobile in soil and very soluble in water. No transport to air.

13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority for disposal, show this MSDS for their consideration. Empty containers not to be recycled or used for any other purpose. Dispose in accordance with local regulations.

14. TRANSPORTATION INFORMATION

UN No	1760
Proper Shipping Name	Corrosive Liquid N.O.S.
ADG Code	Class 8
Sub Risk	Class 6.1
Packing Group	II
Special Precautions	None
Hazchem Code	2R
EPG	8A1
Segregations	Yes

15. REGULATORY INFORMATION

SUSDP: Poison S6

AICS: All of the constituents of this material are listed on the ACIS.

16. OTHER INFORMATION

Issue Date: August 2010
Reason(s) For Issue: Updated format to comply with NOHSC: 2011(2003).

Labelling Details
First line of Label must read: POISON
Other statements to include

R35	Cause severe burns
R41	Risk of serious damage to eyes
R20/21/22	Harmful by inhalation, in contact with skin, and if swallowed
S1/2	Keep locked up and out of reach of children.
S26	In case of contact with eye/s, do NOT rub eyes as this may scratch the cornea, rinse immediately with plenty of water and seek medical advice.
S36/37/39	Wear Suitable protective clothing, gloves and eye/face protection
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label wherever possible).

Abbreviations and Acronyms

SUSPD: Standard for the Uniform Scheduling of Drugs and Poisons
ADG: Australian Code for the Transport of Dangerous Goods by Road and rail
N.O.S.: Not Otherwise Specified
CAS No: Chemical Abstracts Service Registry Number
UN No: United Nations Number
R-Phrases: Risk Phrases
S-Phrases: Safety Phrases
HAZCHEM Code: Hazardous Chemical emergency action code
NOHSC: National Occupational Health and Safety Commission
IARC: International Agency for Research into Cancer
ACIS: Australian Inventory of Chemical Substances
NTP: National Toxicology Program (USA)

Literary references:
Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(41999)]

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011(2003)]
Exposure Standards for Atmospheric Contaminants in the Occupational Environment
Guidance Note [NOHSC: 3008(1995)] National Exposure Standards [NOHSC: 10005(1999)]
List of Designated Hazardous Substances [NOHSC: 10005(1999)]
Standard for the Uniform Scheduling of Drugs and Poison No. 17
The Australian Code for the Transport of Dangerous Goods by Road and Rail EDITION 6

Disclaimer

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product and in particular how to safely handle and use the product in the workplace.
Since Minehan Agencies Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace i.e. a risk analysis.
If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact Minehan Agencies Pty Ltd.