

SAFETY DATA SHEET

Product Name: **CONCENTRATED BLEACH 12.5%**

Page: 1 of 6

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

PRODUCT NAME: CONCENTRATED BLEACH 12.5%

OTHER NAMES: INDUSTRIAL GRADE BLEACH
RECOMMENDED USE: HARD SURFACE CLEANER, DISINFECTANT AND SANITISER.
Formula: NaOCl
SUPPLIER NAME: JAMAC SAFE & CLEAN PTY LTD (ABN 31065 516 529)
ADDRESS: 66 LOFTUS ST, RIVERSTONE NSW 2765
Emergency TELEPHONE: 02 9838 1220 OR 0438 569 315

2. HAZARDS IDENTIFICATION

Poisons Schedule: 6
GHS Hazard Classification: Classified as hazardous according to the criteria of GHS and Labelling of Chemicals.
Hazard Category: Skin Corrosive-Category 1B
Serious Eye Damage- Category 1
Acute Hazard to the Aquatic Environment-Category 1



Signal Word: Danger

Hazard Statements: EUH031 Contact with acids liberates toxic gas.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.

Precautionary Statements:

Prevention: P273 Avoid release to the environment.
P264 Wash exposed skin thoroughly after handling.
P260 Do not breathe fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection.

Response P303 + P361 + P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.
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 at rest in a position comfortable for breathing.
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).

Storage P405 Store locked up.

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

Dangerous Goods Classification: Dangerous Goods.

Australian Code 3. COMPOSITION / INFORMATION ON INGREDIENTS

Appearance: Clear to slightly yellow, slightly hazy solution with characteristic odour.

Ingredients:

Chemical Name,	CAS No	Proportion
Sodium hypochlorite	7681-52-9	12 %
Sodium hydroxide	110-73-2	0.7-2.0%
Water to make total of 100%		

SAFETY DATA SHEET

Product Name: **BLEACH 12.5%**

Page: **2 of 6**

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

4. FIRST AID MEASURES

Swallowed:	Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of water. Get medical aid immediately.
Eye	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.
Skin	Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner, which limits further exposure.
Inhaled	Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. DO NOT use mouth-to-mouth respiration.

Advice to Doctor Symptoms caused by exposure:

Chlorine gas released from sodium hypochlorite causes irritation of respiratory system, consisting in coughing, difficult breathing, stomatitis, nausea and pulmonary edema.

Contact with skin can cause skin irritation, followed by blisters and eczema (especially at 12% concentration). The eye contact causes serious damages of eyes.

Ingestion of tens of grams of sodium hypochlorite solution (12% concentration) can cause mucous membrane burns, perforation of the oesophagus and stomach, and laryngeal oedema.

Medical Attention and Special Treatment: In case of eyes and face splashing, treat eyes firstly. Treat symptomatically and supportively.

Medical Conditions Aggravated

by Exposure: No information available on medical conditions aggravated by exposure to this product.

Inhalation:

Remove source of contamination or move victim to fresh air. Obtain medical advice immediately.

Other First Aid:

Provide general supportive measures (comfort, warmth, rest). Consult a physician and/or the nearest Poison Control

Centre for all exposures except minor instances of inhalation contact.

Notes to physician: Treat symptomatically as for strong alkalis. Do not use acid antidotes

5. FIRE FIGHTING METHODS

General Measures	If safe to do so, remove containers from the path of fire.
Flammability Conditions	Not considered to be a fire hazard. Sodium hypochlorite itself does not burn, but poisonous gases are produced in fire.
Extinguishing Media	Suitable Extinguishing Media: Water. Use water spray to cool fire-exposed containers, to dilute liquid, and control vapour.
Fire and Explosion Hazard	Contact with combustible materials can cause explosions. Hazchem Code: 2X
Hazardous Products of Combustion	Emits toxic fumes of chlorine (hypochlorous acid and sodium chlorate) when heated to decomposition . The decomposition is an exothermal process.
Special Fire Fighting Instructions	Keep containers cool with water spray. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Containers may explode when heated.
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

SAFETY DATA SHEET

Product Name: **BLEACH 12.5%**

Page: **3 of 6**

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Emergency procedures, Evacuate the danger area or to consult an expert. Approach from upwind. Isolate the area. Wear self-contained breathing apparatus in confined spaces, in cases where the oxygen level is depleted, or in case of significant emissions. Prevent further leakage or spillage if safe to do so. Keep away from incompatible products.
Clean Up Procedures Spills/Leaks:	The spills can be neutralized using light reducing agents such as sodium sulphite sodium bisulphite or sodium thiosulphate. Do not use sulphates or bisulphate! Contain and recover when is possible.
Containment	Stop leak if safe to do so.
Decontamination Special precautions:	Do not use combustible materials, such as saw dust! Do not use sulphates or bisulphates for spill neutralizing. Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Protect against physical damage. Personnel which handling the product must wear protective equipment for hand, skin or eyes, and including protective breathing apparatus. Area should be well ventilated. Advice on general occupational hygiene: Avoid inhalation or ingestion and contact with skin and eyes. General occupational hygiene measures are required to ensure safe handling of the substance. Chemicals should be used only by those trained in handling potentially hazardous materials. The electrical equipment should be corrosion resistant.
Storage	Keep in tightly closed containers, store in a cool, dry, well ventilated area. Isolate from incompatible substances. The aqueous solutions are sensitive to light and air. Avoid storage for long period because the product degrades over time. The recommended storing temperature is 15-25 C. Storage at 15 C reduces the rate of decomposition. This product has a UN classification of 1791 and a Dangerous Goods Class 8 (Corrosive) according to The Australian Code for the Transport of Dangerous goods By Road and Rail.
Container	Materials used for storage tanks: *polyethylene; 5-7 years lifetime. The outdoor tanks will be UV proof. *glass fibre reinforced plastics designed accordingly
Incompatible materials:	Reducing agents, combustible materials (wood, cellulose), organic materials, metals, acids.
Materials to avoid	carbon steel, stainless steel, copper and its alloys, aluminium, unprotected metals.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	HSIS Airborne Exposure Limits: Chlorine: TWA 1 ppm (3 mg/m3 peak limitation) NOTE: The exposure value at the TWA is the average airborne concentration of a substance when calculated over a normal 8 hour working day for a 5-day working week. Peak limitation is a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes. 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. These 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.
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	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. These 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.
Personal Protection Equipment	RESPIRATOR: Self-contained breathing apparatus with full face-piece operated in the pressure demand. For emergencies or instances where exposure levels are not known, use a full-face piece positive pressure, air supplied respirator. Warning! Air - purifying respirators do not protect workers in oxygen deficient atmospheres (AS1715/1716).

SAFETY DATA SHEET

Product Name: **BLEACH 12.5%**

Page: **4 of 6**

minimum	EYES: Chemical splash goggles and/or face shield must be worn when possibility exist for eye contact due to splashing or spraying liquid or vapor (AS1336/1337). HANDS: Wear PVC, rubber or neoprene gloves. Glove thickness has to be of 1.2 mm. Do not use leather gloves (AS2161). CLOTHING: Wear impervious protective clothing including boots, lab coat, apron or coveralls and safety footwear (AS3765/2210).
Work Hygienic Practices	Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Yellow slightly liquid	Vapour Pressure: 2500pa @20celsiurs
Odour threshold: Chlorine odour	Boiling Point: 100 approximate
Specific Gravity: approx 1.21	Solubility: Miscible in water
Flash Point: Non-combustible (does not burn)	Viscosity 2.6m Pas
Flammability limits Non-flammable	Melting Point: No Data available
PH (1% solution): 12	Relative Vapour Density: Not available.

10. STABILITY AND REACTIVITY

General Information	Possibility of Hazardous Reactions: Sodium hypochlorite is extremely corrosive for aluminium, brass. Reacts with metals (nickel, cooper, tin) with oxygen release, with ammonia urea, oxidisable substances, ammonium nitrate, ammonium oxalate, ammonium phosphate, ammonium acetate, ammonium carbonate, cellulose and methanol.
Chemical Stability	Unstable. Stability decreases with concentration, heat, light exposure, decrease in pH and contamination with heavy metals, such as nickel, cobalt, copper and iron. In practice, a factor of 2 decrease in concentration produces nearly a factor of 5 decrease in decomposition rate at any given temperature with a pH range of approximately 11 to 13. At pH<11, sodium hypochlorite is unstable and decomposes with the release of chlorine.
Conditions to Avoid	Light, heat and incompatibles.
Materials to Avoid	Incompatible materials and possible hazardous reactions: aluminium, brass, cellulose, steel, stainless steel, bronzes. Strong acids, strong oxidizers, heavy metals (which act as catalysts), reducing agents, ammonia and ammonium salts, ether, and many organic and inorganic chemicals such as paint, kerosene, paint thinners, shellac.
Hazardous Decomposition Products	Emits toxic fumes of chlorine (hypochlorous acid and sodium chlorate) when heated to decomposition. The decomposition is an exothermal process
Hazardous Polymerisation	Sodium hypochlorite is extremely corrosive for aluminium, brass. Reacts with metals (nickel, cooper, tin) with oxygen release, with ammonia, urea, oxidisable substances, ammonium nitrate, ammonium oxalate, ammonium phosphate, ammonium acetate, ammonium carbonate, cellulose and methanol.

11. TOXICOLOGICAL INFORMATION

General Information	Acute toxicity: Sodium Hypochlorite: Rat male Oral LD50 = 1100 mg/kg bw (for sodium hypochlorite sol... 12% free chlorine). Mouse male Oral LD50, = 880 mg/kg bw (for sodium hypochlorite sol... 12% free chlorine). Other routes: intra-peritoneal Rat LD 50, (1h) > 10,7 mg/L air, causes abundant tearing. Rabbit male/female LD50, >20 g/kg bw. Causes serious skin irritation. Mouse LD= 240-250mg/kg bw, Guinea pig LD: 63 mg/kg bw. Repeated dose toxicity: Oral NOAEL: 50 mg/kg bw/day Respiratory or skin sensitisation: Not sensitising Germ cell mutagenicity: No genetic toxicity effects Carcinogenicity: No carcinogenic potential Reproductive toxicity: Sodium hypochlorite has no genotoxic potential, therefore no classification is required according to 67/548/EEC and 1272/2008/EC (CLP) requirements. Information on Possible routes of exposure: Ingestion, Inhalation, Skin/ eye exposure. Interactive Effects: Reacts rapidly with the organic molecules and cellular components, foaming chlorinated compounds which have their own toxicity (BIBRA 1990).
Eye Irritant	Causes eye damage. Eye damage, category 1. Eye contact causes serious burns and discomfort.
Ingestion	Causes severe pain, nausea, vomiting, diarrhoea, and shock. May cause haemorrhaging of the digestive tract. May cause corrosion and permanent tissue destruction of the oesophagus and digestive tract. May be harmful if swallowed.

SAFETY DATA SHEET

Product Name: **BLEACH 12.5%**

Page: **5 of 6**

Inhalation	Irritant. Inhalation of sprayed solution and vapours can cause respiratory system irritation caught, difficulty of breathing, stomatitis, nausea and pulmonary edema. Classified as STOT Single Exposure 3.
Skin	Irritant Light irritant at low concentrations. Moderate irritant at medium concentrations (>5%). Corrosive at concentration higher than 10%. Skin corrosive category 1B.
Chronic	Another Prolonged inhalation may cause respiratory tract inflammation and lung damage. Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated eye contact may cause conjunctivitis to serious eye damage

12. ECOLOGICAL INFORMATION

Ecotoxicity	<p>Aquatic Toxicity Tests demonstrate NOEC (7 days) = 0,0021 mg/L. Factor M=10. Short-term toxicity to invertebrates (molluscs, Daphnia magna, Ceriodaphnia dubia) - Fresh water: EC50/LC50 =0,141 mg/L - Marine water: EC50/LC50 =0.026 mg/L Long-term toxicity to invertebrates - Marine water: LC100 (36days) 0,005mg/L - NOEC for aquatic invertebrates = 0.007 mg/L Short-term toxicity to fish - Fresh water LC 50 =0,06 mg/l - Marine water LC 50= 0.032 mg/l Long-term toxicity to fish - Marine water: NOEC= 0,04 mg CPO/L Short-term toxicity to algae and aquatic plants: Not applicable, sodium hypochlorite decomposes rapidly. Long-term toxicity to algae and aquatic plants - Fresh water EC50/LC50=0,1 mg/l - Marine water EC10/LC10 or NOEC =0,02 mg/L PNEC (Predicted No Effect Concentration) PNEC fresh water = Minimum long-term aquatic toxicity/10 = 0.21 PNEC marine water = Minimum long-term aquatic toxicity /50 = 0.042 Toxicity to sediment micro-organisms There are not predicted exposures due the fact that sodium hypochlorite is destroyed quickly by ox reduction. Sodium hypochlorite cannot exist in presence of organic carbon. PNEC=0 freshwater sediment / marine water sediment. Terrestrial toxicity Short/long -term toxicity to terrestrial invertebrates Substance is not absorbed in soil and is not persistent in soil. TD50<1 min, PEC/PNEC soil<1. Toxicity to soil micro-organisms Short/long term toxicity to plants Due the fact that PEC/PNEC for terrestrial toxicity is <1 and at contact with soil hypochlorite dissipates quickly (TD50<1 min) there is not estimated short/long toxicity to plants. In accordance with column 2 of REACH Annexes IX and X, there is no need to further investigate the effects of the substance on plants. Long-term toxicity to birds EC10/LC10 or NOEC on long term: 200 mg/kg food</p>
Persistence/Degradability	<p>Biotic: The inorganic water cannot be tested for biodegradability. Abiotic: Hypochlorite degrades quickly during the transport through sewage system. Photo-transforming (Photolysis) Atmospheric degradation: At medium pH (6, 5-8, 5) value, half of sodium hypochlorite is present as hypochlorous acid and the other half are dissociated as hypochlorite ions. In the atmosphere, hypochlorous degrades, generating atomic chlorine, which is destroyed by UV radiation. The half life is 115 days. Does not react with ozone layer. Photolysis in water Half-life for sodium hypochlorite solution, active chlorine 12-15%, at 250C is 220 days. In presence of light, the half-life decreases 3-4 times. The UV radiation decomposes the hypochlorite, generating chlorate, chlorite and oxygen: $3 \text{ ClO}^- \Rightarrow \text{ClO}_3^- + 2 \text{ Cl}^-$ (1) $2 \text{ ClO}^- \Rightarrow 2 \text{ Cl}^- + \text{O}_2$ (2) In water, under photolysis, sodium hypochlorite with concentration of 13-18 mg/L, has a half-life of 12 min. at pH =8. This increases up to 60 min. with pH decreasing</p>
acid	<p>At medium pH (6,5-8,5) value, half of sodium hypochlorite is present as hypochlorous acid and the other half is dissociating as hypochlorite ions. The absorption of hypochlorous acid particles, the air volatilization and soil absorption are very low. Thus, hypochlorite remains in aqueous phase and degrades to chlorine.</p>
Mobility	<p>Do NOT let product reach waterways, drains and sewers. Hypochlorite reacts instantaneously with organic and oxidant materials. Has not potential for bioaccumulation. PBT/vPvB: Hypochlorite does not fulfil the PBT criteria (not PBT) and not the vPvB criteria (not vPvB).</p>
Environmental Fate	
Bioaccumulation Potential	

SAFETY DATA SHEET

Product Name: **BLEACH 12.5%**

Page: **6 of 6**

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. Waste packaging should be recycled. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements

Special Precautions for Land Fill.
Contact a specialist disposal company or the local waste regulator for advice. Incineration or landfill should only be considered when recycling is not feasible.

Proper Shipping Name HYPOCHLORITE SOLUTION

Class 8 Corrosive Substances

14. TRANSPORT INFORMATION

Land Transport (Australia) ADG

UN No 1791

Proper shipping name: Hypochlorite solution

Class: CORROSIVE 8

Packing Group: III

Hazchem Code: 2X

EPG: Corrosive Substances

Segregation Dangerous Goods Not applicable

15. REGULATORY INFORMATION

General Information No Data available

Poison's schedule 6

Australia (AICS) Listed

16. OTHER INFORMATION

GENERAL INFORMATION: None.

Acronyms:

ADG Code Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)

AICS Australian Inventory of Chemical Substances

ASCC Office of the Australian Safety and Compensation Council

CAS number Chemical Abstracts Service Registry Number

IARC International Agency for Research on Cancer

NTP National Toxicology Program (USA)

R-Phrase Risk Phrase

SUSDP Standard for the Uniform Scheduling of Drugs & Poisons

UN Number United Nations Number

SDS ISSUE DATE: JANUARY 2024

End of SDS