



Manufacturers of Aluminium Sulphate – Suppliers of Industrial Chemicals

"THE ALUM PEOPLE"

Sodium Hypochlorite

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SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	SODIUM HYPOCHLORITE (Greater than 10% w/w)
Other Names:	Liquid Bleach, Sodium Oxychloride, Pool Chlorine.
Manufacturers Product Code:	MegaCHLOR™
Recommended use of the chemical and restrictions on use:	Bleaching of paper pulp and textiles; disinfectant; fungicide; germicide; chlorination of swimming pools; sanitation of drinking water; laundering; chemical intermediate for the synthesis of organic chemicals; pharmaceutical manufacture; laboratory reagent. Therapeutic category – antiseptic, disinfectant.
Supplier:	Omega Chemicals
ABN:	32 982 143 022 / A.C.N 005 032 744 T/A
Street Address:	47-61 FITZGERALD ROAD, LAVERTON NORTH VIC 3026
Telephone Number:	+61 3 8368 8000
Facsimile:	+61 3 8368 8020
Emergency Telephone:	1300 131 001 (All Hours) Poisons Information Centre Australia: 131 126; New Zealand: 0800 764 766

2. HAZARD IDENTIFICATION

Hazard Classification:	Classified as Hazardous according to the criteria of Safe Work Australia. Classified as Dangerous according to the ADG Code.
GHS Classification:	Skin Corrosion: Category 1B Eye Damage: Category 1 Hazardous to the aquatic environment (acute) – category 1 Hazardous to the aquatic environment (chronic) – category 1 Specific target organ toxicity (single exposure) – category 3
Signal Word (s):	DANGER <div style="text-align: center;"> </div>
Hazard Statement(s):	H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation; or H336 May cause drowsiness or dizziness. H400 Very Toxic to aquatic life. H410 Very toxic to aquatic life with long-lasting effects. AUH031 Contact with acid liberates toxic gas.

Precautionary Statement(s)

General Statement(s): P101 If medical advice is needed, have product container or label on hand
P102 Keep out of reach of children
P103 Read label before use

Prevention Statement(s): P260 Do not breathe gas/fumes/vapours/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P271 Use only outdoors or in well ventilated-area

Response Statement(s): P273 Avoid release to the environment
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 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P321 Specific Treatment (see First Aid Measures on Safety Data Sheet).
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P391 Collect spillage

Storage Statement(s): P405 Store locked up. P403 + P233 Store in well-ventilated place. Keep container tightly closed.

Disposal Statement(s): P501 Dispose of contents/container in accordance with local/regional/national regulations.

Poisons Schedule (SUSMP): S5 CAUTION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:	CAS Number	Proportion:	Hazard Codes
Sodium Hypochlorite	7681-52-9	10 - 30%	H314, H335, H410, H290, AUH301
Water	7732-18-5	Balance to 100%	

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Ingestion: Immediately rinse mouth with water. Give plenty of water to drink. **DO NOT** induce vomiting. If vomiting occurs give further water. **Seek immediate medical attention.**

Eyes: Immediately irrigate with copious quantities of water for at least 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. **Urgently seek medical assistance. Transport to hospital or medical centre.**

Skin: Remove all contaminated clothing without delay. Wash skin gently and thoroughly with copious amounts of water or water and a non-abrasive soap. In addition, the affected area can also be swabbed with polyethylene glycol 400 if available. If swelling, blistering or redness occurs, seek medical attention. For skin burns immediately flood burnt area

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- with copious amounts of water and cover with a clean, dry dressing. Ensure contaminated clothing is washed before re-use or discarded. Seek medical attention.
- Inhalation:** Remove the source of contamination or move the victim to fresh air; 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. Seek medical attention.
- Advice to Doctor:** Treat symptomatically. Do not use acid antidotes in the treatment of sodium hypochlorite poisoning.

Additional Information

**Aggravated medical conditions
caused by exposure:**

No Data Available.

5. FIRE FIGHTING MEASURES

- Extinguishing Media:** In case of fire, use an appropriate extinguishing media (water fog or if unavailable fine water spray, foam, carbon dioxide, dry chemical powder) that is the most suitable for surrounding fire conditions. Keep containers cool with water spray. If safe to do so, remove containers from path of fire. Suppress (knock-down) gases, vapours and mists with a water spray jet.
- Hazchem Code:** 2X
- Specific Hazards arising from the substance or mixture:**
- Hazards from Combustion: Product is non-flammable and stable under normal conditions of use and storage. Under fire conditions this product may emit toxic and/or irritating vapours and gases including chlorine gas and hydrogen chloride gas. Heating can cause expansion or decomposition leading to violent rupture of containers.
- Flammability Conditions: Product is a non-flammable liquid.
- Special Protective Precautions and Equipment for Fire Fighters:** Fire fighters should wear a self-contained breathing apparatus and full protective clothing along with protective equipment. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

- Emergency Procedures/Protective Equipment/Personal Precautions:** Evacuate all unnecessary personnel. Work upwind. Increase ventilation. Use water spray to disperse vapours. Personnel involved in the clean-up should wear full protective clothing; self-contained breathing apparatus may be needed for prolonged periods of exposure. Avoid walking through spilled product as it may be slippery. Cover drains. Collect, bind and pump off spills.
- Environmental Precautions:** Do not allow product to enter drains, sewers, waterways or soil. If contamination of drains has occurred, advise the local emergency services.

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Methods and Materials for Containment and Clean Up:

Contain spilled product using absorbent (soil or sand). Prevent run off into drains, sewers waterways or soil. Collect and seal in properly labelled drums ready for appropriate disposal. Dilute remaining product with water, then carefully neutralize with sodium metabisulphite or sodium thiosulphate. For large spills notify local emergency services.

7. HANDLING AND STORAGE**Precautions for Safe Handling:**

Corrosive liquid. Attacks skin and eyes. May produce severe burns. Ensure an eye bath and safety shower are available and ready for use. Use only in a well-ventilated area. Prevent the build-up of mists or vapours in the work atmosphere. Avoid inhalation of vapours and mists, and skin or eye contact. Wear appropriate protective equipment to prevent inhalation, skin and eye contact when mixing and using. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands before eating, drinking, smoking or using the toilet. Keep containers sealed when not in use.

Container Type:

Packaging must comply with requirements of Hazardous Substances (Packaging) Regulations 2001. Store in original packaging as approved by manufacturer. A polyethylene drum with a vented bung is suitable. **Do not store in metal containers.**

Conditions for Safe Storage, including any Incompatibles:

Store in a cool, dry, well-ventilated area out of direct sunlight. Do not store with incompatible products such as acids, peroxides, metal salts, reducing agents and combustible materials; this product will react with peroxides, metal salts and reducing agents. Avoid contact with most metals. Containers must be carefully vented to release any pressure build-up. Transport and store containers upright with vent at top. Keep containers closed at all times - check regularly for leaks and protect against physical damage. Do not store with any foodstuffs. May decompose forming gaseous products, especially when stored over long periods.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control Parameters:**

National Exposure Standards: Sodium Hypochlorite: AU OEL: Contains no substances with occupational exposure limit values.

Chlorine: AU OEL: Peak Limitation: 1 ppm or 3 mg/m³.

Sodium hydroxide: Peak Limitation = 2 mg/m³

Biological Limit Values: No data available

Appropriate Engineering Controls:

Ensure ventilation is adequate to maintain air concentrations of chlorine (decomposition product) below exposure standards. Natural ventilation should be adequate under normal use conditions. Keep containers closed when not in use in a well-ventilated area.

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Individual Protection Measures, such as Personal Protective Equipment (PPE):	Respirator:	If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable mist filter should be used.
	Eyes:	Safety glasses with side shields or chemical splash goggles or full-face shield as appropriate should be used.
	Hands:	Wear elbow-length gloves of impervious material, natural rubber, neoprene, nitrile rubber or polyethylene should be suitable.
	Clothing:	Protective overalls, splash apron and rubber boots.

After using this product 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

Core Information

Appearance:	Pale yellow-green clear liquid.	
Formula:	NaOCl.	
Molecular Weight:	74.44.	
Odour:	Slight odour of chlorine.	
pH:	12.7.	
Vapour Pressure:	2.3 kPa (at 25°C).	
Vapour Density:	2.49 (where air = 1).	
Boiling Point:	100°C (decomposes).	
Freezing Point:	ca. -25°C.	
Solubility (in Water):	Miscible.	
Specific Gravity:	ca. 1.2 (at 20°C).	
Flash Point:	N/A.	
Flammability Limits (as Percent Volume in Air):	Lower Explosive Limit	N/A.
	Upper Explosive Limit	N/A.
Ignition Temperature:	No data available.	

Additional Information

Specific Heat Value:	No data available.
Particle Size:	No data available.
Volatile Organic Compounds Content (VOC):	No data available.

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Viscosity:	No data available.
Percent Volatile:	No data available.
Octanol/Water Partition Coefficient:	No data available.
Saturated Vapour Concentration:	No data available.
Additional Characteristics:	No data available.
Flame Propagation/Burning Rate of Solid Materials:	No data available.
Properties that may Initiate or Contribute to the Intensity of a Fire:	No data available.
Potential for Dust Explosion:	No data available.
Reactions that Release Flammable Gases or Vapours:	No data available.
Fast or Intensely Burning Characteristics:	No data available.
Non-Flammables that Could Contribute Unusual Hazards to a Fire:	Fire could result in formation of chlorine gas and/or hydrogen chloride gas.
Release of Invisible Flammable Vapours and Gases:	No data available.
Decomposition Temperature:	No data available.
Evaporation Rate:	Slow.

10. STABILITY AND REACTIVITY

Reactivity:	Contact with acids liberates toxic gas.
Chemical Stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. The amount of available chlorine diminishes over time.
Possibility of hazardous Reactions:	When heated, or on contact with acids or acid vapours, produces toxic vapours of chlorides and chlorine gas. Reacts with nitrogen compounds to form unstable or explosive <i>N</i> -chloro compounds. Risk of explosion when in contact with methanol or benzyl cyanide. Violent reaction with hot formic acid.
Conditions to Avoid:	Heat-sensitive (decomposition), avoid exposure to heat. Contamination of solution and exposure to light or heat will accelerate decomposition. Avoid contact with peroxides, metal-salts and reducing agents. Sensitive to air. Avoid shock and friction.

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Incompatible Materials:	Avoid contact with metals; incompatible with most metals. Will react with peroxides, metal-salts and reducing agents. Reacts vigorously with acids producing toxic gases. Incompatible with amines, methanol, copper, peroxides, ammonium salts, solvents, combustible materials, greases and wood. Keep away from all foodstuffs. Risk of explosion with acids, hydrochloric acid, nitric acid, nitrous gases, chlorine, cyanides, oxidizing agents, reducing agents, oxalic acid, organic substances, methanol, urea, acetic anhydride, ammonia, amines and formic acid. Risk of ignition when in contact with arsenic.
Hazardous Decomposition Products:	Chlorine gas and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION**Toxicity Data**

LD50:	5300 mg/kg (rat, oral).
LD50:	5800 mg/kg (rat, oral) (RTECS).

An alkaline poison and primary irritant to mucous membranes, throat and gastrointestinal tract and respiratory tract. Extremely irritating to the eyes and gives rise to burns. Bleaches the skin and will cause burns. Low systemic toxicity.

Acute (short term)

Ingestion:	May be harmful if swallowed. Will cause severe irritation and corrosion (chemical burns) of the mucous membranes of the mouth, throat and gastrointestinal tract with nausea, vomiting, abdominal pain and inflammation. Systemic effects include fall of blood pressure, delirium and coma.
Eye:	A severe eye irritant will cause stinging, blurring, tearing, severe pain. Causes serious eye damage. Corrosive to eyes, contact can cause corneal burns. Can result in permanent injury.
Skin:	Corrosive to skin. May cause skin burns. Contact with skin will cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.
Inhalation:	Inhalation of mists or vapours will result in respiratory irritation, cough, shortness of breath and possible harmful corrosive effects including lesions of the nasal septum, pulmonary oedema, pneumonitis and emphysema.

Chronic (long term)

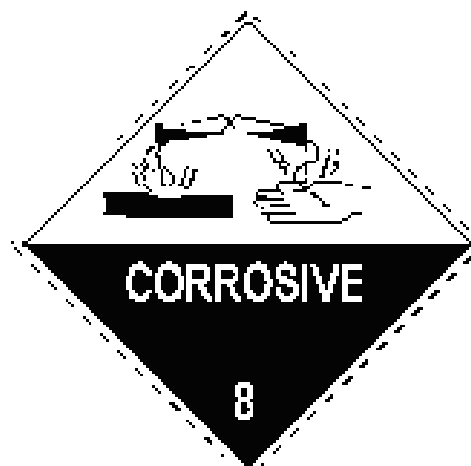
Skin:	Repeated or prolonged exposure may cause drying, cracking and irritation possibly resulting in development of dermatitis.
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12. ECOLOGICAL INFORMATION

Ecotoxicity:	Forms corrosive mixtures with water even if diluted. Harmful effect due to pH shift.
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Persistence and Degradability: No data available.**Mobility:** No data available.**Additional Information****Environmental Fate (Exposure):** No data available.**Bio accumulative Potential:** No data available.**Other Adverse Effects:** Discharge into the environment must be avoided. Avoid contaminating waterways, drains and sewers.**Aquatic Toxicity:** 0.08 mg/L /96 hours. (fathead minnow *pimephales promelas*, LC50).
0.04 mg/L /48 hours (water flea *daphnia magna*, LC50).**Toxicity to bacteria:** 100 mg/L /15 minutes (Photobacterium phosphoreum, EC50).**13. DISPOSAL CONSIDERATIONS****Disposal Methods:** Dispose of in accordance with all local, state and federal regulations. Refer to appropriate State Waste Disposal Authority. Observe local regulations. After dilution and careful neutralisation, approved liquid waste land fill site may be suitable.**Special Precautions for Landfill or Incineration:** No data available.**14. TRANSPORT INFORMATION****UN Number:** 1791.**UN Proper Shipping Name:** Hypochlorite Solution.**Dangerous Goods Class:** 8.**Subsidiary Risk:** None allocated.**Packaging Group:** II.**Special Precautions for User:** TOXIC, CORROSIVE.**Hazchem Code:** 2X.**Incompatible Classes**

This Product is incompatible in a placard load with any of the following:

- Class 1 – Explosives.
- Class 4.3 - Dangerous When Wet Substances.
- Class 5.1 - Oxidising Agents.
- Class 5.2 - Organic Peroxides.
- Class 7 - Radioactive Substances
- All food and food packaging in any quantity.

15. REGULATORY INFORMATION

Poisons Schedule:	5.
EPG:	37.
AICS Name:	Sodium Hypochlorite.
Additional information:	No data available.

16. OTHER INFORMATION**Revision Details****Reason for Revision:**

Version 1	Amended first aid advice for skin exposure.
Version 2	Alignment to GHS requirements.
Version 3	Reflecting update from SWA i.e. Hazard Category modified from [HC081,HC115] to [HC081,HC115,HC110]
Version 4	GHS 7 th Edition & 5 th year review

Version 5	Packaging group review
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Literature References

Chemical Rubber Company:	Handbook of Chemistry and Physics, 85 th Edition.
Merck:	The Merck Index, 14 th Edition.
Weiss, G.:	Hazardous Chemicals Data Book, 2 nd Edition.
Luxon, S. G.:	Hazards in the Chemical Laboratory, 5 th Edition.
Sax, N. Irving:	Dangerous Properties of Industrial Materials, 3 rd Edition.
Safe Work Australia:	Hazardous Chemicals Information System (HCIS) Exposure Standards and GHS Classifications Data-Base, 25 June 2016.
National Transport Commission:	Australian Code for the Transport of Dangerous Goods by Road and Rail, Volume 7.

Abbreviations

CAS Number:	Chemical Abstract Service Registry Number.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
RTECS:	Registry of Toxic Effects of Chemical Substances.
EPG:	Emergency Procedure Guide.
LC50:	Lethal Concentration 50%: The lowest concentration at which approximately 50% of aquatic test animals will die when exposed to the specified concentration for the specified time period.

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LD50:	Lethal Dose 50%: The lowest concentration at which approximately 50% of test animals will die when given the specified dose by mouth.
EC50:	Half Maximal Effective Concentration: the concentration of a compound where 50% of the test population (bacteria) exhibit a response, after some specified exposure time.
ADG Code:	Australian Code for the Transport of Dangerous Goods by Road and Rail, Volume 7.
AICS Name:	Australian Inventory of Chemical Substances Name.
OEL:	Occupational Exposure Level.
N/A:	Not Applicable.

Disclaimer

This Safety Data Sheet is offered solely for information, consideration, and investigation to determine the suitability of various health and safety precautions as may be required under the user's specific conditions and processes. All such conditions and processes are beyond the control of Omega Chemicals.

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