ENVIRO KING BLEACH
Sodium Hypochlorite 6%

ENVIRO KING BLEACH is designed to clean and disinfect.
ENVIRO KING BLEACH is used for cleaning of disinfecting of bathrooms, toilets and kitchens.
ENVIRO KING BLEACH kills a broad range of bacteria and germs leaving a hygienically clean environment.
ENVIRO KING BLEACH can be used for removing stains from refrigerators and dishwashers. It also whitens clothes and cleans nappies.

HOW DOES IT WORK? HOW TO USE?

DIRECTION FOR USE

WARNING: DO NOT mix Bleach with any detergent or chemical except Laundry Detergent

Please read MSDS Sheet for Safety & First Aid

You don’t have to settle for second best to save money when cleaning.
Step-up to the new level in Cleaning Detergents & Soaps.

Use Enviro Chemicals and you will never settle for second best again.

We trust this product will be of interest to you and for more info visit our Web site. Please do not hesitate to contact us if we can be of further assistance.
1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Enviro King Bleach

Other name(s): Liquid chlorine, Sodium Hypochlorite

Recommended Use: Liquid Laundry Bleach

Supplier: Enviro Chemicals (Aust.) Pty Ltd
ACN: 094 087 493
Street Address: 740-744 Woodville Road, Fairfield East NSW 2165, Australia

Telephone Number: +61 2 9755 2012 (Business hour) or Poisons Information centre: 13 11 26.
Facsimile: +61 2 9726 1457
Emergency Telephone: 1 800 033 111 (ALL HOURS)

2. HAZARDS IDENTIFICATION

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

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

Risk Phrases: Toxic by inhalation. Irritating to eyes, respiratory system and skin. Very toxic to aquatic organisms.

Safety Phrases: Keep container tightly closed and in a well ventilated place. Do not breathe vapour/mist. Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible). Avoid release to the environment. Refer to special instructions safety data sheets.

Poisons Schedule: S7 Dangerous Poison.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Proportion</th>
<th>Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine</td>
<td>7782-50-5</td>
<td>&gt;=49.8%</td>
<td>R23, R36/37/38, R50</td>
</tr>
</tbody>
</table>

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 at once.

Inhalation:
Remove victim from area of exposure - 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. If patient finds breathing difficult and develops a bluish discoloration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.
Skin Contact:
If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance. For skin burns, cover with a clean, dry dressing until medical help is available. Launder contaminated clothing before reuse.

Eye Contact:
If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

Ingestion:
Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Medical attention and special treatment:
Treat symptomatically. Effects may be delayed. Delayed pulmonary oedema may result.

5. FIRE FIGHTING MEASURES

Hazards from combustion products:
Non combustible, but will support combustion of other materials. Oxidizing substance.

Precautions for fire fighters and special protective equipment:
Not combustible, however will support the combustion of other materials. Keep containers cool with water spray. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Only move cool cylinders. Do not approach cylinders suspected to be hot. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure. If unable to keep cylinders cool, evacuate area.

Suitable Extinguishing Media:
Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem Code: 2XE

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures:
Clear area of all unprotected personnel. Evacuate personnel from downwind areas. Wear protective equipment to prevent skin and eye contact and inhalation of vapours/dusts. Avoid breathing in vapours. Work up wind or increase ventilation. Wear self contained breathing apparatus. Shut off leak if possible without risk. Work up wind. Use water spray to disperse vapour. DO NOT spray water directly on the leak, liquid chlorine or chlorine container. If safe to do so, rotate container so that gas and not liquid escapes. SMALL SPILLS: Allow liquid to evaporate.

Seek specialist advice. For large spills notify the Emergency Services.

Chlorine gas only becomes visible at high concentrations.

Methods and materials for containment and clean up:
Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Avoid breathing in vapours. Work up wind or increase ventilation. Air-supplied masks are recommended to avoid inhalation of toxic material. For gas leak, DO NOT spray water directly on the leak or chlorine container. Use fire hoses equipped with fog nozzles to disperse gas downwind. For liquid: Contain - prevent run off into drains and waterways. Use fog nozzles as before. Do NOT allow any water to fall onto a pool of liquid chlorine as this will increase gas cloud. If safe to do so, cover with large plastic sheet. Where possible vapour knock down water should be contained.

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Version: 2

Enviro King Bleach MSDS
7. HANDLING AND STORAGE

This material is a Scheduled Poison S7 and must be stored, maintained and used in accordance with the relevant regulations.

Conditions for safe storage:
Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from combustible materials. Keep dry - reacts with water. Keep container standing upright. Use chains or clamps to prevent cylinders being knocked over. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

Precautions for safe handling:
Avoid skin and eye contact and breathing in vapour. Avoid all contact.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chlorine: Peak Limitation = 3 mg/m³ (1 ppm)

As published by the National Occupational Health and Safety Commission.

Peak Limitation - 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.

Engineering controls:
Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. If inhalation risk exists: Use with local exhaust ventilation or while wearing air supplied mask. Vapour heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected.

Personal Protective Equipment:
The selection of PPE is dependant on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

* Not required if wearing air supplied mask.

Wear overalls, full face shield, elbow-length impervious gloves. Use with adequate ventilation. If inhalation risk exists, wear air-supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Gas / Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Greenish - Yellow (high concentrations) ; Clear/invisible (low concentrations)</td>
</tr>
<tr>
<td>Odour</td>
<td>Pungent , Irritating</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>1 ppm (approx)</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C6</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.32 (liquid); 1.56 (@ -35°C).</td>
</tr>
<tr>
<td>Relative Vapour Density (air=1)</td>
<td>2.4</td>
</tr>
<tr>
<td>Vapour Pressure (40 °C)</td>
<td>43/1” kPa</td>
</tr>
<tr>
<td>Flash Point (°C)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>% Volatile by Volume</td>
<td>ca. 100</td>
</tr>
<tr>
<td>Solubility in water (g/L)</td>
<td>7300 mg/L</td>
</tr>
<tr>
<td>Boiling Point/Range (°C)</td>
<td>-34</td>
</tr>
<tr>
<td>Freezing Point/Range (°C)</td>
<td>-101</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Chemical stability: Reactive chemical. Reacts violently with many organic chemicals (eg. mineral oils, greases), hydrocarbons, silicones, and finely divided metals. Forms explosive mixtures with alcohols, glycols, ammonia and its compounds, and hydrogen over a wide range of concentrations. Corrosive in the presence of moisture.

Conditions to avoid: Avoid exposure to heat, sources of ignition, and open flame. Avoid contact with combustible substances. Do not allow water to come into contact with liquid chlorine.


Hazardous decomposition products: Oxides of chlorine. Chlorine compounds.

Hazardous reactions: Oxidising agent. Supports combustion of other materials and increases intensity of a fire. Corrosive to some metals in the presence of moisture. (brass, copper, lead, nickel, steel and stainless steel) Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. Can react with acids and some nitrogen or phosphorous compounds. Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion: Not a likely route of exposure, however, swallowing liquid will result in freeze burns of the mouth, throat and stomach. Swallowing can result in chemical burns to the mouth, throat and abdomen; perforation of the gastrointestinal tract and vomiting of blood and eroded tissue.

Eye contact: A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury. Liquid splashes or spray may cause freeze burns to the eye.

Skin contact: Liquid chlorine is corrosive to skin. Contact with skin will result in irritation. Liquid splashes or spray may cause freeze burns.
Material Safety Data Sheet

Inhalation: Material is irritant to the mucous membranes of the respiratory tract (airways). May cause coughing and shortness of breath. May cause adverse lung effects if high concentrations are inhaled. Inhalation of vapours may cause severe breathing difficulties and lung oedema. Delayed (up to 48 hours) fluid build up in the lungs may occur. Severe exposure may cause lung damage. Overexposure may result in death.

Long Term Effects:
No information available for the product.

Toxicological Data:
Inhalation LC50 (rat): 293 ppm/1hr. (1)
Inhalation LC50 (mice): 137 ppm/1hr. (1)
SKIN: Corrosive (rabbit).
EYES: Severe irritant (rabbit).

12. ECOLOGICAL INFORMATION

Ecotoxicity
Avoid contaminating waterways.

Persistence/degradability and mobility
Does not accumulate in organisms. The material is not expected to bioconcentrate.

Aquatic toxicity:
Very toxic to aquatic organisms.

96hr LC50 (fish): 0.014 mg/L

Terrestrial toxicity:
Very ecotoxic in the soil environment.

13. DISPOSAL CONSIDERATIONS

Disposal methods:
Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Contact supplier for advice.

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: 1017
Class-primary 2.3 Toxic Gas
Subrisk 1: 5.1 Oxidising Agent  8 Corrosive
Subrisk 2: 8 Corrosive
Proper Shipping Name: CHLORINE
Hazchem Code: 2XE
Marine Transport
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.
This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.

UN No: 1017
Class-primary: 2.3 Toxic Gas
Subrisk 1: 5.1 Oxidising Agent
Subrisk 2: 8 Corrosive
Proper Shipping Name: CHLORINE

IMDG EMS Fire: F-C
IMDG EMS Spill: S-U

Air Transport
TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in passenger aircraft and cargo aircraft.

15. REGULATORY INFORMATION

Classification: This material is hazardous according to criteria of Safe Work Australia; HAZARDOUS SUBSTANCE.

Hazard Category: T: Toxic
Xi: Irritant
N: Dangerous for the Environment

Risk Phrase(s): R23: Toxic by inhalation.
R36/37/38: Irritating to eyes, respiratory system and skin.
R50: Very toxic to aquatic organisms.

Safety Phrase(s): S7/9: Keep container tightly closed and in a well ventilated place.
S23: Do not breathe vapour/mist/aerosol.
S24/25: Avoid contact with skin and eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).
S61: Avoid release to the environment. Refer to special instructions Safety Data Sheets.

Poisons Schedule: S7 Dangerous Poison.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION


This material safety data sheet has been prepared by SH&E Shared Services, Orica.
Reason(s) for Issue:
Revised Primary MSDS

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Orica Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Orica representative or Orica Limited at the contact details on page 1.

Orica Limited's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.