Milton® Anti-bacterial solution

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier
Product name: Milton® Anti-bacterial solution

1.2. Relevant identified uses of the substance or mixture and uses advised against
Disinfection of nursery accessories (feeding bottles, teats, …) by immersion.
Disinfection of surfaces (floor, working surfaces, …) in domestic and healthcare sectors by wet wiping.
Disinfection of unknown water.
For professional and general public.

1.3. Details of the supplier of the safety data sheet
Registered company name: Milton Australia Pty Ltd
Address: 1/575 Darling Street, Rozelle NSW 2039 Australia
Phone: +61 3 8586 0500
Fax.: +61 3 8586 0505
E-mail: info@nicepack.com.au
http://www.miltonbaby.com.au

1.4. Emergency telephone number

Country	Phone number	Website
Australia	1800 506 750	-
New Zealand	0800 555 895	-

SECTION 2 – HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with Safe Work Australia classification guidance.

Corrosive to metals	Category 1 (Met. Corr. 1, H290).
Skin irritation	Category 2 (Skin Irrit. 2, H315).
Hazardous to the aquatic environment - Acute hazard	Category 1 (Aquatic Acute 1, H400).
Hazardous to the aquatic environment - Chronic hazard	Category 2 (Aquatic Chronic 2, H411).
Contact with acids	Liberates toxic gas (AUH031).

Warning! Do not use together with other products. May release dangerous gases (chlorine).

2.2. Label elements
Biocidal product.

Hazard pictograms:

Signal word: WARNING

Hazard statements:

H290	May be corrosive to metals.
H315	Causes skin irritation.
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements:

P101	If medical advice is needed, have product container or label at hand.

P102	Keep out of reach of children.
P234	Keep only in original container.
P273	Avoid release to the environment.
P302+P352	IF ON SKIN: Wash with plenty of water.
P501	Dispose of contents / container to hazardous waste collection authorized in accordance with local, regional, national and / or international regulations.

2.3. Other hazards

AUH031	Contact with acids liberates toxic gas.
	Warning! Do not use together with other products. May release dangerous gases (chlorine).

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances
Not applicable (mixture).

3.2. Mixtures
Composition:

CAS No.	INDEX	EC No.	Hazardous ingredient(s)	Pictograms	Classification	% w/w
7681-52-9	017-011-00-1	231-668-3	Sodium hypochlorite	GHS 05 GHS 09	H290* H314 (1B) H400 (M = 10*) H411* EUH031	2.00%**

Other ingredients determined to be nonhazardous

**According to supplier's SDS*
***Corresponds to 1.90% w/w active chlorine released from sodium hypochlorite*

Information on ingredients: No data available
Other data: No data available

SECTION 4 – FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing if the victim is unconscious.

4.1. Description of first aid measures

In the event of exposure by inhalation	In the event of massive inhalation, remove the exposed person to fresh air. Keep warm and at rest. Seek medical attention.
In the event of splashes or contact with eyes	Wash thoroughly with soft, clean water holding the eyelids open. If there is any redness, pain or visual impairment, consult an ophthalmologist.
In the event of splashes or contact with skin	Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognized cleaner. Watch out for any remaining product between skin and clothing, watches, shoes, etc. If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the victim transferred to hospital.
In the event of swallowing	Do not give the victim anything orally. In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor. Keep at rest. Do not induce vomiting. Seek medical attention immediately, showing the label.

4.2. Most important symptoms and effects, both acute and delayed
No data available.

4.3. Indication of any immediate medical attention and special treatment needed
Specific and immediate treatment: Treat symptomatically.
Information for the doctor: No data available.

SECTION 5 – FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction	In the event of a fire, use: - sprayed water or water mist - foam - dry powder - carbon dioxide (CO2) Prevent the effluent of the fight against the fire from entering sewers or waterways.
Unsuitable methods of extinction	In the event of a fire, do not use: - water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.
Do not breathe in smoke.
In the event of a fire, the following may be formed:
- chlorine and chlorinated decomposition products

5.3. Advice for firefighters

No data available.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult safety advice of sections 7 and 8.

For non-first aid worker	Avoid any contact with the skin and eyes. In the event of accidental release of a large quantity, evacuate all unnecessary personnel and allow intervention only by trained operators equipped with suitable personal protective equipment (See section 8).
For first aid worker	First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.
Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

If the ground is contaminated, once the product has been recovered by sponging with an inert and non-combustible absorbent material, wash the contaminated area in plenty of water.
Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

Consult sections 8 and 13.

SECTION 7 – HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.
Remove and wash contaminated clothing before re-using.
Use in a well-ventilated area.

Fire prevention	Prevent access by unauthorised personnel.
Recommended equipment and procedures	For personal protection, see section 8. Observe precautions stated on label and also industrial safety regulations. Avoid skin and eye contact with this mixture.
Prohibited equipment and procedures	No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

Always keep in original packaging.
Keep the container tightly closed in a dry, well-ventilated place, protected from heat and direct sunlight.
Keep away from food, drink and animal feed.

7.3. Specific end use(s)

No data available.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Chlorine gas may be present while product is in use. Use in well ventilated areas.

Australian Exposure Standard	CAS No.	Peak limitation ppm	Peak limitation mg/m^3
Chlorine	7782-50-5	1ppm	3mg/m^3

8.2. Exposure controls

Suitable technical inspections	No data available.
Personal protection measures, such as personal protective equipment	Use personal protective equipment that is clean and has been properly maintained. Store personal protective equipment in a clean place, away from the work area. Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.
Eye / face protection	Avoid contact with eyes.
Hand protection	Avoid skin contact. Wear suitable protective gloves in the event of prolonged or repeated skin contact. Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN374. Gloves must be selected according to the application and duration of use at the workstation. Protective gloves need to be selected according to their suitability for the workstation in question: other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.
Body protection	Avoid skin contact. Work clothing worn by personnel shall be laundered regularly. After contact with the product, all parts of the body that have been soiled must be washed.
Respiratory protection	In the event of accidental release of a large quantity, recommended type of powered air-purifying respirator: Anti-gas and vapour filter(s) (Combined filters) in accordance with standard ASNZS 1715.
Thermal risks	Not applicable.

8.3. Exposure controls linked to environmental protection

No data available.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

General information:

Physical state	Clear liquid
Odour	Chlorine odour
Colour	Slightly yellow

Important health, safety and environmental information:

pH	11.8 at 21°C
Melting point/freezing point	Not applicable
Boiling point/boiling range	Around 110°C
Flash point	No flash point up to 110°C (EC A.9, ISO Standard 3679)
Evaporation rate	Not determined
Flammability	Not flammable
Lower/upper flammability limits	Not determined
Lower/upper explosive limits	Not determined
Vapour pressure	Not determined
Vapour density	Not determined
Relative density	1.130 to 1.150

Solubility	Not determined
Partition coefficient	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	1.73 mPa*s at 20°C 1.22 mPa*s at 40°C
Explosive properties	Not explosive (expert statement)
Oxidising properties	Not oxidising (expert statement)

9.2. Other information
No data available.

SECTION 10 – STABILITY AND REACTIVITY

10.1. Reactivity
Mixture which by chemical action can corrode and even destroy metals.
Contact with acids liberates toxic gas (chlorine).
May release dangerous gases (chlorine).

10.2. Chemical stability
This mixture is stable under the recommended handling and storage conditions in section 7.
Stability of the solution decreases with the action of heat, light and in the presence of some trace impurities.

10.3. Possibility of hazardous reactions
Contact with acids liberates toxic gas (chlorine).
Reacts with ammonia solutions and amines to form explosive compounds.
Can react violently if in contact with methanol.
Decomposition with evolution of oxygen is accelerated by light and heat and also by contact with many metals, particularly copper, nickel, iron and “monel”.
Oxidising agent; may assist combustion.
When exposed to high temperatures, the mixture can release hazardous decomposition products and fumes.
In the event of a fire, the following may be formed: chlorine and chlorinated decomposition products.

10.4. Conditions to avoid
Keep away from heat and direct sunlight.
Avoid contact with other chemicals.

10.5. Incompatible materials
Keep away from:
- acids
- ammonia and amines
- methanol
- metals (particularly copper, nickel, iron and “monel”)

10.6. Hazardous decomposition products
The thermal decomposition may release/form smoke and hazardous decomposition products:
- chlorine and chlorinated decomposition products.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Gas (chlorine) produced under fire or acidic conditions is toxic by inhalation.

Acute toxicity	No data available.
Skin corrosion/skin irritation	Skin irritant. (Skin irritation, Category 2, OECD No.404, rabbit).
Serious damage to eyes/eye irritation	Not irritant. (OECD No.405, rabbit).
Respiratory or skin sensitisation	No data available.
Germ cell mutagenicity	No data available.
Carcinogenicity	No data available.
Reproductive toxicant	No data available.

Specific target organ systemic toxicity - single exposure	No data available.
Specific target organ systemic toxicity - repeated exposure	No data available.
Aspiration hazard	No data available.
Symptoms related to the physical, chemical and toxicological characteristics	No data available.
Delayed and immediate effects as well as chronic effects from short and long-term exposure	No data available.
Interactive effects	No data available.
Absence of specific data	No data available.
Other information	No data available.

SECTION 12 – ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Substances

SODIUM HYPOCHLORITE (CAS No.7681-52-9)
The following data are taken from Assessment Report "Active chlorine released from sodium hypochlorite", January 2017.

Acute aquatic toxicity*:

Fish (Oncorhynchus kisutch), sea water:	LC50 = 0.032 mg TRO/L (96 h)
Invertebrates (Ceriodaphnia dubia), fresh water:	EC50 = 0.035 mg active Cl/L (48 h)
Algae (Pseudokirchneriella subcapitata), fresh water:	ErC50 = 0.0365 mg avCl/L (72 h) EbC50 = 0.0183 mg avCl/L (72 h)
Microorganisms, activated sludge:	EC50 = 77.1 mg avCl/L (3 h)

M factor (Acute) = 10

Chronic aquatic toxicity*:

Fish (Menidia peninsulae), sea water:	LOEC = 0.210 mg CPO/L (28 d) NOEC = 0.040 mg CPO/L (28 d)
Invertebrates (Crassostrea virginica), sea water:	NOEC = 0.007 mg TRO/L (15-19 d)
Algae (Periphytic community), fresh water:	CI80 = 0.358 mg FAC/L (7 d) CI50 = 0.023 mg FAC/L (7 d) NOEC = 0.021 mg FAC/L (7 d)

M factor (Chronic) = 1

** TRO: total residual oxidant, CPO: chlorine produced oxidant, FAC: free available chlorine*

12.1.2. Mixtures

Hazardous to the aquatic environment - Acute hazard, Category 1 (Aquatic Acute 1, H400).
Hazardous to the aquatic environment - Chronic hazard, Category 2 (Aquatic Chronic 2, H411).
(classification by conventional method).

12.2. Persistence and degradability

SODIUM HYPOCHLORITE (CAS No.7681-52-9)
Sodium hypochlorite is a strong oxidiser. It will react with organic substances present in soil and sediments and degrades rapidly to chloride. Sodium hypochlorite is substantially removed in biological treatment processes.

12.3. Bioaccumulative potential

SODIUM HYPOCHLORITE (CAS No.7681-52-9)
Sodium hypochlorite has low potential for bioaccumulation and decomposes in water (calculated log Kow = -3.42).

12.4. Mobility in soil

SODIUM HYPOCHLORITE (CAS No.7681-52-9)
Sodium hypochlorite is mobile in soil and sediments.

12.5. Results of PBT and vPvB assessment

SODIUM HYPOCHLORITE (CAS No.7681-52-9)
Not classified as PBT or vPvB.

12.6. Other adverse effects

SODIUM HYPOCHLORITE (CAS No.7681-52-9)

Sodium hypochlorite is substantially removed in biological treatment processes. There is evidence of inhibition to the aerobic treatment process at a concentration (mg/l) of 0.05 mg/L.

SECTION 13 – DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with local legislation and trade waste agreements.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste	Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals. Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company. Do not contaminate the ground or water with waste, do not dispose of waste into the environment.
Soiled packaging	Completely empty container. Keep label(s) on container. Give to a certified disposal contractor.
Local arrangements	No data available

SECTION 14 – TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADG Code for road and rail, IMDG for sea and ICAO/IATA for air transport.

14.1 UN Number

1791

14.2. UN proper shipping name

UN1791 HYPOCHLORITE SOLUTION

14.3. Transport hazard class(es)

8

14.4. Packing group

III

14.5. Environmental hazards

- Environmentally hazardous material:

SECTION 15 – REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Classification and labelling information included in section 2	The following regulations have been used: - Safe Work Australia Guidance.
Ingredients	All ingredients appear in the Australian Inventory of Chemical Substances
SUSMP	Not Scheduled at the concentration provided.
APVMA	Exempt from approval.
Substances that deplete the ozone layer (EC Regulation No. 1005/2009, Montreal Protocol)	Not applicable
Substances that are Persistent Organic Pollutants, Stockholm Convention)	Not applicable

15.2. Chemical safety assessment

No data available.

SECTION 16 – OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Title for H and AUH indications mentioned in section 3:

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
AUH031	Contact with acids liberates toxic gas.

Abbreviations

GHS07	Exclamation mark.
GHS09	Environment
ADG	Australian Dangerous Goods Code.
IMDG	International Maritime Dangerous Goods.
IATA	International Air Transport Association.
ICAO	International Civil Aviation Organisation
RID	Regulations concerning the International carriage of Dangerous goods by rail.
PBT	Persistent, Bioaccumulative and Toxic.
vPvB	Very Persistent and very Bioaccumulative.
SVHC	Substance of Very High Concern.
avCl	Available Chlorine.
DNEL	Derived No Effect Levels