

ANOGARD

HOSPITAL-GRADE DISINFECTANT

Issue Date: **20/02/2022**
Revision 05
L.GHS.AUS.EN

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	ANOGARD
Chemical Name	Not Applicable
Synonyms	Active chlorine at neutral pH, generated by electrolysis of a sodium chloride solution
Chemical formula	Not Applicable
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Disinfection of drinking water systems and hard surfaces (clean conditions)
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Details of the supplier of the safety data sheet

Registered company name	Ecas4 Australia Pty Ltd
Address	Unit 8, 1 London Road, Mile End South SA 5031
Telephone	+61 8 8122 7166
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Website	www.ecas4.com.au
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Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	+61 8 8122 7166 (office hours)
Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification	Not Applicable

Label elements

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

Hazard statement(s)

Not applicable.

Precautionary statement(s) – Prevention

Not applicable.

Precautionary statement(s) – Response

Not applicable.

Precautionary statement(s) – Storage

P410	Protect from sunlight.
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Precautionary statement(s) – Disposal

Not Applicable.

Safety precaution(s)

Use biocides safely. Always read the label and product information before use.

Other hazards (not relevant for the classification)

Special danger of slipping by leaking/spilling product.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures.

Mixtures

CAS No.	%[weight]	Name
7790-92-3 / 7681-52-9	≤ 0.05	Hypochlorous Acid / Sodium Hypochlorite
Not Available	> 99.9	Ingredients determined not to be hazardous

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	Rinse thoroughly with plenty of water. Remove contact lenses, if present and easy to do. Get medical attention if irritation persists.
Skin Contact	In case of prolonged exposure and discomfort: remove residues with water. Remove contaminated clothing, including shoes, and wash thoroughly the affected skin with water. Consult a physician if irritation persists. Wash contaminated clothing before reuse.
Inhalation	If fumes, aerosols, or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

There is no restriction on the type of extinguisher which may be used. Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Not applicable.

Advice for firefighters

Not applicable.

SECTION 6 Accidental release measures

Personal precautions, protective equipment, and emergency procedures

Minimise the exposure to the product (see Section 8). In case of accidental contact, dilute with water.

Environmental precautions

The product is a biodegradable solution, with a limited shelf life, so there are no potential risks to the environment (see section 12).

Methods and material for containment and cleaning up

Collect the liquid with absorbent material (paper, sand, universal binder, sawdust).

No special precautions are required for the disposal of the contaminated material. Packaging may be recycled.

SECTION 7 Handling and storage

NO special precautions required. Provide adequate ventilation.

Precautions for safe handling

Safe handling	DO NOT use in combination with other products, especially acids.
Other information	Handle in accordance with good industrial hygiene and safety practice. Store away from incompatible materials and foodstuff containers. Provide adequate ventilation.

Conditions for safe storage, including any incompatibilities

Suitable container	Keep containers at a temperature between 2 and 30 °C. Protect from frost and from direct sunlight.
Storage incompatibility	Do not store together with acids or easily oxidisable material.

Specific end use(s)

The optimum effectiveness of the product can be extended by means of conservation to protect from light and in sealed containers, watertight, made of HDPE or opaque glass. Make sure that the container is properly labelled, and store preferably between 5 and 10 °C.

SECTION 8 Exposure controls / personal protection

Avoid prolonged contact with skin. Use good personal hygiene practices. The accumulation of vapours should be prevented, especially in environments with poor ventilation; mechanical suction may be appropriate in such situations.

Control parameters

Occupational Exposure Limits (OEL) – Reference is made to the ACGIH values reported for Chlorine: ⁽¹⁾

TLV – TWA (Chlorine): 0,5 ppm / 1,5 mg/m³ (ACGIH 2012)

TLV – STEL (Chlorine): 1 ppm / 3 mg/m³ (ACGIH 2012)

Exposure controls

Under normal conditions of use, there is NO need to apply specific exposure control measures. Provide adequate ventilation in the place of use. In accordance with Regulation (EEC) 793/93 on the evaluation and control of the risks of existing substances, the risk assessment has been carried out on sodium hypochlorite and NO significant risks were identified in the scenarios of professional use developed under the Technical Guideline for human exposure. ⁽²⁾

Eye and face protection	NO special protection required during normal use of the product; in case of manipulation of large quantities, wear eye protection. DO NOT spray in the eyes.
Skin protection	NO special protection required during normal use of the product; in case of prolonged contact and manipulation of large quantities, wear protective gloves made of latex or rubber.
Respiratory protection	NO special protection required during normal use of the product; provide adequate ventilation.
Environmental exposure controls	NO special precautions are required: at the concentration present in the mixture (≤ 0.05%), the active chlorine degrades very quickly in the environment in the presence of light and/or organic substances.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear, homogeneous and transparent liquid (like water) with distinctive odor.		
Physical state	Liquid	Upper Explosive Limit (%)	Not Applicable
Odour	Very slight chlorine smell	Lower Explosive Limit (%)	Not Applicable
Odour threshold	Not Available	Vapour pressure (kPa)	about 1.75 (at 20 °C)
pH (as supplied)	6.5 ± 0.5	Solubility in water	Completely miscible
Melting point / freezing point (°C)	about 0 °C	Vapour density (Air = 1)	Not Available
Initial boiling point and boiling range (°C)	about 100 °C	Relative density (Water = 1)	1
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not explosive; pressurised container: may burst if heated
Flammability	Not Applicable	Oxidising properties	Not Available

SECTION 10 Stability and reactivity

Stable under normal ambient conditions of temperature and pressure. If properly stored (preferably at temperatures between 5 and 30 °C), the mixture maintains its optimal (i.e., bactericidal activity) Oxidation-Reduction Potential (ORP) for a period up to 18 months.

Reactivity	Avoid contact with strong acids, amines, ammonia, ammonium salts, reducing agents and reactive metals.
Chemical stability	Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur. Protect from frost and from sunlight.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur
Conditions to avoid	DO NOT mix with other products. Avoid contact with acids, amines, ammonia, ammonium salts, reactive metals and other reducing agents.
Incompatible materials	Polyamide, low alloy steel, iron and reactive metals.
Hazardous decomposition products	Chlorine vapours; small amounts of trihalomethanes may be formed in presence of organic substances.

SECTION 11 Toxicological information

Information on toxicological effects

Inhalation	Not irritant to respiratory epithelium – in vitro ⁽³⁾
Ingestion	No cytotoxic effects on oral mucosal cell cultures ⁽⁴⁾
Skin Contact	Non-irritant when dermatologically tested on volunteers with sensitive skin ⁽⁵⁾
Eye Contact	No cytotoxic effects on cornea cells in vitro ⁽⁶⁾
Chronic	Not applicable

Reason for the failure to classify:

The mixture cannot be classified in a particular hazard class due to the lack of data, the availability of information / data inconclusive or insufficient for classification according to the criteria laid down in the regulations mentioned in this SDS.

SECTION 12 Ecological information

Toxicity

The product's active ingredients can be toxic to certain organisms (e.g., microorganisms); given their low concentration in solution, it is unlikely that mammals or other warm-blooded organisms are affected as a result of an accidental contact with the product. Aquatic organisms, amphibians and reptiles may be more susceptible.

Toxicity to aquatic organisms (short-term effects and long-term effects)

Toxicity to fish	LC ₅₀ fish = 5.9 mg/L – 96 h
Toxicity to Daphnia Magna	EC ₅₀ Daphnia > 1 mg/L tested on a mixture containing sodium hypochlorite at 5% ⁽⁷⁾
Toxicity to algae	The standard acute toxicity tests of sodium hypochlorite for algae are not considered technically feasible. ⁽⁸⁾

Persistence and degradability

The product degrades slowly, generating a dilute salt solution.

Bioaccumulative potential

Persistence in atmospheric compartment is considered irrelevant. At environmental pHs (~7.5), 50% of the active chlorine is present as hypochlorous acid, and the remaining 50% is present in the hypochlorite anion form; only the hypochlorous acid portion is volatile. The Henry's constant measured for the hypochlorous acid is equal to 0.0097 Pa m³ mol⁻¹; it indicates that the concentration in air is very low. Therefore, the atmospheric compartment does not represent a significant exposure route.

Persistence in soil is deemed very low (no bioaccumulation); the partition coefficient of sodium hypochlorite is 0.87 at pH 7.

Active chlorine mixtures are soluble in water; therefore, they may be mobile in the soil. However, the mixture is expected to be readily degraded in contact with the environment.

The **persistence in the aquatic compartment** is poor, given the rapid degradation of the substance; hypochlorites degrade very quickly (about 300 seconds) in the presence of organic matter. ⁽⁹⁾

Photo-oxidation, photolysis: hypochlorites are sensitive to light; the half-life of a solution at 10-15% of free chlorine is reduced by 3-4 times by the effect of sunlight.

Degradability: sodium hypochlorite is a completely biodegradable inorganic substance.

Degradation of metabolites: not relevant, sodium hypochlorite is reduced to chloride.

Results of PBT and vPvB assessment

Based on the information obtained from a bibliographic research on sodium hypochlorite, the substance does not meet the PBT and vPvB criteria: it is not persistent, nor bioaccumulative. ⁽¹⁰⁾

SECTION 13 Disposal considerations

No special precautions required. Dilution with water can be taken into account. Where permitted, the solution may be disposed of into the sewer system without negative effects.

The oxidising activity of the product can be neutralised by adding a surplus of organic material. Dispose of containers and unused product in accordance with regulations.

Refer to the Community / National / Local provisions for waste disposal. Empty carefully and completely, if possible. Packaging may be recycled.

SECTION 14 Transport information

The mixture does not fall within the scope of the transport legislation (NON-DANGEROUS GOODS).

The product is normally produced and consumed locally (on-site) and is classified as non-hazardous.

We recommend the use of dark containers, in order to protect the product from light.

Labels Required

Pictogram	Not Applicable
Marine Pollutant	No
HAZCHEM	Not Applicable

SECTION 15 Regulatory information

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

Ecas4® Broad Spectrum Sanitiser is a registered Hospital-Grade Disinfectant (AUST L 349350), approved to kill Covid-19. The hypochlorous acid contained in the product is an EPA registered biocide: chemical substance with code 129054.

National Inventory Status

National Inventory	Status	National Inventory	Status
Australia – AIIC / Australia Non-Industrial Use	Yes	New Zealand – NZIoC	Yes
Canada – DSL	Yes	Philippines – PICCS	Yes
Canada – NDSL	No (sodium hypochlorite (sodium hypochlorite))	USA – TSCA	Yes
China – IECSC	Yes	Taiwan – TCSI	Yes
Europe – EINECS / ELINCS / NLP	Yes	Mexico – INSQ	Yes
Japan – ENCS	Yes	Vietnam – NCI	Yes
Korea – KECI	Yes	Russia – FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.		

SECTION 16 Other information

The Ecas4® Broad Spectrum Sanitiser / Hospital-Grade Disinfectant is an alternative, clean and environmentally friendly disinfectant that can be used for the sanitation of water, of hot- and cold-water networks, as well as for cleaning and disinfecting most surfaces, both inside and outside. The information contained herein is based on data (current state of knowledge and experience) considered accurate at the time of publication and is provided for free. This document is intended to describe the product only to health and safety requirements. Therefore, it shall not be interpreted as a guarantee of any specific quality for the product; these qualities depend on the conditions of the test or sale contract. It is the user's responsibility to safely use the product, checking its suitability, and to proceed to a proper disposal.

NO DECLARATIONS OR WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUALITY, OR OF ANY OTHER NATURE ARE MADE WITH RESPECT TO THIS INFORMATION AND TO THE PRODUCT TO WHICH THIS INFORMATION REFERS.

The information contained in this SDS is in compliance with:

- the EC Regulations No. 1907/2006 (REACH), No. 1272/2008 (CLP) and EU. 453/2010 (Annex I)
- the approved Code of Practice, under section 274 of the Work Health and Safety Act (the Australian WHS Act)
- the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Rev. 8 (2019)

Revision Date	February 2022 (revision 5 – new template)	Revision Date	February 2016 (revision 2)
Revision Date	July 2020 (revision 4 – mixture composition)	Revision Date	April 2015 (revision 1)
Revision Date	March 2020 (revision 3)	Initial Date	August 2011

Other information

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists; **ADG:** Australian Dangerous Goods; **AIIC:** Australian Inventory of Industrial Chemicals; **CAS:** Chemical Abstract Service (division of the American Chemical Society); **CLP:** Classification, Labelling and Packaging (of substances and mixtures); **DSL:** Domestic Substances List; **EC₅₀:** concentration estimated to immobilise 50% of the Daphnia after 24 hours exposure; **EEC:** European Economic Community; **ELINCS:** European List of Notified Chemical Substances; **EINECS:** European Inventory of Existing Commercial chemical Substances; **Ems:** Emergency Response Procedures for Ships Carrying Dangerous Goods; **ENCS:** Existing and New Chemical Substances Inventory; **ERG:** Emergency Response Guidebook; **FBEPH:** Russian Register of Potentially Hazardous Chemical and Biological Substances; **IATA:** International Air Transport Association; **ICAO:** International Civil Aviation Organization; **IECSC:** Inventory of Existing Chemical Substance in China; **IMDG:** International Maritime Dangerous Goods; **INSQ:** Inventario Nacional de Sustancias Químicas; **KECI:** Korea Existing Chemicals Inventory; **LC₅₀:** concentration determining the death of the 50% of individuals in acute toxicity tests for environmental exposure; **NCI:** National Chemical Inventory; **NDSL:** Non-Domestic Substances List; **NLP:** No-Longer Polymers; **NZIoC:** New Zealand Inventory of Chemicals; **OEL:** Occupational Exposure Limits; **ORP:** Oxidation-Reduction Potential; **PBT:** Persistent, Bioaccumulative and Toxic; **PICCS:** Philippine Inventory of Chemicals and Chemical Substances; **REACH:** Registration, Evaluation, Authorisation and Restriction of Chemicals; **SDS:** Safety Data Sheet; **TCSI:** Taiwan Chemical Substance Inventory; **TLV-STEL:** Threshold Limit Value – Short Term Exposure Limit (15 minutes); **TLV-TWA:** Threshold Limit Value – Time Weight Average, weighted average concentration over time, on a conventional eight-hour workday and a 40-hour working week; **TSCA:** Toxic Substances Control Act; **UN:** United Nations; **vPvB:** very Persistent and very Bioaccumulative; **WHS:** Work Health and Safety.

Bibliographic references

- ACGIH 2012, TLVs and BEIs based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents & Biological exposure Indices
- European Union Risk Assessment Report, Sodium Hypochlorite, Final report, November 2007
- Bio Basic Europe s.r.l., Report No. 2010G27V1-1
- Bio Basic Europe s.r.l., Report No. 2017E20V2-1
- Bio Basic Europe s.r.l., Report No. 2004E21PC-1
- Bio Basic Europe s.r.l., Report No. 2017E20V1-1
- OECD Guidelines for the Testing of Chemicals, Test No. 202: Daphnia sp. Acute Immobilisation Test
- A.I.S.E., Environmental classification of sodium hypochlorite containing bleach products
- Evaluation Report on Sodium Hypochlorite (CAS 7681-52-9) for inclusion of the Active Substance in Annex I to Directive 98/8/EC – Draft March 2010
- Eurochlor registration group, Sodium Hypochlorite, Final Assessment 2007

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