

Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND MANUFACTURER

Product Name: Bang CalciN™
Intended Use: Liquid Fertiliser
Details of Company: Advanced Nutrients Pty Ltd
13 Hinkler Court
Brendale. QLD. 4500
Ph: 07 3448 0051
Email: service@advancednutrients.com.au
Emergency Contact: +61 419 758 458
Poisons Information Centre 13 11 26

2. HAZARDS IDENTIFICATION

SWA Classification: Classified as hazardous goods according to the criteria of SAFE WORK AUSTRALIA under Model WHS Regulations.
Dangerous Goods: NOT dangerous goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
GHS Classification: Acute Toxicity (Oral) Category 4,
Serious Eye Damage/Eye Irritation Category 2A
Signal Word: WARNING



Pictogram:

Hazard Statement:

H302 Harmful if swallowed
H319 Causes serious Eye Irritation
H402 Harmful to aquatic life

Prevention Statement:

P264 Wash thoroughly after handling
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment
P280 Wear protective gloves/protective clothing/eye protection/face protection

Response Statement:

P305+P351+P338 If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If irritation [persists, get medical attention
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell
P330 Rinse Mouth

Disposal Statement:

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance Name:	CAS	%
Calcium Nitrate Tetrahydrate	13477-34-4	80-100%
Other ingredients (considered non-hazardous)		Balance to 100%

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4. FIRST AID MEASURES

SWALLOWED:	Drink plenty of water. Do not induce vomiting. Seek medical advice
EYE:	Rinse with plenty of water for 15 minutes. Seek medical advice
SKIN:	Rinse with plenty of water for 15 minutes. Seek medical advice
INHALED:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice
ADVICE TO DOCTOR:	Treat symptomatically.

Indication of any immediate medical attention and special treatment needed:

The toxicity of nitrates and nitrites result from their vasodilating properties and their propensity to form methaemoglobin.

- Most produce a peak effect within 30 minutes.
- Clinical signs of cyanosis appear before other symptoms because of the dark pigmentation of methaemoglobin.
- Initial attention should be directed towards improving oxygen delivery, with assisted ventilation, if necessary. Hyperbaric oxygen has not demonstrated conclusive benefits.
- Institute cardiac monitoring, especially in patients with coronary artery or pulmonary disease.
- Hypotension should respond to Trendelenburg's position and intravenous fluids; otherwise dopamine may be needed.
- Naloxone, glucose and thiamine should be given if a multiple ingestion is suspected.
- Decontaminate using Ipecac Syrup for alert patients or lavage for obtunded patients who present within 2-4 hours of ingestion.
- Symptomatic patients with methaemoglobin levels over 30% should receive methylene blue. (Cyanosis alone, is not an indication for treatment). The usual dose is 1-2 mg/kg of a 1% solution (10 mg/ml) IV over 5 minutes; repeat, using the same dose if symptoms of hypoxia fail to subside within 1 hour.

[Ellenhorn and Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker who has been exposed at the Exposure Standard (ES or TLV):

Determinant Index Sampling Time Comments

1. Methaemoglobin in blood 1.5% of haemoglobin During or end of shift B, NS, SQ

B: Background levels occur in specimens collected from subjects NOT exposed

NS: Non-specific determinant; also observed after exposure to other materials

SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test.

5. FIRE FIGHTING MEASURES

FLAMMABILITY:	Non combustible.
EXTINGUISHING MEDIA:	Use extinguishing media suitable for surrounding fire.
FIRE / EXPLOSION HAZARD:	This is not a flammable material. If heated, a pressure increase may occur and the container may burst. Some gases such as, nitrogen oxide, may be released. In smoke or fumes wear self-contained breathing apparatus. Advise fire brigade of any hazard. Suitable for most extinguishing media. Product does not represent and explosion hazard.
HAZCHEM Code:	None allocated

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6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Wear SWA approved self-contained breathing apparatus and full protective clothing. For further details refer to section 8.
ENVIRONMENTAL PRECAUTIONS	In the event of a major spill, prevent spillage from entering drains or water courses. Spills to soil or similar surface may necessitate removal of top soil. The affected area should be placed in appropriate container for disposal
CONTAINMENT AND CLEANING	Clean up all spills immediately. Stop leak if safe to do so and absorb spill onto sand, earth, vermiculite or some other inert absorbent material. Collect the spilled material and place into a suitable container for disposal.

7. HANDLING AND STORAGE

VENTILATION:	Ensure ventilation is adequate to maintain air concentrations below exposure standards and as low as is reasonably practicable. While good natural ventilation may be adequate in most cases, local exhaust ventilation may be required.
PERSONAL PROTECTION:	Protective equipment must be worn: PVC gloves, waterproof apron, safety boots and a full-face shield. Avoid breathing dust or vapours.
FLAMMABILITY:	The product poses no flammability hazard.
STORAGE AND TRANSPORT:	This is a non-dangerous good. Store away from combustible materials, food, herbicides & fungicides. Store in well-sealed container in cool dry place.
OTHER INFORMATION:	Avoid contact with strong bases, strong oxidising agents (may decompose) and metals.

KEEP OUT OF REACH OF CHILDREN

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

NATIONAL EXPOSURE STANDARDS:	No exposure standard for this product has been set.
VENTILATION:	Ensure ventilation is adequate to maintain air concentrations below exposure standards and as low as is reasonably practicable. While good natural ventilation may be adequate in most cases, local exhaust ventilation may be required.
PERSONAL PROTECTION:	Protective equipment must be worn: PVC gloves, waterproof apron, safety boots and splash goggles. Avoid breathing dust or vapours. See Australian Standards AS/NZS 2161, 2210.1 and 2210.2 for more information Masks must be properly fitted and comply with Australian Standards AS/NZS 1715;1716 "Selection, use and maintenance of respiratory protective devices." Safety glasses with top and side shields. See Australian Standards AS/NZS 1336 and 1337 for more information.
WORK HYGIENE	Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Remove contaminated clothing and protective equipment before entering eating areas. Appropriate techniques

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should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	pale yellow
SPECIFIC GRAVITY / BULK DENSITY:	1.45
pH (NEAT):	2.0 – 3.0
SOLUBILITY IN WATER:	100%
ODOUR:	odourless
BOILING POINT:	>105°C
VAPOUR PRESSURE:	as water
PERCENT VOLATILES:	Volatility 6% at max 184°C
FLASH POINT:	noncombustible
FLAMMABILITY LIMITS:	noncombustible
AUTOIGNITION TEMPERATURE:	noncombustible
SHELF LIFE:	2 years

10. STABILITY AND REACTIVITY

REACTIVITY:	Strong acids may decompose
STABILITY:	Stable at ambient temperature and under normal conditions of use.
MATERIALS TO AVOIDS:	Avoid contact with strong bases, strong oxidising agents as product may decompose.
HAZARDOUS DECOMPOSITION:	Under normal conditions of storage and use, hazardous decomposition products should not be produced. Fire or heat may produce irritating, toxic and/or corrosive fumes, including nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Inhalation	Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. The substance and/or its metabolites may bind to haemoglobin inhibiting normal uptake of oxygen. This condition, known as "methaemoglobinemia", is a form of oxygen starvation (anoxia). Symptoms include cyanosis (a bluish discolouration skin and mucous membranes) and breathing difficulties. Symptoms may not be evident until several hours after exposure. At about 15% concentration of blood methaemoglobin there is observable cyanosis of the lips, nose and earlobes. Symptoms may be absent although euphoria, flushed face

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and headache are commonly experienced. At 25-40%, cyanosis is marked but little disability occurs other than that produced on physical exertion. At 40-60%, symptoms include weakness, dizziness, lightheadedness, increasingly severe headache, ataxia, rapid shallow respiration, drowsiness, nausea, vomiting, confusion, lethargy and stupor. Above 60% symptoms include dyspnea, respiratory depression, tachycardia or bradycardia, and convulsions. Levels exceeding 70% may be fatal.

Skin Contact

Limited evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

Open cuts, abraded or irritated skin should not be exposed to this material

Eye

Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.

Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

Chronic

Long-term exposure to the product is not thought to produce chronic effects adverse to health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

Acute Toxicity - Dermal

(rat) LD50: >2000 mg/kg

Acute Toxicity - Oral Irritation

(Rat) LD50: >300<2000 mg/kg

Eye (Rodent - rabbit): 500mg/24H - Mild

Eye: adverse effect observed (irritating)

Skin (Rodent - rabbit): 500mg/24H - Mild

Skin: no adverse effect observed (not irritating)

12. ECOLOGICAL INFORMATION

TOXICITY	May be toxic to aquatic life
PERSISTENCE	readily biodegradable
BIOACCUMULATIVE	No information provided
MOBILITY	Contains nitrate which is highly mobile in soils.
ADVERSE EFFECTS	Avoid contaminating waterways. Fertilisers, particularly those containing nitrogen and/or phosphorus, can stimulate weed and algal growth in static surface waters. Nitrogen fertilisers may contain or form nitrate which can

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contaminate surface or ground water. High nitrate concentrations may render the water unsuitable for human consumption and livestock consumption.

13. DISPOSAL CONSIDERATIONS

DISPOSAL: Rinse packaging thoroughly and add to spray tank. Recycle bulk containers. Beneficial reuse is the most preferred option of disposal for degraded or non-harmful contaminated fertilisers. Fertilizers contaminated with harmful substances (chemicals, hydrocarbons, etc.) must be disposed in accordance with advice from the relevant Waste Management Authority.

ALWAYS DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

14. TRANSPORT INFORMATION

TRANSPORT: This product is not classed as a hazardous or dangerous good for transport by the ADG Code, IMDG Code, IATA.

STORAGE & TRANSPORT: It is recommended not to transport agricultural chemicals with foods, food related products and animal feed. Store undercover at >4°C - <50°C

UN NUMBER: N/A

D.G. CLASS: N/A

SUBSIDIARY RISK: NONE

HAZCHEM CODE: N/A

PACKAGING GROUP: N/A

POISONS SCHEDULE: N/A

15. REGULATORY INFORMATION

Classifications: Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7).

Inventory Listings: AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals). All components are listed on AIIC, or are exempt.

16. OTHER INFORMATION

SDS Creation Date: 09/12/2024 Issue Number: v7.2

Customer Service: 1800 244 009 (This Issue Number replaces all previous issues)

Australian Poisons Info Centre: 13 11 26

Abbreviations

ADG Australian Code for the Transport of Dangerous Goods by Road & Rail

CAS # Chemical Abstract Service number - used to uniquely identify chemical compounds

EC No. European Community Number

GHS Globally Harmonized System

IATA International Air Transport Association

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IMDG International Maritime Dangerous Goods Code
LC50 Lethal Concentration, 50% / Median Lethal Concentration
LD50 Lethal Dose, 50% / Median Lethal Dose
OEL Occupational Exposure Limit
pH relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm Parts Per Million
STEL Short-Term Exposure Limit
STOT-RE Specific target organ toxicity (repeated exposure)
STOT-SE Specific target organ toxicity (single exposure)
SWA Safe Work Australia

The product should not be used for purposes other than shown in Section 1 without first referring to the supplier and obtaining written instructions. As specific conditions of use of the product are outside of the suppliers' control, the user is responsible for ensuring that the requirements of the relevant legislation are complied with. The information in this Safety Data Sheet is based on the present knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as a guarantee of technical performance or suitability for particular applications. This SDS will be revised and updated as requirements occur. Should further information and relevant advice be required, contact Advanced Nutrients Pty Ltd.