

SAFETY DATA SHEET



Revision date: 17-Jul-2023

Revision Number 6

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name CAFFEINE ANHYDROUS

Product Code(s) 000000030865

Other means of identification

CAS No. 58-08-2

Chemical name 1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl-

Synonyms Caffeine

Recommended use of the chemical and restrictions on use

Recommended use Pharmaceutical applications.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier

Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia
Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 309 2528

Facsimile: +64 9 0508 366 364

For further information, please contact

Contact Point Product Safety Department

Emergency telephone number

Emergency Telephone 0 800 734 607 (ALL HOURS)

2. HAZARDS IDENTIFICATION

Not classified as a Dangerous Good under NZS 5433 Transport of Dangerous Goods on Land; NON-DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS Classification

SIGNAL WORD

Warning

EPA New Zealand HSNO approval code or group standard Pharmaceutical Active Ingredients Group Standard 2020
Approval Number: HSR100425

Acute toxicity - Oral Category 4 (HSNO - 6.1D)

Label elements**Hazard statements**

H302 - Harmful if swallowed

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Precautionary Statements - Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards which do not result in classification

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTSSubstance

Chemical name	CAS No.	Weight-%
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (caffeine)	58-08-2	>99

4. FIRST AID MEASURESDescription of first aid measures**General advice**

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Show this safety data sheet to the doctor in attendance.

Emergency telephone numberPoisons Information Center, New Zealand: 0800 764 766
Poisons Information Center, Australia: 13 11 26**Inhalation**

Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms occur.

Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact

Wash skin with soap and water. Call a physician if symptoms occur.

Ingestion Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Combustible material. Dusts or fumes may form explosive mixtures in air.

Hazardous combustion products Oxides of carbon. Oxides of nitrogen.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin and eyes. Avoid breathing dust or spray mist. Avoid generation of dust. Ensure adequate ventilation. Do not touch or walk through spilled material. Remove all sources of ignition. Take precautionary measures against static discharges. Evacuate personnel to safe areas. Wash thoroughly after handling.

For emergency responders Shut off ignition sources. Clear area of all unprotected personnel. Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent product from entering drains. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Use non-sparking tools.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin and eyes. Avoid breathing dust or spray mist. Avoid generation of dust. Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Remove all sources of ignition. Take precautionary measures against static discharges. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Ensure adequate ventilation. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight. Keep out of the reach of children. Store away from foodstuffs and sources of heat or ignition. Keep container closed when not in use.

Incompatible materials Strong oxidizing agents. Iodine. Silver salts. Tannins. Strong caustic alkali solutions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for particulate(s):

Particulates not otherwise classified: 8hr WES-TWA 10 mg/m³ (inhalable dust) or 3 mg/m³ (respirable dust)

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

These Workplace 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 workplace 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.

Appropriate engineering controls

Engineering controls Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent 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.

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, DUST MASK.



Eye/face protection	Glasses.
Hand protection	Impervious gloves.
Skin and body protection	Wear suitable protective clothing. Overalls. Antistatic boots.
Respiratory protection	If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.
Environmental exposure controls	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	Powder
Appearance	Crystalline
Color	White
Odor	Odourless
Odor threshold	No information available

Property	Values	Remarks • Method
pH	No data available	None known
Melting point / freezing point	234 - 239 °C	None known
Boiling point / boiling range	178 °C	(Sublimes)
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	20 hPa / 15 mmHg	@ 89 °C
Vapor density	No data available	None known
Relative density	1.230	@ 18 °C
Water solubility	18.7 g/L @ 16 °C	None known
Solubility(ies)	Slightly soluble in water, ethanol. Soluble in hot water.	None known
Partition coefficient	log Pow: 0.091 at 23°C	None known
Autoignition temperature	540 - 600 °C	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information**10. STABILITY AND REACTIVITY**Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Heat, flames and sparks. Dust formation. Static discharge (electrostatic discharge). Direct sunlight. Contact with foodstuffs.

Incompatible materials

Incompatible materials Strong oxidizing agents. Iodine. Silver salts. Tannins. Strong caustic alkali solutions.

Hazardous decomposition products

Hazardous decomposition products Oxides of carbon. Oxides of nitrogen.

11. TOXICOLOGICAL INFORMATIONAcute toxicityInformation on likely routes of exposure

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

Inhalation May cause irritation of respiratory tract.

Eye contact May cause physical irritation to the eyes. Dust contact with the eyes can lead to mechanical irritation.

Skin contact May cause irritation.

Ingestion Harmful if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, and abdominal pain. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (caffeine)	= 192 mg/kg (Rat) = 328 - 367.7 mg/kg (Rat) (1) (2)	= > 2,000 mg/kg (Rat) (1)	-

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Not classified. (1).
Serious eye damage/eye irritation	Not classified. (1).
Respiratory or skin sensitization	Not classified. (1).
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	New Zealand	IARC
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (caffeine) - 58-08-2		Group 3

Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Ecotoxicity	Keep out of waterways.
Terrestrial ecotoxicity	There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (caffeine)	-	LC50: =151mg/L (96h, Pimephales promelas)	EC50: =182.12mg/L (4h, Daphnia species)

Persistence and degradability

Persistence and degradability	Biodegradable. (2).
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Bioaccumulative potential

Bioaccumulation This product shows a low bioaccumulation potential. (2).

Mobility

Mobility in soil No information available.

Chemical name	Partition coefficient
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (caffeine)	-0.07

Other adverse effects

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging For packages that have been in direct contact with hazardous chemicals, the person must ensure that the package is rendered incapable of containing any chemical. It must be disposed of in a manner that is consistent with the requirements for disposal of the chemical that it contained, taking into account the material the package is manufactured from.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT Not classified as a Dangerous Good under NZS 5433 Transport of Dangerous Goods on Land; NON-DANGEROUS GOODS.

IATA Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

IMDG Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

15. REGULATORY INFORMATION

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

New Zealand

National regulations See section 8 for national exposure control parameters

EPA New Zealand HSNO approval code or group standard Pharmaceutical Active Ingredients Group Standard 2020
Approval Number: HSR100425

Chemical name	New Zealand HSNO Chemical Classification
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (caffeine) - 58-08-2	Acute Tox. 3 (Oral)

International Inventories

NZIoC	This material is listed on the New Zealand Inventory of Chemicals.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	This material is listed on the Australian Inventory of Industrial Chemicals.

Legend:**NZIoC** - New Zealand Inventory of Chemicals**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC**- Australian Inventory of Industrial Chemicals**International Regulations****The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable**The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**16. OTHER INFORMATION**

(1) Supplier Safety Data Sheet; 05/ 2023

(2) Supplier Safety Data Sheet; 04/ 2020

Prepared By This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).**Issuing Date:** 17-Jul-2023**Reason(s) For Issue:** 5 Yearly Revised Primary SDS**Revision Note:**

The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

EPA (Environmental Protection Agency)

Acute Exposure Guideline Level(s) (AELG(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian Industrial Chemicals Introduction Scheme (AICIS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Disclaimer

This SDS 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 Ixom Operations Pty Ltd 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 Bronson & Jacobs representative or Ixom Operations Pty Ltd at the contact details on page 1.

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

Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris and Australian Botanical Products.

End of Safety Data Sheet