

Caffeine

SECTION 1. IDENTIFICATION

Product Identifier	Caffeine
Other Means of Identification	Guaranine, Methyl-theobromine, 1,3,7-Trimethylxanthine
Product Code(s)	CA1710
Product Family	Organic solid
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	Infotrac, 1-800-535-5053, 24 Hours
SDS No.	0740

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Acute toxicity (Oral) - Category 3

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Toxic if swallowed.
Causes skin and eye irritation.
May cause respiratory irritation.

Precautionary Statement(s):

Prevention:
Wash hands and skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Response:
IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
Rinse mouth.
Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

Very toxic to aquatic life.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
CAFFEINE	58-08-2	> 99	1,3,7,-Trimethylxanthine

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor.

Ingestion

Do not induce vomiting. Rinse mouth with water. Immediately call a Poison Centre or doctor.

First-aid Comments

Get medical advice or attention if you feel unwell or are concerned. Some of the first-aid procedures recommended here require advanced first-aid training.

Most Important Symptoms and Effects, Acute and Delayed

None known.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Use water to keep non-leaking, fire-exposed containers cool. Special "alcohol resistant fire-fighting foams".

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides.

Special Protective Equipment and Precautions for Fire-fighters

Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Product Identifier: Caffeine

Date of Preparation: October 12, 2016

Page 02 of 06

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Remove or isolate incompatible materials as well as other hazardous materials. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Do not get in eyes, on skin or on clothing. Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating dusts. Only use where there is adequate ventilation.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
CAFFEINE	Not established		Not established			

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash in work area, if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

Follow the NIOSH respirator regulations found in 29 CFR 1910.134 or European Standard EN149. Always use an approved respirator when necessary.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	White powder.
Odour	Odourless
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	234 - 239 °C (453 - 462 °F) (melting); 234 - 239 °C (453 - 462 °F) (freezing)
Initial Boiling Point/Range	178 °C (352 °F)
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not available

Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	1.23
Solubility	Slightly soluble (0.1-1 g/100 mL) in water; Mildly soluble in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	540 °C (1004 °F)
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Solid
Molecular Weight	194.2

SECTION 10. STABILITY AND REACTIVITY

Reactivity

None known.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

Generation of dust. High heat.

Open flames, sparks, static discharge, heat and other ignition sources. Incompatible materials.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid).

Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
CAFFEINE	4.94 mg/L (rat)	192 mg/kg (rat)	> 2000 mg/kg (rabbit)

Skin Corrosion/Irritation

Causes skin irritation.

Serious Eye Damage/Irritation

Causes serious eye irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Harmful Causes nose and throat irritation.

Ingestion

Toxic, can cause death May cause severe irritation or burns to the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Product Identifier: Caffeine

Date of Preparation: October 12, 2016

Page 04 of 06

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
CAFFEINE	Not Listed	Not designated	Not Listed	Not Listed

Reproductive Toxicity**Development of Offspring**

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal Methods**

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	UN1544	Alkaloids, Solid, n.o.s., (Caffeine)	6.1	III
IATA (Air)	UN1544	Alkaloids, Solid, n.o.s., (Caffeine)	6.1	III

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION**Safety, Health and Environmental Regulations****Canada****Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

Listed on the DSL.

USA**Toxic Substances Control Act (TSCA) Section 8(b)**

Listed on the TSCA Inventory.

Product Identifier: Caffeine

Date of Preparation: October 12, 2016

Page 05 of 06

SECTION 16. OTHER INFORMATION

SDS Prepared By	Alphachem Limited
Phone No.	(905)-821-2995
Date of Preparation	October 12, 2016
Date of Last Revision	February 16, 2017
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). Ward's Science database. RTECS database. Gurvey & Berry Co database.
Disclaimer	This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.