

GURVEY & BERRY

Ingredients for wellness, nutrition, beauty and more.

Material Safety Data Sheet

1. IDENTIFICATION

Product Identifier: Caffeine Anhydrous

Other Means of Identification:

Chemical Name: 1,3,7-Trimethylpurine-2,6(3H, 1H)-dihydrone

Synonyms: Guanine; Methyl-theobromine, 1,3,7-Trimethylxanthine

Chemical Formula: $C_8H_{10}N_4O_2$

CAS Number: 58-08-2

EINECS Number: 200-362-1

Recommended Use Food ingredient, NHP ingredient

Restrictions on Use Added Caffeine content in foods and NHP is regulated in Canada.

Initial Supplier Identifier:

Guvevy & Berry Co. Inc.

310 Judson Street, Unit #15

Toronto, ON, Canada, M8Z 5T6

Tel: (416) 259-5700 Fax: (416) 259-5417

E-mail: msds@gurveyberry.com

Emergency Telephone: Canutec 613-996-6666 (24 hours)

2. HAZARD IDENTIFICATION

GHS Classification in accordance with Hazardous Products Regulations (HPR) OR/2015-17)

Acute toxicity - Oral (Category 4)

Acute toxicity - Inhalation (Category 4)

Acute toxicity - Dermal (Category 5)

Acute Aquatic - Toxicity (Category 3)

Hazard pictograms:



GHS07

Signal word:

WARNING!

Hazard statements:

H302 Harmful if swallowed.
 H332 Harmful if inhaled.
 H313 May be harmful in contact with skin.
 H402 Harmful to aquatic life.

Precautionary statements:**Prevention:**

P261 Avoid breathing dust.
 P264 Wash hands, skin, and clothes thoroughly after handling
 P270 Do not eat, drink, or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.

Response:

P301+P317+330 IF SWALLOWED: Rinse mouth. Get medical help.
 P304+P340+P317 IF INHALED: remove person to fresh air and keep comfortable for breathing. Get medical help.

P302+P317 IF ON SKIN: Get medical help.

Storage:

P403 + P233 Store in well-ventilated area.
 Keep container tightly closed.

Disposal:

P501 Dispose of contents/container at a licensed waste disposal plant in accordance with local, provincial, federal regulations.

Hazards not otherwise classified (HNOC) or not covered by GHS –

DO NOT EAT THIS PRODUCT. A TEASPOON MAY BE VERY HARMFUL.

3. COMPOSITION AND INFORMATION ON INGREDIENTS
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Chemical Family: Alkaloid Methylated xanthine
 Molecular weight: 194.19 g/mol
 Chemical Formula: C₈H₁₀N₄O₂
 EC Number: 200-362-1

Chemical Name	CAS No.	Concentration	Common name / Synonyms	Other identifiers
Caffeine Anhydrous	58-08-2	<=100%	1,3,7-Trimethylxanthine	None

4. FIRST-AID MEASURES

First aid measures by route of exposure:

General:	Move out of dangerous area. Remove any contaminated clothing. Consult a physician and show this safety data sheet.
After Ingestion:	Do not induce vomiting without medical advice. Rinse mouth with water. Never administer anything by mouth to an unconscious person. Obtain medical aid immediately.
After Inhalation:	Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical aid.
After Skin Contact:	Remove contaminated clothing and shoes. Brush off loose particles from skin. Flush skin with soap and water at least 15 min. Seek medical attention if irritation develops.
After Eye Contact:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical attention should irritation develop or persist.

Most Important Symptoms and Effects, Acute and Delayed:

Ingestion:	Harmful if swallowed. May cause very fast or irregular heartbeat, elevated blood pressure. May cause stomach cramps, nausea, vomiting, and diarrhea. May cause shakiness, tremor, panic attack, restlessness, insomnia, headache, muscles cramps. May cause frequent urination and dehydration.
Inhalation:	May cause respiratory tract irritation. May cause effects like those for ingestion.
Skin Contact:	May cause skin irritation.
Eye Contact:	Dust may cause mechanical irritation.
Medical Conditions Aggravated By Exposure:	May aggravate existing heart conditions, stomach, and central nervous system conditions.

Immediate Medical Attention and Special Treatment: N/A

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water, dry chemical, chemical foam, or alcohol resistant foam.

Do not get water inside containers.

Unsuitable Extinguishing Media: N/A

Special Hazards Arising from the Product:

Decomposition Products - Nitrogen oxides, carbon monoxide, and carbon dioxide. Other toxic fumes.

Special Protective Equipment and Precautions for Fire-Fighters:

As in any fire, wear a self contained breathing apparatus in pressure demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Individual Protection Measures (e.g. personal protective equipment):

Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing dust.

For full list of PPE see [section 8](#).

Methods and materials for containment and cleaning up

Small spill:

Wear personal protective equipment. Sweep up, then place into a suitable container for disposal. Avoid generating dust.

Large spill:

Evacuate the area. Communicate the hazard to other workers. Do not touch damaged containers or spilled material unless wearing a respirator, chemical safety goggles, rubber boots and heavy rubber gloves.

Stop leak if you can do it without risk. Use a shovel to put the solid in a convenient waste disposal container. Avoid generation of dust.

Dispose the waste container of in according to local and regional authority regulations.

Environmental precautions:

Prevent entry into waterways, sewers, basements, or confined areas. Do not flush into sewerage system or to drains.

Reference to other sections:

See section 1 for emergency contact.

See section 8 for information on appropriate personal protective equipment.

See section 13 for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Wash hand after handling and before eating. Don't ingest. Avoid contact with skin and eyes. Avoid formation of dust. Provide appropriate exhaust ventilation at places where dust is formed.

For other precautions see Section 2.2

Conditions for Safe Storage: Store in a cool dry place. Store in a tightly closed container away from sun and moisture.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH® TLV®		OSHA PEL	
	TWA	STEL	TWA	STEL
Caffeine Anhydrous	N/A	N/A	N/A	N/A

Appropriate Engineering Controls: Good general ventilation to control worker exposure to airborne contaminants. Mechanical exhaust recommended.
Safety shower and eye wash fountain are required.

Personal precautions, protective equipment, and emergency procedures:

Respiratory System: Use personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Avoid breathing dust. Use an N 95 respirator or better.

Eye/face protection Safety glasses with side-shields conforming to EN166
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection Impervious protective clothing and boots should be worn to prevent skin contact.
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Control of environmental exposure Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Powder
Color:	White
Molecular Weight:	194.2 g/mol
Odor:	Odorless
Odor Threshold:	N/A
pH:	5.5-6.5 at 10g/L at 20 °C
Melting Point/freezing point:	234-239 °C
Initial boiling point/boiling range:	N/A
Flash Point:	N/A
Evaporation Rate:	N/A
Flammability (solid; gas):	The product is not flammable.
Upper flammability or explosive limits	N/A
Lower flammability or explosive limits	N/A
Vapor Pressure (mmHg):	N/A
Vapor Density (air=1):	N/A
Relative Density:	1.23 g/cm ³ at 18 C
Solubility in Water:	Sparingly soluble in cold water. Freely soluble in boiling water. 18.7 g/L at 16 C (61 F)
Solubility in Other Agents:	Freely soluble in chloroform, slightly or sparingly soluble in alcohol, slightly soluble in ether.
Partition coefficient (n-octanol/water expected)	log Pow: -0.07 at 20 °C – bioaccumulation is not expected
Autoignition	540-600 °C
Decomposition	N/A
Viscosity	N/A
Explosive properties	N/A
Oxidizing properties	N/A
Other information:	
Dissociation constant	10.4 at 40 °C

10. STABILITY AND REACTIVITY

Reactivity:	N/A
Chemical stability:	Stable under normal temperatures and pressures.
Possibility of hazardous reactions:	N/A
Conditions to avoid:	N/A
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	(formed under fire conditions) Nitrogen oxides, carbon monoxides, carbon dioxides.
Other decomposition products	N/A
In the event of fire:	See section 5

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation: Yes Skin Contact: Yes Ingestion: Yes Eye contact Yes

Acute Toxicity LD₅₀:

LD50 Oral - Rat (male and female)
367.7 mg/kg (OECD Test Guideline 401)
(Regulation (EC) No 1272/2008, Annex VI)
LC50 Inhalation - Rat - male and female –
4 h - 4.94 mg/l (OECD Test Guideline 403)
LD50 Dermal - Rat (male and female)–
> 2,000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation:

Skin - Rabbit
Result: No skin irritation - 4 h (OECD Test
Guideline 404)

Serious Eye Damage/irritation:

Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory and/or Skin Sensitization: N/A

Aspiration Toxicity: N/A

**STOT (Specific Target Organ Toxicity)
Single Exposure:** N/A

**STOT (Specific Target Organ Toxicity)
Repeated Exposure:**

Mouse - male and female - Oral - 90 d - No observed adverse effect level - 167.4
- 179.4 mg/kg
(ECHA)
RTECS: EV6475000

Carcinogenicity:

IARC: Caffeine is listed in group 3 (not classifiable as to its carcinogenicity to
humans) –
OSHA: Caffeine is not listed

Reproductive Toxicity: N/A

Germ Cell Mutagenicity: N/A
Interactive Effects N/A

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Toxicity to fish Static test LC50 - Leuciscus idus (Golden orfe) -
87 mg/l - 96 h (DIN 38412 part 15)
Static test NOEC - Leuciscus idus (Golden orfe) –
46 mg/l - 96 h (DIN 38412 part 15)

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - Daphnia magna (Water flea)
182 mg/l - 48 h (DIN 38412)

Toxicity to algae

Static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h
(OECD Test Guideline 201)

static test NOEC

Desmodesmus subspicatus (green algae) - 6.25 mg/l - 72 h
(OECD Test Guideline 201)

Persistence and degradability:

Biodegradability aerobic - Exposure time 22 d
Result: 90 - 100 % - Readily biodegradable. (OECD Test Guideline 301A)

Bioaccumulative potential:

No data available

Mobility in soil:

No data available

Other adverse effects:

No data available

13. DISPOSAL CONSIDERATIONS

Wastes of Residues: Dispose according to local, provincial and federal regulations. Don't empty into drains. Avoid release to the environment.
Contaminated Packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT -Not Dangerous Goods
IATA - Not Dangerous Goods

15. REGULATORY INFORMATION

CANADA
DSL/NDSL: Listed on the DSL.

Ingredient Disclosure List: Not listed on the ingredient disclosure list.

16. OTHER INFORMATION

This information is based upon knowledge currently available.

More detailed information on the physical and chemical properties can be requested from the supplier. To the best of our knowledge, the information contained herein is accurate and complete. However, this should not be construed to imply any warranty or guarantee. Gurvey & Berry Co. Inc. shall not be held liable for any damage resulting from handling or from contact with the above chemical.

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N/A = not available.
N/D = not determined.