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4540

**MATERIAL SAFETY DATA SHEET**

World's Natural Science Establishment, Ltd.  
1800 Westview Avenue  
Mississauga, Ontario L4X 1K1  
Tel: (416) 291-1469 ext 2012

**SECTION I NAME**

Product	CAFFEINE	 CHEMTREC 800-424-9300 Day 716-226-6177 Night 716-334-4222 HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4
Chemical Name	1,3,7-Trimethylxanthine	
Molecular Formula	C <sub>8</sub> H <sub>10</sub> N <sub>4</sub> O <sub>2</sub>	
(s) Size	10 grams to 500 grams	
S. No.	58-08-2	

**SECTION II HAZARDOUS INGREDIENTS OF MIXTURES**

Principal Hazardous Component(s)	%	TLV Units
Caffeine	100%	Not established

**WARNING: MAY BE HARMFUL IF INHALED OR SWALLOWED.**

**SECTION III PHYSICAL DATA**

Melting Point (°F)	Sublimes at 238°C	Specific Gravity (H <sub>2</sub> O = 1)	Unknown
Boiling Point (°F)	Sublimes at 238°C	Percent Volatile by Volume (%)	Non-volatile solid
Or Pressure (mm Hg)	Not applicable	Evaporation Rate	Not applicable
Or Density (lb = 1)	Not applicable		
Solubility in Water	One gram dissolves in 46 ml of water at 20°C.		
Appearance and Odor	White powder; no odor.		

**SECTION IV FIRE AND EXPLOSION HAZARD DATA**

Flash Point (°F)	Not applicable	Flammable Limits in Air % by Volume	Lower	Upper
Ignition	Use any media suitable for extinguishing supporting fire.			

**SPECIAL FIREFIGHTING PROCEDURES**

In fire conditions, wear a NIOSH-approved self-contained breathing apparatus.

**SPECIAL FIRE AND EXPLOSION HAZARDS**

When heated to decomposition, emits toxic fumes of Nitrous oxides and other hazardous materials; can react vigorously with oxidizing materials.

**7. NON-REGULATED.**

Prepared by U.S. Department of Labor "essentially similar" to form OSHA-20

**SECTION V HEALTH HAZARD DATA**

Threshold Limited Value

None established. Toxicity: Oral-Rat LD50 192 mg/kg.

**Effects of Overexposure**  
Harmful if swallowed. Avoid breathing dust.  
SIDE EFFECTS: nervousness, insomnia, tachycardia may occur, dizziness, headache, and vomiting.

**Emergency and First Aid Procedures**

**IF SWALLOWED:** If conscious, give one or two glasses of water. Induce vomiting and call a physician.  
**CONTACT:** In case of contact with skin or eyes, flush with water. For eyes, if irritation persists get medical attention.  
**INHALATION:** Remove to fresh air. If illness or discomfort develops, get medical attention.

**SECTION VI REACTIVITY DATA**

Stability	Unstable	Conditions to Avoid
	Stable	Excessive temperatures and heat.
Incompatibility (Materials to avoid)	Strong oxidizers.	

**Hazardous Decomposition Products**

When heated to decomposition, emits toxic fumes of nitrous oxides.

**SECTION VII SPILL OR LEAK PROCEDURES**

Steps to be taken in case material is released or spilled  
Sweep up and place in a suitable container.

**Waste Disposal Method**

Dispose of in an approved incinerator.

**SECTION VIII SPECIAL PROTECTION INFORMATION**

Discharge, treatment, or disposal may be subject to federal, state, or local laws.

**Respiratory Protection**

None should be needed in normal laboratory handling. If dusty conditions prevail, work in a ventilation hood or wear a NIOSH-approved dust mask.

**Ventilation**

Local Exhaust Recommended  
Mechanical (General) Recommended  
Other

**Protective Gloves**

Rubber  
Goggles, lab coat, ventilation hood, proper gloves, and eye wash station.

**SECTION IX SPECIAL PRECAUTIONS**

**Precautions to be Taken in Handling and Storing**  
Store in a cool, dry place. Wash thoroughly after handling.  
**Other Precautions**  
Read label on container before using.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No. 1 Date 1/13/87 Approved *Wanda L. D'Amico* Chemical Safety Coordinator *CP*

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