



# Safety Data Sheet (Caffeine)

DATE PREPARED: 12/12/2012  
REVISION NUMBER: 12/12/2012

## Section 1 – Company Information

**Parchem - fine & specialty chemicals**  
**415 Huguenot Street**  
**New Rochelle, NY 10801**  
☎ (914) 654-6800 ☎ (914) 654-6899  
🌐 [parchem.com](http://parchem.com) ✉ [info@parchem.com](mailto:info@parchem.com)

EMERGENCY RESPONSE NUMBER:  
CHEMTEL - Parchem CCN# M1S0007152  
Toll Free US & Canada: (800)255-3924  
All other Origins: (813) 248-0585  
Collect Calls Accepted

## Section 2 – Product Identification/ Information on Ingredients

PRODUCT NAME Caffeine  
CAS NUMBER 58-08-2  
SYNONYM Caffeine, Anhydrous  
FORMULA  $C_8H_{10}N_4O_2$

PRODUCT	CAS NUMBER	% BY WEIGHT
Caffeine	58-08-2	>99%

## Section 3 – Hazards Identification

Harmful if swallowed. Light sensitive.

**Potential Health Effects Eye:** Dust may cause mechanical irritation.

**Skin:** May cause skin irritation. Low hazard for usual industrial handling.

**Ingestion:** Harmful if swallowed, May cause gastro intestinal irritation with nausea, vomiting and diarrhea.

**Inhalation:** May cause respiratory tract irritation. May cause effects similar to those described for ingestion.

**Chronic:** May cause cancer according to animal studies. May cause digestive tract and cardiac disturbances. May cause reproductive and fetal effects.

## Section 4 – First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Ingestion:** Induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.



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### Section 5 – Fire Fighting Measures

**General Information:** A sin any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or chemical foam.

### Section 6 – Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Sweep up, then place into a suitable container for disposal

### Section 7 – Handling & Storage

**Handling:** Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Use only in a chemical fume hood.

**Storage:** Store in a cool, dry place. Ensure proper ventilation in storage area. Store in a tightly closed container.

### Section 8 – Exposure Controls & Personal Protection

**Engineering Controls:** Use process enclosure, local exhaust ventilation, or other engineering controls to control air borne levels below recommended exposure limits.

**Eyes:** Wear appropriate protective eye glasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN149. Always use a NIOSH or European Standard EN149 approved respirator when necessary.

### Section 9 – Physical & Chemical Properties

**Physical State:** Crystalline powder

**Appearance:** white

**Odor:** odorless

**pH:** Not available.

**Vapor Pressure:** Not available

**Viscosity:** Not available.

**Boiling Point:** Not available

**Freezing/Melting Point:** 234 -239 deg C

**Autoignition Temperature:** 540 deg C (1,004.00 deg F)



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**Flash Point:** Not available.  
**Explosion Limits, lower:** Not available  
**Explosion Limits, upper:** Not available.  
**Decomposition Temperature:**  
**Solubility in water:** 1 g/46 ml in water  
**Specific Gravity/Density:** 1.2300 g/cm<sup>3</sup>  
**Molecular Formula:** C<sub>8</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</sub>  
**Molecular Weight:** 194.19

Section 10 – Stability & Reactivity Data

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** In compatible materials, temperatures above 150°C.  
**In compatibilities with Other Materials:** Strong oxidizing agents.  
**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, carbon dioxide.  
**Hazardous Polymerization:** Has not been reported.

Section 11 – Toxicological Information

**RTECS#: CAS#58-08-2 :** EV6475000  
**LD50/LC50: CAS# 58-08-2:**  
Oral, mouse: LD50 = 127mg/kg;  
Oral, rabbit: LD50= 224 mg/kg;  
Oral, rat: LD50=192 mg/kg.  
**Carcinogenicity:** CAFFEINE IARC: Group3 carcinogen  
**Other:** See actual entry in RTECS for complete information.

Section 12 – Ecological Information

**Ecotoxicity:** No data available. No information available.  
**Environmental:**  
**TERRESTRIAL FATE:** If released to soil, estimated soil adsorption indicates that caffeine will display very high mobility. An estimated Henry's Law constant of  $1.9 \times 10^{-19}$  atm-cu m/mole at 25 deg C indicates that it will not volatilize from moist soil to the atmosphere.  
**AQUATIC FATE:** If released to water caffeine will not bio concentrate aquatic organisms.  
**ATMOSPHERIC FATE:** Exists predominantly in the particulate phase, half-life 2.5 hours. Expected to biodegrade, but not to bioconcentrate.  
**Physical:** No information available.  
**Other:** No information available.



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### Section 13 – Disposal Consideration

Dispose in accordance with all local, state and federal regulations.

### Section 14 – Transportation Data

#### **DOT (US)**

Shipping Name: Alkaloids, Solid, N.O.S. (Caffeine)  
Hazard Class: 6.1  
UN Number: 1544  
Packing Group: III

#### **IATA**

Shipping Name: Alkaloids, Solid, N.O.S. (Caffeine)  
Hazard Class: 6.1  
UN Number: 1544  
Packing Group: III

#### **IMO**

Shipping Name: Alkaloids, Solid, N.O.S. (Caffeine)  
Hazard Class: 6.1  
UN Number: 1544  
Packing Group: III

#### **RID/ADR**

Shipping Name: Alkaloids, Solid, N.O.S. (Caffeine)  
Hazard Class: 6.1  
UN Number: 1544  
Packing Group: III

### Section 15 – Regulatory Information

#### **European/International Regulations**

#### **European Labeling in Accordance with EC Directives**

**Hazard Symbols:** XN

**Risk Phrases:** R22 Harmful if swallowed.

#### **Safety Phrases:**

**WGK (Water Danger/Protection)** CAS#58-08-2: 1

United Kingdom Occupational Exposure Limits

Canada:

CAS# 58-08-2 is listed on Canada's DSL List.

CAS#58-08-2 is not listed on Canada's Ingredient Disclosure List.



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Exposure Limits CAS# 58-08-2: OEL-RUSSIA: STEL 0.5 mg/m<sup>3</sup>  
US FEDERAL TSCA CAS# 58-08-2 is listed on the TSCA inventory.

### Section 16 – Other Information

#### Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

