



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. CC 25  
Effective Date October 8, 1998

## SECTION V HEALTH HAZARD DATA CC 25

**Threshold Limited Value** RTECS No. EV6475000 Toxicity data: oral-child LDLO: 320mg/kg, oral-woman LDLO: 1000mg/kg, oral-infant TDLO: 14,700ug/kg, oral-mouse LD50: 127mg/kg, Oral-rat LD50: 192 mg/kg.

**Effects of Overexposure** **INGESTION AND INHALATION:** No TLV established. May act as stimulant if excessive ingestion. Large doses (above 1 g) may cause palpitation, excitement, insomnia, dizziness, headache and vomiting. **SKIN AND EYES:** As dust or vapor may be an irritant. Exercise appropriate procedures to minimize potential hazards.

**Emergency and First Aid Procedures** **INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink, induce vomiting and call a physician. Never give anything by mouth to an unconscious person. **SKIN:** Flush with water, then wash with mild soap and water. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention. **INHALATION:** Remove to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

## SECTION VI REACTIVITY DATA

|                  |                 |   |                            |                                  |
|------------------|-----------------|---|----------------------------|----------------------------------|
| <b>Stability</b> | <b>Unstable</b> |   | <b>Conditions to Avoid</b> | Excessive temperatures and heat. |
|                  | <b>Stable</b>   | X |                            |                                  |

**Incompatibility (Materials to Avoid)** Strong oxidizers, hot alkalis, chlorine water.

**Hazardous Decomposition Products** When heated to decomposition, emits toxic fumes of nitrous oxides, carbon monoxide, carbon dioxide.

|                                 |                       |                            |                 |
|---------------------------------|-----------------------|----------------------------|-----------------|
| <b>Hazardous Polymerization</b> |                       | <b>Conditions to Avoid</b> | Not applicable. |
| <b>May Occur</b>                | <b>Will Not Occur</b> |                            |                 |
|                                 | X                     |                            |                 |

## SECTION VII SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled** Wear protective safety equipment and use adequate ventilation. Avoid making dust. Sweep up and place in a suitable container for disposal. Flush spill area with water. Do not allow wash water to pollute water ways and streams. Recover for use if not contaminated.

**Waste Disposal Method** Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

Dispose of in an approved incinerator.

## SECTION VIII SPECIAL PROTECTION INFORMATION

**Respiration Protection (Specify Type)** None should be needed in normal laboratory handling. If dusty conditions prevail, work in a ventilation hood or wear a NIOSH/MSHA-approved dust mask.

|                    |                             |                     |                |            |
|--------------------|-----------------------------|---------------------|----------------|------------|
| <b>Ventilation</b> | <b>Local Exhaust</b>        | <b>Recommended.</b> | <b>Special</b> | <b>No.</b> |
|                    | <b>Mechanical (General)</b> | <b>Recommended.</b> | <b>Other</b>   | <b>No.</b> |

**Protective Gloves** Rubber. **Eye Protection** Chemical safety glasses.

**Other Protective Equipment** Goggles, lab coat, ventilation hood, proper gloves and eye wash station.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Store in a cool, dry place. Wash thoroughly after handling. Avoid breathing dust or vapor. Do not ingest. Remove and wash contaminated clothing. Keep container tightly closed when not in use.

**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals. The FDA has recently proposed removal of caffeine from its "generally recognized as safe" list and is gathering additional information. Concerns with excessive use include possible reproductive effects to fetal craniofacial area, musculoskeletal system, possible bladder cancer (2 separate epidemiological studies), myocardial infarction and, to lesser degree, constipation, palpitations, shortness of breath and depressed mental state.

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

|                       |                     |                                 |                                       |
|-----------------------|---------------------|---------------------------------|---------------------------------------|
| <b>Revision</b> No. 6 | <b>Date</b> 10/8/98 | <b>Approved</b> Michael Raszeja | <b>Chemical Safety Coordinator</b> MR |
|-----------------------|---------------------|---------------------------------|---------------------------------------|

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## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

|                          |                                                              |                                                                         |                   |   |
|--------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------|-------------------|---|
| <b>Product</b>           | CAFFEINE                                                     | <br><b>CHEMTREC</b><br><b>800-424-9300</b><br>Day 716-226-6177          | <b>Health</b>     | 2 |
| <b>Chemical Synonyms</b> | 1,3,7, - Trimethylxanthine                                   |                                                                         | <b>Fire</b>       | 1 |
| <b>Formula</b>           | C <sub>8</sub> H <sub>10</sub> N <sub>4</sub> O <sub>2</sub> |                                                                         | <b>Reactivity</b> | 0 |
| <b>Unit Size</b>         | up to 2.5 Kg.                                                |                                                                         | <b>HMIS *</b>     |   |
| <b>C.A.S. No.</b>        | 58-08-2                                                      | <b>HAZARD RATING</b><br>LEAST SLIGHT MODERATE HIGH EXTREME<br>0 1 2 3 4 |                   |   |

## SECTION II INGREDIENTS OF MIXTURES

| Principal Component(s) | %    | TLV Units        |
|------------------------|------|------------------|
| Caffeine, anhydrous    | 100% | Not established. |
|                        |      | (ACGIH-1983-84)  |

**DANGER!** **POISON MAY BE HARMFUL IF INHALED OR SWALLOWED**

## SECTION III PHYSICAL DATA

|                               |                                              |                                              |                |
|-------------------------------|----------------------------------------------|----------------------------------------------|----------------|
| <b>Melting Point (°F)</b>     | Sublimes at 238°C (460°F)                    | <b>Specific Gravity (H<sub>2</sub>O = 1)</b> | 1.23           |
| <b>Boiling Point (°F)</b>     | 178°C (352°F)                                | <b>Percent Volatile by Volume (%)</b>        | 0.5%           |
| <b>Vapor Pressure (mm Hg)</b> | 760 @ 178°C                                  | <b>Evaporation Rate ( =1)</b>                | Not applicable |
| <b>Vapor Density (Air=1)</b>  | Not applicable                               |                                              |                |
| <b>Solubility in Water</b>    | One gram dissolves in 46 mL of water at 20°C |                                              |                |
| <b>Appearance &amp; Odor</b>  | White needles or white powder; no odor.      |                                              |                |

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

|                                  |                               |                                            |              |              |
|----------------------------------|-------------------------------|--------------------------------------------|--------------|--------------|
| <b>Flash Point (Method Used)</b> | Ignition temp. 925°C (1696°F) | <b>Flammable Limits in Air % by Volume</b> | <b>Lower</b> | <b>Upper</b> |
|                                  |                               | g/cu.ft.                                   | 2            | 16           |

**Extinguisher Media** Use any media suitable for extinguishing supporting fire.

## SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA-approved, self-contained breathing apparatus and full protective clothing.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 154)

## UNUSUAL FIRE AND EXPLOSION HAZARDS

When heated to decomposition, emits toxic fumes of Nitrous oxides and other hazardous materials; can react vigorously with oxidizing materials. Severe (Bureau of Mines Explosion Hazard Ratings) as dust.

D.O.T. **Poisonous solids, n.o.s., (Caffeine), 6.1, UN 2811, PG III**

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