**** MATERIAL SAFETY DATA SHEET ****

Theobromine, 99%
97168

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Theobromine, 99%
Catalog Numbers: AC258821000, AC258821000, AC258823500
Synonyms: 3,7-Dimethyl-2-oxo-2,6-dihydroxycyclohept-3-ene-3,7-dimethyl-purine
Company Identification: Acorus Organics N.V.
One Reagent Lane
Fairview, NJ 07410
For emergencies in the US, call CHEMTREC 800-424-9300

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS# Chemical Name % EINECS#
83-87-0 Theobromine, 99% 201-494-2

Hazard Symbols: XN
Risk Phrases: 22

**** SECTION 3 - HAZARDS IDENTIFICATION ****

Appearance: white very fine powder.
Target Organ: None.
Potential Health Effects
The toxicological properties of this material have not been investigated. Use appropriate procedures to prevent opportunities for direct contact with the skin or eyes and prevent inhalation.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids.
Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Do not induce vomiting. Allow the victim to rinse his mouth and then drink 2-4 cups of water, and seek medical advice.
Inhalation: Remove from exposure to fresh air immediately.

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:
As in fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Extinguishing Media:
Use agents most appropriate to extinguish fire. Autoprophoretic Temperature: Not available.

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal.

**** SECTION 7 - HANDLING AND STORAGE ****

Handling: Wash thoroughly after handling. Remove contaminated clothing and washer before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.
Storage:

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:
Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use a process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Exposure Limits

- Chemical Name: Theobromine, 99%
- OSHA Vacated PELs: None

Personal Protective Equipment

- Eyes: Wear safety glasses and chemical goggles if splashing is possible.
- Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.
- Clothing: Wear appropriate protective clothing to minimize contact with skin.
- Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Not available.
Appearance: white.
Odor: Not available. pH: Not available.
Vapor Pressure: Not available. Vapor Density: Not available.
Charge Rate: Not available. Viscosity: Not available.
Bolling Point: Not available. Freezing/Melting Point: 260.0 - 265.00 deg C
Specific Gravity/Density: Not available.

Molecular Formular: C7H8N4O2
Molecular Weight: 180.17

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, strong oxidizers.
Incompatibilities with Other Materials: Not available.
Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.
Hazardous Polymerization: Not been reported.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTCS/CSA:
CAS# 83-67-0: X2275000
LD50 (LD50): Oral, mouse: LD50 = 837 mg/kg; Oral, rat: LD50 = 1265 mg/kg.
Carcinogenicity: Theobromine, 99%.
IARC: Group 3 carcinogen.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity: Not available.

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of in a manner consistent with federal, state, and local regulations. RODA D-Series Maximum Concentration of Contaminants.
**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT
No information available

IMO
- Not regulated as a hazardous material.

IATA
- Not regulated as a hazardous material.

RID/ADR
- Not regulated as a hazardous material.

Canadian TDG
No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
TSCA
- CAS# 83-67-0 is listed on the TSCA inventory.
- Health & Safety Reporting List:
  - None of the chemicals are on the Health & Safety Reporting List.
- Chemical Test Rules
  - None of the chemicals in this product are under a Chemical Test Rule.
- Section 12b
  - None of the chemicals are listed under TSCA Section 12b.
- TSCA Significant New Use Rule
  - None of the chemicals in this material have a SNUR under TSCA.

SARA
- Section 302 (RQ):
  - None of the chemicals in this material have an RQ.
- Section 302 (TPQ)
  - None of the chemicals in this product have a TPQ.
- SARA Codes
  - CAS # 83-67-0: chronic.
- Section 313
  - No chemicals are reportable under Section 313.

Clean Air Act:
- This material does not contain any hazardous air pollutants.
- This material does not contain any Class 1 Ozone depleters.
- This material does not contain any Class 2 Ozone depleters.

Clean Water Act:
- None of the chemicals in this product are listed as Hazardous Substances under the CWA.
- None of the chemicals in this product are listed as Priority Pollutants under the CWA.
- None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
- None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
- Methane, 99% is not present on state lists from CA, PA, MN, MA, FL, or NJ.
- California No Significant Risk Level:
  - None of the chemicals in this product are listed.

European/International Regulations
- European Labeling in Accordance with EC Directives
  - Hazard Symbols: XN
  - Risk Phrases: R 22 Harmful if swallowed.
  - Safety Phrases: S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)
- CAS# 83-67-0: 1

Canada
- CAS# 83-67-0 is listed on Canada's DSL/NDSL List.
- WHMIS: Not available.
- CAS# 83-67-0 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 2/01/1996 Revision #1 Date: 9/02/1997

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