



Biomolecules for research

MATERIAL SAFETY DATA SHEET

Section 1 : Substance Identification

Name: Methotrexate

CAS Number: 59-05-2

Catalog Number: CC-103

Chemical Name: (+)-4-Amino-10-methylfolic Acid

Synonyms: Amethopterin

Chemical Class: Folic Acid Derivative

Company Identification: BIOMOL International L.P.
5120 Butler Pike
Plymouth Meeting PA 19462-1202 USA
(610) 941-0430 (9am-5pm ET)

Section 2 : Health Hazard Data

Acute Health Effects: May be harmful if ingested, inhaled, or absorbed through the skin. This compound is a cytotoxic agent. Cytotoxins are drugs which are designed to kill cells by preventing cell division or inhibiting cell growth. Rapidly dividing cell populations such as blood, bone marrow, or immune system cells are particularly susceptible. Effects of overexposure can include; nausea, vomiting, hair loss, anemia, increased bruising, agranulocytosis, liver or kidney damage.

Chronic Health Effects: This compound is a teratogen and a Category 2 mutagen causing concerns over toxic and reproductive effects in both men and women. Extreme care must be taken to prevent exposure to this compound. Women who are or may be pregnant should not handle teratogenic compounds.

Section 3 : First Aid Measures

Eye Contact: Check for and remove contact lenses. Flush eyes with running water for at least 15 minutes separating eyelids. **Seek medical attention immediately.**

Skin Contact: Wash with soap and water for 15 minutes. Remove contaminated clothing and shoes. **Seek medical attention immediately.**

Inhalation: Remove from exposure. If breathing is difficult, administer oxygen. If breathing stops, administer artificial respiration. **Seek medical attention immediately.** Provide chemical label and MSDS if possible.

Ingestion: Remove dentures and clear mouth. If person is conscious, rinse mouth with water. **Call physician or poison control immediately.** Provide chemical label and MSDS information if possible.

Physician's Note: Calcium leucovorin is a potent agent for neutralizing the immediate effects of methotrexate on the blood forming system. In general, when overexposure is known or suspected, calcium leucovorin should be administered as soon after exposure as possible. See the Physician's Desk Reference for recommended doses and routes of administration. Methotrexate blood levels should be monitored and calcium leucovorin dose adjusted accordingly.

Section 4 : Fire and Explosion Data

Flammability: Not Available

Flash Point: Not Available

Combustion Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides

Extinguishing Media: Carbon Dioxide, Dry chemical powder, polymer foam, water spray

Special Firefighting Procedures: Use self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire/Explosion Hazards: None known

Section 5 : Spill or Leak Procedures

Cleanup Procedures: **EVACUATE AREA** Wearing appropriate protective gear as outlined under "Protective equipment" wipe up spill and place in sealed container and hold for disposal. Avoid raising dust. Ventilate the area and wash spill site after material has been removed.

Waste Disposal Method: Observe all Federal, State and Local regulations concerning the disposal of this product.

Section 6 : Storage and Handling Precautions

Protective Equipment: For spill clean up, wear disposable Tyvek protective clothing, chemical resistant rubber gloves, rubber boots, and chemical safety goggles. Self contained breathing apparatus or NIOSH/MSHA approved respirator is required. This product should be handled in isolation.

Storage and Handling: This product should be stored at -20°C . It should be kept in a tightly closed container. This product should be handled only by qualified experienced professionals. Wash thoroughly after handling this material.

Section 7 : Physical Data

Appearance: Yellow-orange to brown solid

Molecular Weight: 454.5

Odor: None

Taste: Not Available

Boiling Point: Not Available
Solubility: DMSO
Specific Gravity: Not Available
Volatility: Not Available

Melting Point: 185°C
Vapor Density: Not Available
Vapor Pressure: Not Available

Section 8 : Stability and Reactivity Data

Stability: This material is stable if stored as directed
Conditions to Avoid: None known
Incompatibles: Strong acids and oxidizing agents

Section 9 : Toxicity Data

RTECS#: Not Available

Oral LD50: Rat : 135mg/kg

Mouse : 146mg/kg

Section 10 : Ecological Data

Ecotoxicological Information: None Available

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

Emergency Contact:

BIOMOL International L.P.
5120 Butler Pike
Plymouth Meeting, PA 19462 USA

(610) 941-0430

Last Revised : 1/8/04