

Material Safety Data Sheet

Pharmaceutical Resources Branch, DTP, DCT, NCI
 Executive Plaza North, Room 818
 6130 Executive Boulevard
 Rockville, Maryland 20852

NSC 21548

Revision Date: June 30, 1991

SECTION I. MATERIAL IDENTIFICATION

Common Name: THYMIDINE CAS: 50-89-5
 Chemical Name: 1-(2-Deoxy-B-D-Ribofuranosyl)-Thymine
 Molecular Formula: $C_{10}H_{14}N_2O_5$
 Other Designations: Thymine-2-desoxyriboside

SECTION II. INGREDIENTS AND HAZARDS

Ingredient Name	Percent	Exposure Limits
THYMIDINE	100%	NOT YET ESTABLISHED

Toxicity Data:

Mouse(ip): LD50: 2512 mg/kg, J Pharmacol Exp Ther, vol 207,pg 504, 1978.
 Additional information on mutation, reproductive effects and detailed toxicity data can be found under RTECS XP2071000.

SECTION III. PHYSICAL DATA

Appearance & Odor: White crystalline powder; no odor.

MP: 186-7°C BP: UNKNOWN
 Molecular Weight: 242.23
 Solubility (%): Soluble in water

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point: UNKNOWN Autoignition Temperature: UNKNOWN
 Flammability Limits: LEL %: UNKNOWN UEL %: UNKNOWN

Extinguishing Media: Use materials appropriate to the surrounding fire.

Unusual Fire or Explosion Hazards: No unusual fire or explosion hazard is known to exist.

Special Fire-fighting Procedures: Evacuate personnel to a safe area. Firefighters should use self-contained breathing apparatus and protective clothing.

Hazardous Combustion Products: Since products of combustion are unknown, as a precaution they should be assumed to be hazardous.

SECTION V. REACTIVITY DATA

Compound Stability: Material is stable under most conditions. Hazardous polymerization is not known to occur.

Chemical Incompatibilities: No unusual chemical incompatibilities are known to exist.

Conditions To Avoid: High temperatures.

Hazardous Decomposition Products: Since products of decomposition are unknown, as a precaution, they should be assumed to be hazardous.

SECTION VI. HEALTH HAZARD INFORMATION

Thymidine is not listed in the NTP, IARC, or OSHA literature.

Summary of Risks: UNKNOWN

Primary Entry Routes: Inhalation, ingestion, and skin and/or eye contact.

Target Organs: UNKNOWN

Signs & Symptoms of Overexposure: UNKNOWN

Acute Effects: UNKNOWN

Chronic Effects: UNKNOWN

Medical Conditions Which May Be Aggravated By Contact: UNKNOWN

For Eye Contact: No toxicity data found, but contact may cause irritation and slight corneal injury. Immediately flush eyes with copious amounts of water for at least 15 minutes. Consult an ophthalmologist.

For Skin Contact: No toxicity data found, but contact may cause irritation and/or allergic reaction. Remove contaminated clothing. Wash skin with plenty of soap and water. Consult a physician.

For Inhalation: No toxicity data found, but excessive dust may cause irritation if inhaled. Remove victim promptly to clean air. If breathing is difficult, give oxygen. If victim is not breathing, administer artificial respiration. Keep victim quiet and warm. Consult a physician.

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For Ingestion: May cause irritation of mouth, throat, esophagus and gastrointestinal tract. Drink water and call a poison control center or consult a physician immediately. Avoid alcoholic beverages.

In the event of an accident involving the handling of this agent, consultation with a physician experienced with cancer chemotherapy is suggested.

SECTION VII. SPILL, LEAK AND DISPOSAL PROCEDURES

Spill/Leak Cleanup Procedures: Evacuate area. Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard after use. Sweep up compound, place in a bag, and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after compound pick-up is complete. Dispose of contaminated clean-up materials properly.

Waste Management/Disposal: Observe all Federal, state, and local laws concerning the disposal of hazardous material or waste.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Personal Protective Equipment:

Goggles: Wear chemical safety goggles when handling Thymidine.
Gloves: Wear rubber or latex gloves when handling Thymidine.
Respirator: Wear NIOSH-MSHA approved respirator.
Other: Wear protective laboratory coat or apron.

Workplace Considerations:

Ventilation: Laboratory operations should be conducted in a chemical fume hood, glove box, or ventilated cabinet equipped with mechanical exhaust to the outside.

Safety Stations: Safety shower and eye bath should be accessible.

The personal protective equipment listed above should be worn at all times when handling Thymidine. Avoid contact and inhalation. Avoid prolonged or repeated exposure. Wash thoroughly after handling.

SECTION IX. SPECIAL PRECAUTIONS

Storage Segregation: Store in tightly sealed containers at room temperature.

Other Precautions: The user should be made aware that Thymidine is an investigational substance. Hazards associated with exposure to Thymidine may as yet be unknown. This material should be handled only by those trained in the handling of potentially hazardous material.

The information in this document was compiled primarily from secondary sources. The information is believed to be correct and accurate, but no warranty is expressed or implied.