

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
	Harmful compound, minimize exposure. Light sensitive material. Moisture sensitive material. POSSIBLE MUTAGEN. MINIMIZE EXPOSURE.	

Section I. Chemical Product and Company Identification

Chemical Name	Trimethoprim		
Catalog Number	T2286	Supplier	TGI America 9211 N. Harborsgate St. Portland OR 1-800-423-8616
Synonym	2,4-Diamino-5-(3,4,5-trimethoxybenzyl)pyrimidine		
Chemical Formula	C ₁₄ H ₁₈ N ₄ O ₃		
CAS Number	738-70-5	In case of Emergency Call	Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
Trimethoprim	738-70-5	Min. 98.0 (T)	This compound is classified as a possible mutagen. There is no acceptable exposure limit for a mutagen.	Rat LD ₅₀ (oral) >5300 mg/kg Mouse LD ₅₀ (oral) 2764 mg/kg Rat LD ₅₀ (intraperitoneal) 500 mg/kg Mouse LD ₅₀ (intraperitoneal) 400 mg/kg Rat LD ₅₀ (subcutaneous) >5 gm/kg

Section III. Hazards Identification

Acute Health Effects	Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY Reproductive Effects. Rat TDLo Oral 2250 mg/kg, female 11-13 days of pregnancy TOXIC Effects: Effects on Fertility - Post-implantation mortality Effects on Embryo or Fetus - Fetotoxicity

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	Not available.	Flammable Limits	Not available.
Combustion Products	These products are toxic carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂).		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		

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Emergency phone number (800) 424-9300

Fire Fighting Media
and Instructions

SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Consult with local fire authorities before attempting large scale fire-fighting operations.

Section VI. Accidental Release MeasuresSpill Cleanup
Instructions

Harmful material. Light sensitive material. Moisture sensitive material. Possibly mutagenic material.
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning the spill by rinsing any contaminated surfaces with copious amounts of water. Consult federal, state, and/or local authorities for assistance on disposal.

Section VII. Handling and StorageHandling and Storage
Information

HARMFUL. LIGHT SENSITIVE. MOISTURE SENSITIVE. POSSIBLE MUTAGEN. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. Do not breathe dust.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection

Splash goggles. Lab coat. Dust respirator. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent.



Exposure Limits

This compound is classified as a possible mutagen. There is no acceptable exposure limit for a mutagen.

Section IX. Physical and Chemical Properties

Physical state @ 20°C

Solid. (White Powder.)

Solubility

Solubility in g/100 ml at 25°: DMAC 13.86; benzyl alcohol 7.29; propylene glycol 2.57; chloroform 1.82; methanol 1.21; water 0.04; ether 0.003; benzene 0.002.

Specific Gravity

Not available.

Molecular Weight

290.32

Partition Coefficient

Not available.

Boiling Point

Not available.

Vapor Pressure

Not applicable.

Melting Point

199 to 203°C (390.2 to 397.4°F)

Vapor Density

Not available.

Refractive Index

Not available.

Volatility

Not available.

Critical Temperature

Not available.

Odor

Not available.

Viscosity

Not available.

Taste

Not available.

Section X. Stability and Reactivity Data

Stability

This material is stable if stored under proper conditions. (See Section VII for instructions)

Conditions of Instability

Avoid excessive heat and light.

Incompatibilities

Reactive with strong oxidizing agents.

Section XI. Toxicological Information

RTECS Number

UV8225000

Routes of Exposure

Eye Contact. Ingestion. Inhalation.

Toxicity Data

Rat LD₅₀ (oral) >5300 mg/kg
Mouse LD₅₀ (oral) 2764 mg/kg
Rat LD₅₀ (intraperitoneal) 500 mg/kg
Mouse LD₅₀ (intraperitoneal) 400 mg/kg
Rat LD₅₀ (subcutaneous) >5 gm/kg

Chronic Toxic Effects

CARCINOGENIC EFFECTS : Not available.
MUTAGENIC EFFECTS : Not available.
TERATOGENIC EFFECTS : Not available.
DEVELOPMENTAL TOXICITY Reproductive Effects.
Rat TDLo Oral 2250 mg/kg, female 11-13 days of pregnancy
TOXIC Effects:
Effects on Fertility - Post-implantation mortality
Effects on Embryo or Fetus - Fetotoxicity

Acute Toxic Effects

Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information

Ecotoxicity	Not available.
Environmental Fate	Trimethoprim's production and use as an antibiotic may result in its release to the environment through various waste streams. If released to air, an estimated vapor pressure of 9.9X10 ⁻⁹ mm Hg at 25 deg C indicates trimethoprim will exist solely in the particulate phase in the ambient atmosphere. Particulate-phase trimethoprim will be removed from the atmosphere by wet and dry deposition. If released to soil, trimethoprim is expected to have high mobility based upon an estimated Koc of 75. Trimethoprim has a pKa of 7.12, which indicates it will partially exist in the protonated form in moist soils and cations adsorb to soil stronger than neutral compounds. Volatilization from moist soil surfaces is not expected to be an important fate process based upon an estimated Henry's Law constant of 2.4X10 ⁻¹⁴ atm-cu m/mole for the free base and given the fact that cations are non-volatile. Trimethoprim is not expected to volatilize from dry soil surfaces based on its estimated vapor pressure. The half-lives of trimethoprim incorporated into sediment cores were approximately 100 and 75 days under anaerobic and aerobic conditions, respectively, suggesting that biodegradation occurs slowly in the environment. If released into water, the neutral form of trimethoprim is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. Since cations tend to adsorb to suspended solids and sediment in water, the protonated form of trimethoprim is expected to adsorb to these surfaces. Volatilization from water surfaces is not expected to be an important fate process based upon this compound's estimated Henry's Law constant and the fact that cations are non-volatile. Hydrolysis is not expected to be an important fate process due to a lack of hydrolyzable functional groups. An estimated BCF of 3 suggests the potential for bioconcentration in aquatic organisms is low. Occupational exposure to trimethoprim may occur through inhalation of dust particles and dermal contact with this compound at workplaces where trimethoprim is produced or used. The general population may be exposed to trimethoprim through its use as an antibiotic.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.
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Section XIV. Transport Information

DOT Classification	Not a DOT controlled material (United States).
PIN Number	Not applicable.
Proper Shipping Name	Not applicable.
Packing Group (PG)	Not applicable.
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This product is NOT on the EPA Toxic Substances Control Act (TSCA) inventory. The following notices are required by 40 CFR 720.36 (C) for those products not on the inventory list: (i) These products are supplied solely for use in research and development by or under the supervision of a technically qualified individual as defined in 40 CFR 720.0 et sec. (ii) The health risks of these products have not been fully determined. Any information that is or becomes available will be supplied on an MSDS sheet.
WHMIS Classification (Canada)	On DSL
EINECS Number (EEC)	212-006-2
EEC Risk Statements	R20/21/22- Harmful by inhalation, in contact with skin and if swallowed. R46- May cause heritable genetic damage. R47- May cause birth defects.
Japanese Regulatory Data	Not available.

Section XVI. Other Information

Version 1.0
Validated on 3/21/2008.
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Notice to Reader

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.