

MATERIAL SAFETY DATA SHEET

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Version 1.5

Section 1 - Product and Company Information

Product Name TETRACYCLINE
Product Number 87128
Brand FLUKA

Company Sigma-Aldrich
Address 3050 Spruce Street
SAINT LOUIS MO 63103 US

Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313 No
TETRACYCLINE FREE BASE	60-54-8	No

Formula C₂₂H₂₄N₂O₈

Synonyms Abramycin * Abricycline * Achromycin
(naphthracene derivatives) * Agromicina *
Ambramicina * Ambramycin * Amycin * Biocycline *
Cefracycline suspension * Criseociclina *
Cyclomycin * Cytome * Deschlorobiomycin *
Hostacyclin * Liquamycin * Medocycline *
6-Methyl-1,11-dioxy-2-naphthacenecarboxamide *
Micycline * Neocycline * Oletetrin * Omegamycin *
Orlycycline * Panmycin * Polycycline (antibiotic)
* Resteclin * Roviciclina * Sumycin syrup *
Tetrabon * Tetra-Co * Tetracycline * Tetracycline
I * Tetracycline II * Tetracyn * Tetradecin *
Tetrafil * Tsiklomitsin * T-125 * Veracin *
Vetacyclinum

RTECS Number: QI8750000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Harmful.

Harmful if swallowed.

Photosensitizer. Calif. Prop. 65 developmental hazard. Target organ(s): Liver. Teeth. Bones.

HMIS RATING

HEALTH: 3*

FLAMMABILITY: 0

REACTIVITY: 1

NFPA RATING

HEALTH: 3

FLAMMABILITY: 0

REACTIVITY: 1

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe dust. Avoid contact with eyes,

skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.
Store at 2-8°C

SPECIAL REQUIREMENTS

Light sensitive.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Color: Yellow Form: Powder	
Property	Value	At Temperature or Pressure
Molecular Weight	444.43 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	172 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	4.0 - 11.0 %	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	Degree of Rotation: 10 g/l Solvent: MeOH -291 - -236 (+/-5)	
Miscellaneous Data	N/A	

Solubility

N/A

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: May discolor on exposure to light.

Materials to Avoid: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed.

SENSITIZATION

Sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Skin: Can cause skin photosensitization.

TARGET ORGAN(S) OR SYSTEM(S)

Liver. Teeth. Bones.

SIGNS AND SYMPTOMS OF EXPOSURE

Can cause phototoxic reactions, gastrointestinal disturbances, turn teeth yellow and reduce mineralization.

TOXICITY DATA

Multiple

Woman

310 MG/KG

LDLO

Remarks: Liver:Jaundice, other or unclassified.

Gastrointestinal:Nausea or vomiting. Nutritional and Gross

Metabolic:Changes in:Metabolic acidosis.

Oral

Rat

807 mg/kg

LD50

Intraperitoneal

Rat

310 MG/KG

LD50

Intravenous

Rat

129 MG/KG
LD50

Oral
Mouse
678 mg/kg
LD50

Intraperitoneal
Mouse
120 MG/KG
LD50

Subcutaneous
Mouse
400 MG/KG
LD50

Intravenous
Mouse
157 MG/KG
LD50

Oral
Guinea pig
1875 mg/kg
LD50

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is probably not carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

CHRONIC EXPOSURE - TERATOGEN

Result: Possible risk of congenital malformation in the fetus.

Species: Rat
Dose: 100 UG/M3/24H
Route of Application: Inhalation
Exposure Time: (1-20D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

Species: Rat
Dose: 1 MG/M3/24H
Route of Application: Inhalation
Exposure Time: (1-20D PREG)
Result: Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord).

Species: Rat
Dose: 3 GM/KG
Route of Application: Unreported
Exposure Time: (9-14D PREG)
Result: Effects on Embryo or Fetus: Fetal death.

Species: Mouse
Dose: 700 MG/KG
Route of Application: Oral
Exposure Time: (14D POST)
Result: Specific Developmental Abnormalities: Skin and skin appendages.

Species: Mammal
Dose: 55 MG/KG
Route of Application: Intravenous
Exposure Time: (8-18D PREG)
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

CHRONIC EXPOSURE - MUTAGEN

Species: Mouse
Route: Intraperitoneal
Dose: 110 MG/KG
Exposure Time: 24H
Mutation test: Micronucleus test

Species: *S. typhimurium*
Mutation test: Histidine reversion (Ames)

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Woman
Dose: 200 MG/KG
Route of Application: Unreported
Exposure Time: (34-35W PREG)
Result: Effects on Newborn: Delayed effects.

Species: Woman
Dose: 80 MG/KG
Route of Application: Unreported
Exposure Time: (1-39W PREG)
Result: Effects on Newborn: Other postnatal measures or effects.

Species: Rat
Dose: 10 GM/KG
Route of Application: Oral
Exposure Time: (8-21D PREG/7D POST)
Result: Effects on Newborn: Behavioral.

Species: Rat
Dose: 863 MG/KG
Route of Application: Oral
Exposure Time: (4D POST)
Result: Effects on Newborn: Behavioral. Effects on Newborn: Physical.

Species: Rat
Dose: 413 MG/KG
Route of Application: Oral
Exposure Time: (3D POST)
Result: Effects on Newborn: Behavioral. Effects on Newborn: Physical.

Species: Rat
Dose: 700 MG/KG
Route of Application: Intramuscular
Exposure Time: (8-14D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn
Indication of Danger: Harmful.
R: 22
Risk Statements: Harmful if swallowed.
S: 22-36
Safety Statements: Do not breathe dust. Wear suitable protective clothing.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.
Risk Statements: Harmful if swallowed.
Safety Statements: Do not breathe dust. Wear suitable protective clothing.
US Statements: Photosensitizer. Calif. Prop. 65 developmental hazard. Target organ(s): Liver. Teeth. Bones.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

UNITED STATES - STATE REGULATORY INFORMATION

CALIFORNIA PROP - 65

California Prop - 65: This product is or contains chemical(s) known to the state of California to cause developmental toxicity. This product is or contains chemical(s) known to the state of California to cause developmental toxicity.

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: No
NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.