

8-30-05



SIGMA-ALDRICH

# Material Safety Data Sheet

Date Printed: 05/05/2005  
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Version 1.30

## Section 1 - Product and Company Information

<b>Product Name</b>	Tetracycline	
<b>Product Number</b>	T3258	
<b>Brand</b>	Sigma Chemical	
<b>Company</b>	Sigma-Aldrich	
<b>Street Address</b>	3050 Spruce Street	
<b>City, State, Zip, Country</b>	SAINT LOUIS, MO 63103 US	
<b>Technical Phone:</b>	314 771 5765	
<b>Fax:</b>	800 325 5052	<b>Emergency Phone:</b> 414 273.3850 Ext. 5996

## Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
TETRACYCLINE FREE BASE	60-54-8	No	200-481-9	

**Formula** C22H24N2O8  
**Synonyms** Abramycin, Abricycline, Achromycin (naphthracene derivatives), Agromicina, Ambramicina, Ambramycin, Amycin, Biocycline, Cetracycline suspension, Criseociclina, Cyclomycin, Cytome, Deschlorobiomycin, Hostacyclin, Liqumycin, Medocycline, 6-Methyl-1,11-dioxy-2-naphthacene-carboxamide, Micycline, Neocycline, Oletetrin, Omegamycin, Orlycycline, Panmycin, Polycycline (antibiotic), Resteclin, Rovicyclina, Sumycin syrup, Tetrabon, Tetra-Co, Tetracycline, Tetracycline I, Tetracycline II, Tetracyn, Tetradecin, Tetrafil, Tsiklomitsin, T-125, Veracin, Vetacyclinum

## Section 3 - Hazards Identification

**Emergency Overview**  
 Harmful.  
 Harmful if swallowed.  
 Photosensitizer. Calif. Prop. 65 reproductive hazard. Target organ(s): Liver. Teeth. Bones.

**HMS 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

**Autoignition Temp:** 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 -20°C

### Special Requirements

Light sensitive.

## Section 8 - Exposure Controls / PPE

### Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

### Personal Protective Equipment

#### Respiratory

Government approved 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

**Molecular Weight:** 444.44 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 - 11 %  
Solvent Content: N/A  
Evaporation Rate: N/A  
Viscosity: N/A  
Partition Coefficient: N/A  
Decomposition Temp.: N/A  
Flash Point °F: N/A  
Flash Point °C: N/A  
Explosion Limits: N/A

Flammability: N/A  
Autoignition Temp.: N/A  
Optical Rotation: Degree of Rotation:  
-291 - -236 (+/-5)  
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.

**RTECS Number:** QI8750000

### Toxicity Data

Multiple - Woman: 310 MG/KG (LDLO)

Remarks: Gastrointestinal: Nausea or vomiting.

Liver: Jaundice, other or unclassified.

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

Species	Dose	Route of Application	Exposure Time
Rat	100 UG/M3/24H	Inhalation	(1-20D PREG)
	Result: Possible risk of congenital malformation in the fetus.		
	Result: Effects on Embryo or Fetus: Fetal death.		
Rat	1 MG/M3/24H	Inhalation	(1-20D PREG)
	Result: Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord).		
Rat	3 GM/KG	Unreported	(9-14D PREG)
	Result: Effects on Embryo or Fetus: Fetal death.		

Solvent: MeOH10 g/l

Mouse 700 MG/KG Oral (14D POST)  
Result: Specific Developmental Abnormalities: Skin and skin appendages.  
Mammal 55 MG/KG Intravenous (8-18D PREG)  
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

#### Chronic Exposure - Mutagen

Species	Dose	Route	Exposure Time	Mutation test
Mouse	110 MG/KG	Intraperitoneal	24H	Micronucleus test
S. typhimurium				Histidine reversion (Ames)

#### Chronic Exposure - Reproductive Hazard

Species	Dose	Route of Application	Exposure Time
Woman	200 MG/KG	Unreported	(34-35W PREG)
Woman	80 MG/KG	Unreported	(1-39W PREG)
Rat	10 GM/KG	Oral	(8-21D PREG/7D POST)
Rat	863 MG/KG	Oral	(4D POST)
Rat	413 MG/KG	Oral	(3D POST)
Rat	700 MG/KG	Intramuscular	(8-14D PREG)

Result: Effects on Newborn: Delayed effects.  
Result: Effects on Newborn: Other postnatal measures or effects.  
Result: Effects on Newborn: Behavioral.  
Result: Effects on Newborn: Behavioral. Effects on Newborn: Physical.  
Result: Effects on Newborn: Behavioral. Effects on Newborn: Physical.  
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.

Risk Statements R: 22

Harmful if swallowed.

Safety Statements S: 22 36

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 reproductive hazard. Target organ(s): Liver. Teeth. Bones.

##### United States Regulatory Information

SARA Listed: No

##### United States - State Regulatory Information

California Prop - 65

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 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.