

Safety Data Sheet

Section 1 – Chemical Product and Company Identification

Product Name: ArborBiotic

EPA Reg. #: 88482-1

Product Use: Pesticide

Company Identification: Invaio Sciences, Inc.
75 Moulton Street
Cambridge MA 02138
+1 (617) 401-9511

Emergency Contact: American Association for Poison Control Centers
+1 (800) 222-1222

Section 2 – Hazards identification

Classification of substance:

Acute Inhalation Toxicity – Category 2

Eye Irritation – Category 2A

Skin Irritation – Category 2

Reproductive Toxicity – Category 2

Acute Aquatic Toxicity

Chronic Aquatic Toxicity

GHS labeling elements:

The substance is classified and labeled according to the Globally Harmonized System (GHS) according to the Federal Register /Vol. 77, No. 58 /Monday, March 26, 2012/ Rules and Registration - 29 CFR 1910.1200":

Hazard pictograms:



Signal Word: Warning

Hazard statements:

Causes serious eye irritation.

Causes skin irritation.

Toxic if inhaled.

Suspected of damaging fertility or the unborn child.

Precautionary Statements:

Do not breathe mist/vapors/spray.

Avoid contact during pregnancy and while nursing.

Use only outdoors or in a well-ventilated area.

In case of inadequate ventilation, wear respiratory protection.

Wash thoroughly after handling.

Wear eye protection/face protection.

Wear protective gloves.

Avoid release to the environment.

If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical help.

If on Skin: Wash with plenty of water. If skin irritation occurs, get medical help. Take off contaminated clothing and wash it before reuse.

If Inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/ protective clothing/ eye protection/ face protection. If exposed or concerned, get medical advice.

Cross Sensitivity: Persons hypersensitive to one tetracycline may be hypersensitive to other tetracyclines also.

Section 3 – Composition/ Information on Ingredients

Mixture Component	CAS No.	Percent
Oxytetracycline Hydrochloride	2058-46-0	39.6%
Citric Acid	77-92-9	Up to 34%
Sucrose	57-50-1	Up to 28%

Section 4 – First Aid Measures

Symptoms	If ingested, it may cause diarrhea, abdominal pain or burning, nausea, vomiting, lethargy, increased sensitivity of the skin to sunlight, and fatigue. Ingestion of large amounts may cause fatty liver degeneration characterized by nausea, vomiting, high fever, and jaundice.
Eyes:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. May cause irritation
Skin:	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. May cause irritation
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. May cause irritation.
Ingestion:	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur. May cause irritation
<p style="text-align: center;">Note to Physicians</p> <p>For current information about the treatment of overdose, consult a certified Regional Poison Control Center by calling the number listed in your local telephone directory.</p>	

Section 5 – Firefighting Measures

Extinguishing media: Use water spray, dry powder or sand, carbon dioxide, or appropriate surrounding fire and materials.

Fire and Explosive Hazards: Not expected to be a fire or explosive hazard.

Special firefighting procedures: Responders should wear positive-pressure breathing devices, complete fire protection clothes, and shoes. Use water to cool exposed containers to extinguish fire.

Reference to other sections:

See Section 10 for decomposition products.

Section 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Wear approved respiratory protection, chemically-compatible gloves and protective clothing. Keep unprotected persons away.

Environmental Precautions: Should not be released into the environment. Notify authorities if the product enters sewers or public waters.

Methods and material for containment and cleaning up: Wipe up spillage or collect spillage using a high-efficiency vacuum cleaner. Avoid breathing dust. Place spillage in a suitable, appropriately labeled container for disposal. Wash spill site and dispose rinsate in accordance with local, state and federal regulations.

Section 7 – Handling and Storage

Handling

Precautions for safe handling: As a general rule, when handling, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

Protect against electrostatic charges.

Keep a protective respiratory device available.

Wear Personal Protective Equipment.

Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities:

Store in a tight, light-resistant container.

This material should be handled and stored per label instructions to ensure product integrity.

Store locked up.

Reference to other sections:

See Section 10 for incompatibilities

Section 8 – Exposure Controls and Personal Protection

Exposure Guidelines. This product does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep the risk of inhalation low.

Personal Protection

Respirators: Use NIOSH-approved particulate filtering face piece respirator with any N, R or P filter (TC- 84A); OR an elastomeric NIOSH-approved particulate respirator with any N, R or

P filter (TC-84A); OR a NIOSH-approved powered air purifying respirator with an HE filter (TC-21C). Higher level respirators that are NIOSH-approved for particulates that contain oil may also be used.

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles.

Body: Wear appropriate chemical-resistant overalls, rubber boots, and rubber gloves. Avoid any skin exposure.

Hands: Wear appropriate gloves.

General protective and hygienic measures: No smoking, eating, or drinking during handling. Handle in accordance with good industrial hygiene and safety practices.

Other conditions to avoid: Avoid alcoholic beverages 24 hours before and after handling this product.

Section 9 – Physical and Chemical Properties

Information on basic physical and chemical properties

General Information:

Appearance and Physical State: Yellow crystalline powder; odorless

pH Value: 2.0-3.0 (1% aqueous solution)

Melting point: 220°C

Boiling point: Not available

Specific Gravity: Approx. 0.20

Density (gm/ml): 0.2

Flash point (C): Not available

Autoignition temperature (C): Not available

Decomposition temperature (C): Not available

Kinematic Viscosity: Not available

Partition Coefficient: Not available

Vapor Pressure: Not available

Relative Vapor Density: Not available

Explosion: Not available

Solubility: Soluble in water and sparingly in alcohol and methanol; less soluble in dehydrated alcohol; insoluble in chloroform and in ether.

Particle characteristics: 150-300 µM

Section 10 – Stability and Reactivity

Chemical Stability: This material is chemically stable.

Incompatible to Avoid: Alkalis, strong oxidizers

Conditions to Avoid: Avoid exposure to heat and light.

Decomposition Products: When heated to decomposition, the material emits toxic fumes of nitrogen oxides (NO_x), carbon monoxide (CO), carbon dioxide (CO₂), and hydrogen chloride (HCl).

Hazardous Polymerization: No information available

Section 11 – Toxicological Information

Acute Toxicity:

LD/LC50 values that are relevant for classification:

Oral: LD50 > 5000 mg/kg (Rat)

Inhalation: LC50 > 1.65 mg/L (Rat – 4 hours)

Dermal: LD50 > 5000 mg/kg

Primary irritant effect:

On eyes: Causes eye irritation

On the skin: Slightly irritating

Sensitization: Product is not considered a contact sensitizer.

Germ Cell Mutagenicity: It was mutagenic in tests with mouse lymphocytes cells with activation. It showed weakly positive results for inducing sister-chromatid exchange in hamster ovary cells with and without activation, but did not induce chromosomal aberrations.

Carcinogenicity: None of the components of this formulation are listed as carcinogen by IARC, NTP or OSHA.

Reproductive Toxicity: In humans, oxytetracycline has been associated with congenital abnormalities such as neural tube defect, cleft palate, and heart malformation when used during the second and third months of pregnancy. Staining of teeth may occur in offspring of mothers treated with oxytetracycline during the second and third trimester of pregnancy. Studies in dogs and in rabbits given material resulted in increased frequencies of skeletal and other malformations in the offspring; however, studies in mice showed no increase in congenital defects.

STOT-Single Exposure: Not available

STOT-Repeated Exposure: Not available

Aspiration Hazard: Based on available data, the classification criteria are not met.

Section 12 – Ecological Data

Eco-toxicity:

Oxytetracycline Hydrochloride (2058-46-0)

Fish: LC50 – *Salvenus namaycush* – <200 mg/l – 96 h (ECOTOX Database)

Aquatic invertebrates: EC50 – *Daphnia magna* (Water flea) - >102 mg/l – 48 h (External SDS)

Algae: EC50 – *Chlorella vulgaris* (Fresh water algae) – 7.05 mg/l – 72 h (ECOTOX Database)

Citric Acid (77-92-9)

Fish: LC50 – *Leuciscus idus* (Golden orfe) - 440 - 760 mg/l - 96 h (IUCLID)

Algae: static test NOEC - *Scenedesmus quadricauda* (Green algae) - 425 mg/l - 8 h (ECHA)

Eco-decomposition: No data available

Other: No data available

Section 13 – Disposal Considerations

Disposal: Dispose of contents/container in accordance with all applicable Federal, State, and local laws.

Section 14 – Transport Information

Class No.: Not regulated

UN No.: Not regulated

Packing Group: Not regulated

Packing in: Not regulated.

Storage: Store in a cool place, keeping away from heat and light.

Section 15 – Regulatory Data

FIFRA Classification: This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also included other important information, including directions for use.

Following is the hazard information as required on the pesticide label:

WARNING

Causes substantial but temporary eye injury.

Harmful if inhaled.

Avoid breathing dust.

Do not get in eyes or on clothing.

Wear protective eyewear (goggles, facemask or safety glasses).

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

This material is not to be used for medical, veterinary, or human purposes.

U.S. Regulatory Information:

California Prop. 65-Developmental Toxicity

Toxic Substances Control Act (TSCA): Listed, not regulated.

CERCLA Hazardous Substance List: Not listed.

Clean Water Act (CWA): Not regulated.

Clean Air Act (CAA): Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA): Not regulated.

International Regulatory Information:

EINECS#218-161-2

Hazard code: Xn

Risk phrases: R20, R21, R22, R63

Safety phrases: S36/37/39

Canada: WHMIS Class D-2A

Section 16 – Additional information

SDS Revision Date: 21 September 2023

Disclaimer:

The information contained in this SDS was obtained from sources Invaio Sciences, Inc. believes are reliable, however we do not accept any responsibility for any damages resulting from the use of this information. The data are offered solely for your consideration, investigation, and verification. These suggestions should not be confused with state, municipal, or insurance requirements, or with national safety codes and constitute no warranty. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state, and local regulations.