
SECTION 1 - IDENTIFICATION OF PRODUCT AND COMPANY

Phibro Animal Health 65 Challenger Road Ridgefield Park, NJ 07660	Emergency telephone:	1-800-345-4735
	Hours of operation	24 Hours
	Product information:	1-888-475-7355
	Hours of operation	M-F 9 a.m. - 5 p.m. Eastern Time

Trade names	Terramycin® 200 for fish type A medicated article
Chemical family	Tetracycline derivative
Therapeutic use	Antibiotic agent
Description	Uniform tan meal with a cereal odor

SECTION 2 - COMPOSITION

<u>Ingredient</u>	<u>CAS Number</u>	<u>Amount</u>
Oxytetracycline	79-57-2	<46%
Inert Material		Proprietary

SECTION 3 - HAZARDS IDENTIFICATION

Signal word	CAUTION!
Statements of hazard	MAY CAUSE LIVER AND KIDNEY EFFECTS. INFANTS OF MOTHERS EXPOSED DURING PREGNANCY MAY DEVELOP DISCOLORATION OF THE TEETH.
Eye effects	May cause eye irritation.
Skin effects	May cause skin irritation. May cause allergic skin reaction. Exposure to sunlight following contact may result in skin reactions in rare instances. Repeated or prolonged contact may cause dermatitis of the hands and wrists.
Inhalation effects	An Occupational Exposure Limit has been established for one or more of the ingredients (see Section 8).
Ingestion effects	See 'Known clinical effects', below.
Known clinical effects	Ingestion of this material may cause effects similar to those generally seen in clinical use of antibiotics including gastrointestinal irritation, vomiting, transient diarrhea, nausea, and abdominal pain.
Other potential health effects	Individuals sensitive to this material or other materials in its chemical class may develop allergic reactions.

SECTION 4 - FIRST AID MEASURES

Skin	Wash skin with soap and water. Remove contaminated clothing and shoes. Wash clothing and thoroughly clean shoes before reuse. If irritation occurs or persists, get medical attention.
Eyes	Immediately flush eyes with water for at least 15 minutes. If irritation occurs or persists, get medical attention.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.
Ingestion	Get medical attention immediately. Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

Fire fighting instructions	Wear approved positive pressure, self-contained breathing apparatus and full protective turn out gear. Evacuate area and fight fire from a safe distance. Move containers from fire area if possible without increased personal risk. Dike area if possible to contain water for later disposal. Carbon dioxide extinguishers may be ineffective.
Extinguishing media	Water, dry powder or foam extinguishers are recommended.
Flash point	Not applicable
Hazardous combustion products	Emits toxic fumes of carbon monoxide, carbon dioxide and oxides of nitrogen

SECTION 6 - ACCIDENTAL RELEASE MEASURES

General	Review Sections 3, 8 and 12 before proceeding with clean up.
Small spill	Sweep material into appropriate recovery container. Clean spill area thoroughly with detergent and water. Avoid creating airborne dust.
Large spill	Sweep material into appropriate recovery container. Close container and move it to a secure holding area. Avoid creating airborne dust.

SECTION 7 - HANDLING AND STORAGE

General handling	Minimize dust generation and accumulation. Do not expose to ignition sources. Ground and bond all bulk transfer equipment. Keep away from heat. Use only in a well-ventilated area. Avoid contact with eyes, skin and clothing. Avoid breathing dust.
Storage conditions	Keep container tightly closed when not in use. Store out of direct sunlight in a well ventilated area at room temperature.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

<u>Compound</u>	<u>Issuer</u>	<u>Type</u>	<u>OEL</u>
Oxytetracycline	Phibro	TWA-8	0.5 mg/m ³

Measurement method Oxytetracycline: CMA-KAS-99-003 (contact Phibro Animal Health for additional details)

Ventilation

Keep airborne contamination levels below the exposure limits listed above in this section. Good general ventilation should be sufficient to control airborne levels. Do not use in confined space.

Respiratory protection

In dusty conditions use an approved dust mask or more protection as needed. If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL.

Eye protection

Wear safety glasses with sideshields if airborne dust is present.

Skin protection

If dust is created wear long sleeves and pants to protect skin.

Hand protection

Rubber gloves

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical form	Uniform meal
Color	Tan
Odor	Cereal odor
Molecular weight	Mixture
Molecular formula	Mixture
pH	Not applicable
Boiling point	Not applicable
Melting point	No data available
Density	Not applicable
Vapor pressure	No data available
Water solubility	Practically insoluble or insoluble
Solvent solubility	No data available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Stable
Conditions to avoid	Contact with moist air causes darkening of this material. Direct sunlight, excessive heat, sparks or open flame. Avoid generating dust, explosions can result if this material is dispersed as a dust cloud.
Incompatibilities	Bases, strong oxidizers
Hazardous decomposition products	See Section 5 - Hazardous combustion products
Hazardous polymerization	Will not occur
Explosive properties	Possible dust explosion hazard (has not been evaluated).

SECTION 11 - TOXICOLOGY INFORMATION

Toxicology summary The information included in this section describes the potential hazards of various forms of the active ingredient.

Acute toxicity

<u>Compound</u>	<u>Type</u>	<u>Route</u>	<u>Species</u>	<u>Dosage</u>
Oxytetracycline	LD ₅₀	Oral	Rat	4800 mg/kg
Oxytetracycline	LD ₅₀	Oral	Mouse	2240 mg/kg

Eye Tetracyclines are known to cause local irritation upon intramuscular and intravenous administration. The potential for irritation should be considered.

Skin Tetracyclines are known to cause local irritation upon intramuscular and intravenous administration. The potential for irritation should be considered.

Inhalation Tetracyclines are known to cause local irritation upon intramuscular and intravenous administration. The potential for irritation should be considered.

Ingestion See table above

Mutagenicity Oxytetracycline was not mutagenic in microbial cells, but was weakly positive in *in vitro* mammalian cells. Overall, it was judged not to be genotoxic.

Sensitization Skin sensitization and/or photosensitization (allergic response after UV exposure) have been demonstrated with clinical usage of oxytetracycline.

Subchronic effects Studies of oxytetracycline hydrochloride at doses up to 100,000 ppm in feed in mice and rats for 14 days and 13 weeks were unremarkable with the exception of slight fatty infiltration observed in the liver of all male rats.

SECTION 11 - TOXICOLOGY INFORMATION ...continued

Chronic effects/ carcinogenicity	Long-term studies of oxytetracycline hydrochloride toxicity were conducted by the US National Toxicology Program (NTP) in mice at doses up to 1400 mg/kg/day and in rats at doses up to 2000 mg/kg/day. No evidence of carcinogenicity was seen in mice. In rats, adrenal lesions in males and in the pituitary in females were observed. Program concluded that there was equivocal evidence of carcinogenicity in male and female rats but no evidence of carcinogenicity in male or female mice.
Carcinogen status	None of the components of this formulation is listed as a carcinogen by IARC, NTP or OSHA.
Reproductive effects	Effects on fertility (litter size) and embryo- or fetotoxicity were observed in rats at subcutaneous dose of oxytetracycline at 1000 mg/kg, in rabbits at intramuscular dose of 789 mg/kg, and in dogs at 643 mg/kg (no other details reported). Tetracyclines as a class are capable of crossing the placenta and causing staining of the primary teeth.
Teratogenicity	No increase in congenital defects was found in mice and rats treated with oxytetracycline at oral doses of 1500 and 2100 mg/kg on days 6 - 15 of gestation, respectively. In rabbits, oxytetracycline was administered intramuscularly at 41.5 mg/kg/day from days 10 to 28 of gestation. The number and percentage of partial and total resorptions were significantly increased; no effects on fetal body weight were observed. No abnormalities were found at necropsy.
Target organs	Liver, Kidneys, Reproductive system
At increased risk from exposure	Individuals who have shown hypersensitivity to this material or other materials in its chemical class and individuals with liver and/or kidney dysfunction or impairment may be more susceptible to toxicity in cases of overexposure. Individuals with alcoholic liver disease and also individuals with hyperlipidemia, especially hypertriglyceridemia, may be more likely to exhibit fatty changes from tetracycline.
Additional information	PREGNANCY RISK CATEGORY D. Results of animal studies indicate that tetracyclines as a class cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (retardation of skeletal development). Evidence of embryotoxicity has also been noted in animals treated early in pregnancy. Tetracyclines as a class are also known to cause tooth discoloration in young children and children exposed to the drug in utero.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental overview	The environmental characteristics of this material have not been fully evaluated. Releases to the environment should be avoided. See Aquatic toxicity data of the active ingredient below:
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SECTION 12 - ECOLOGICAL INFORMATION ...continued

Aquatic toxicity

<u>Compound</u>	<u>Type</u>	<u>Species</u>	<u>Dosage</u>
Oxytetracycline	LC50/96h	Lake trout	< 200 mg/L

SECTION 13 - DISPOSAL INFORMATION

Disposal procedure Incineration is the recommended method of disposal for this material. Observe all local and national regulations when disposing of this mixture.

SECTION 14 - TRANSPORTATION INFORMATION

General shipping instructions Not regulated for transport under USDOT, IATA, or IMDG regulations.

SECTION 15 - REGULATORY INFORMATION

TSCA status Not listed

SARA section 302 No

SARA section 313 No

California Proposition 65 THIS PRODUCT IS OR CONTAINS CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE DEVELOPMENTAL TOXICITY.

Canadian WHMIS This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16 - OTHER

Disclaimer **Phibro Animal Health believes that the information contained in this Material Safety Data Sheet is accurate, and while it is provided in good faith, it is without a warranty of any kind, expressed or implied.**