Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

Section 1: Identification

Product Name Miconazole Nitrate USP
Commercial Name Not available.
Product Use Antifungal
Restrictions On Use Not available

Product Code 30-1154

Company
PCCA
9901 South Wilcrest
Houston, TX 77099
Phone: 1-800-331-2498
Fax: 1-800-874-5760

In case of emergency contact:
CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: CFR 1910.1200 Acute toxicity: Oral, Category 4 Skin Sensitization, Category 1

Signal Word WARNING

Hazard Statement(s) Harmful if swallowed. May cause an allergic skin reaction.

Pictogram(s) or Symbol(s)

Precautionary Statement(s):

Prevention Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves.

Response If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse

Storage Not available.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations

Section 3: Composition/Information on Ingredients

Substance/Mixture Substance
Components Miconazole nitrate
% By Weight 100
CAS# 22832-87-7
Molecular Weight 479.14 g/mole
Chemical Formula C18H14Cl4N2O.HNO3
Synonym(s) 1-(2,4-Dichloro-beta-((2,4-dichlor benzyl)oxy)phenethyl)-imidazole nitrate Afloxin, Micotin, Brentan, Micatin

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Miconazole nitrate	22832-87-7	100	Not available.	ORAL (LD50):Acute: 920mg/kg [Rat]. 578 mg/kg [Mouse]. 276mg/kg [Guineapig].

Section 4: First-Aid Measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin Contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists. For minor skin contact, avoid spreading material on unaffected skin.
Eye Contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Symptoms/Effects	
Acute	May cause allergic skin reaction. Pharmacologically active material. Occupational exposure may cause physiological effects.
Delayed	May cause allergic skin reaction. Pharmacologically active material. Occupational exposure may cause physiological effects.

Immediate Medical Attention

Provide general supportive measures and treat symptomatically. Treatment of imidazole antifungal overdose may include the following: Toxicity after ingestion is unlikely. Gastrointestinal decontamination is generally unnecessary. For severe diarrhea or vomiting, monitor and correct fluid status. For mild/moderate allergic reactions, administer antihistamines with or without inhaled beta agonists, corticosteroids, or epinephrine. For severe allergic reaction, administer oxygen, antihistamines, epinephrine, or corticosteroids. (Poisindex).

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media

Water. Foam. Dry chemical or CO2. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media

None known

Products of Combustion

Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.

Firefighters Special Equipment and Precautions

Use water spray to cool unopened containers. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing. Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6: Accidental Release Measures

Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Ensure adequate ventilation. Wear appropriate personal protective equipment. For personal protection, see section 8 of the SDS. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. For waste disposal, see section 13 of the SDS. Avoid the generation of dusts during clean-up. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination. Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Handling:As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Combustible dust clouds may be created where operations produce fine material (dust). Select and use containment devices and personal protective equipment based on a risk assessment of material potency and exposure potential. Storage:Store in tight container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

Section 8: Exposure Controls/Personal Protection

Exposure Limits	TWA 0.75 mg/m3

Engineering Controls	For laboratory operations, use local exhaust ventilation or a ventilated enclosure for high energy operations such as particle sizing. Control exposures to below the occupational exposure level (if available). Select and use containment devices and personal protective equipment based on a risk assessment of exposure potential. Cover all containers for solutions and slurries while being transferred.
Personal Protection	Eye/face protection: Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available. Skin protection Hand protection: Wear nitrile or other impervious gloves if skin contact is possible. When the material is dissolved or suspended in an organic solvent, wear gloves that provide protection against the solvent. Other: Train employees in proper gowning and degowning practices. Wear lab coat. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use. Do not wear protective garments in common areas (e.g., cafeterias) or out-of-doors. Respiratory protection: Respirators are generally not required for laboratory operations. Use a tight-fitting full-face respirator with HEPA filters for spill cleanup. Chose respiratory protection appropriate to the task and the level of existing engineering controls. Thermal hazards: Wear appropriate thermal protective clothing, when necessary. General hygiene consideration: Handling practices in this SDS are recommendations for laboratory use of reference standards. Procedures for any other uses or quantities should be determined after an appropriate assessment.

Section 9: Physical and Chemical Properties

Appearance	Solid. White Off-white Powder
Odor	Slight
Odor Threshold	Not available.

Melting Point	352.4 - 361.4 °F (178 - 183 °	**pH**	Not available.
Freezing Point	Not available.	**Vapor Pressure**	< 0.0000001 kPa at 25 °C
Boiling Point/Range	Decomposes.	**Vapor Density**	Not available.
Decomposition temperature	Not available	**Viscosity**	Not available.
Partition Coefficient: n-octanol/water	4.5	**Evaporation Rate**	Not available.
Flash Point	289.5C	**Autoignition temperature**	662 °F (350 °C)
Flammability	Non-inflammable	**Flammability or Explosive Limits:**	
		Lower	Not available.
		Upper	Not available.

Solubility(ies)	Very slightly soluable
Other	Chloroform: Slightly soluble. Dimethyl sulfoxide: Freely soluble. Dimethylformamide: Freely soluble. Ethanol: Slightly soluble. Ether: Insoluble. Isopropyl alcohol: Very slightly soluble. Methanol: Sparingly soluble. Propylene glycol: Slightlly soluble. Chemical family Imidazole. Dust explosion properties Kst 166 bar.m/s Minimum ignition energy (MIE) - dust cloud 80 mJ Molecular formula C18H14Cl4N2O . HNO3 Molecular weight 479.14 pH in aqueous solution 4 (at 0.16 grams/liter)

Section 10: Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport
Chemical Stability	Material is stable under normal conditions.
Hazardous Polymerization	No dangerous reaction known under conditions of normal use
Conditions to Avoid	Contact with incompatible materials.
Incompatible Materials	Oxidizing agents. Strong bases
Hazardous Decomposition Products	Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions. NOx. Cl-

Section 11: Toxicological Information

RTECS NI4771000

Acute Toxicity
Harmful if swallowed Oral LD50 Dog > 160 mg/kg Guinea pig 275.9 mg/kg Mouse 578 mg/kg Rat 920 mg/kg

Skin Corrosion/Irritation
Not available

Serious Eye Damage/Irritation
Not available

Respiratory or Skin Sensitization
May cause an allergic skin reaction

Germ Cell Mutagenicity
Not available

Carcinogenicity
Not available.

Reproductive Toxicity

Based on available data, the classification criteria are not met. Epidemiological studies have not shown an association between therapeutic use of a related material during pregnancy and an increased incidence of birth defects. Adverse reproductive effects were seen in animal studies with a related material.

Routes of Entry
Skin. Ingestion.

Symptoms Related to Exposure
Imidazole antifungals: Gastrointestinal disturbances. Central nervous system effects. Back pain. Fever. Chills. Skin rash. Itching. Blistering. Burning. Skin redness. Flushing. Visual disturbances. Yellowed eyes or skin. Swelling in arms or legs. Difficulty breathing.

Potential Health Effects
Not available.

Target Organ(s) Not available

Section 12: Ecological Information

Ecotoxicity
Aquatic Fish LC50 Fish 0.11 mg/l, 96 hours

Persistance and Degradability
Not available.

Bioaccumulative Potential
log Kow 4.5, 5.79

Mobility in Soil
Not available.

Other Adverse Effects
Not available.

Section 13: Disposal Considerations

Waste Disposal
Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste

Disposal of Container
Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner

Other Considerations
Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14: Transport Information

DOT Classification
Not a DOT controlled material (United States). This material is not classified dangerous good according to international transportation regulations (ADR/RID-IMDG-ICAO/IATA). UN number Environmentally hazardous substance, solid, n.o.s. (Miconazole nitrate) UN proper shipping name 9Class Transport hazard class(es) -Subsidiary risk IIIPacking group

Section 15: Regulatory Information

Regulations
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated CERCLA Hazardous Substance List (40 CFR 302.4) Not listed. SARA 304 Emergency release notification Not regulated. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not regulated. Superfund Amendments and Reauthorization Act of 1986 (SARA) Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Hazard categories SARA 302 Extremely hazardous substance Not listed. YesSARA 311/312 Hazardous chemical SARA 313 (TRI reporting) Not regulated. Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Not regulated.Safe Drinking Water Act (SDWA) California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Other

WHMIS (Canada) CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).;DSCL (EEC) R22- Harmful if swallowed. R38- Irritating to skin. R41- Risk of serious damage to eyes.;Gloves.;Lab coat.;Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.;Splash goggles.

Section 16: Other Information

This information is given without any warranty or representation. It is believed to be correct but does not claim to be all inclusive and shall be used only as a guide. Gufic Biosciences Ltd., shall not be held liable for any damage resulting from handling or contact with the above product. It is offered solely for your consideration, investigation and verification.