

MATERIAL SAFETY DATA SHEET

Sipcam Agro USA, Inc.
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In Case of Emergency, Call
Sipcam Agro USA, Inc.: 919-226-1195
CHEMTREC: 800-424-9300

I. GENERAL INFORMATION

1-Slight Health Hazard

0-Noncombustible

0-Nonreactive

Above: Ratings based on NIOSH "Identification System for Occupationally Hazardous Materials" (1974).

II. TRANSPORTATION INFORMATION

This product is regulated for transportation purposes as follows:

MODE	BULK (> 119 GALLONS)	NON-BULK (< 119 GALLONS)
IATA (AIR):	Yes	No
IMO (Water):	Yes	Yes
DOT (Land):	Yes	No

Proper Shipping Name: Environmentally hazardous substance, liquid, N.O.S.(Tetraconazole I), 9, UN3082, PG III, ERG # 171

Special Provisions: Marine pollutant

Freight class: NMFC Item #102120

SARA TITLE III INFORMATION

313 Inventory Ingredients: Tetraconazole (11.6% wt/wt)

312 Hazards Classification: Acute and Chronic Health*

*See Section VII for Health Hazard Information

III. PRODUCT IDENTIFICATION

Product Names: Tetraconazole

Synonyms: Tetraconazole; M-14360; ASC-66811

IV. HAZARDOUS INGREDIENTS

The substances listed below are those identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Component	CAS No.
Tetraconazole	112281-77-3

Exposure Limits for Tetraconazole:

ACGIH-TLV: Not Established

OSHA-PEL: Not Established

V. PHYSICAL DATA (* denotes data for technical active ingredient tetraconazole)

Boiling Point:	*100° C approx.
Melting Point:	*liquid at ambient temperatures
Freezing Point:	
Specific Gravity (H ₂ O=1):	1.08 @ 20° C
Vapor Pressure:	*17 mm Hg @ 20° C
Vapor Density (Air = 1):	
Solubility in H ₂ O:	Miscible in water

SIPCAM AGRO USA, INC.

% Volatiles by Volume: 67 approx.
Evaporation Rate (Butyl Acetate = 1):
Appearance and Odor: Light yellow liquid; practically odorless

VI. FIRE AND EXPLOSION DATA

Flash Point: 98° C (Pensky-Martens closed cup)
Autoignition Temperature:
Flammable Limits in Air, % by Volume: Lower:
Upper:
Extinguishing Media: CO₂, foam, dry chemical, water
Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Fight fire upwind. Avoid heavy hose streams. Dike area to prevent water runoff. Vapors and fumes from fire are hazardous. Evacuate people downwind from fire.
Unusual Fire and Explosion Hazards: In case of fire, HF, HCl and HCN may be evolved

VII. HEALTH HAZARD INFORMATION

Oral LD50 (rat): 4,090 (female) mg/kg ; > 5,000 mg/kg (male)
Dermal LD50 (rat): > 2,000 mg/kg
Inhalation LC50 (4-hour; rat): > 3.17 mg/liter of air
Primary Eye Irritation (rabbit): Mild irritant; conjunctival irritation persisting ~1 hour
Primary Dermal Irritation Index (rabbit): Mild irritant

Emergency and First Aid Procedures

Eyes: Flush eyes with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. Consult a physician if irritation persists.
Skin: Wash affected skin areas with soap and water.
Inhalation: Remove subject to fresh air.
Ingestion: Dilute by giving 2 glasses of water to drink and call a physician. Never give anything by mouth to an unconscious person.

Possible Effects of Chronic Overexposure (No studies have been performed on humans):

In subchronic, chronic, and reproduction studies on rats, and carcinogenicity studies on mice, and a chronic study on dogs, increase liver weight, increases in serum enzymes, or gross and microscopic liver pathology were noted, providing evidence of liver toxicity upon repeated exposure to very high doses of tetraconazole. Dietary administration of tetraconazole to mice throughout their lifetime at very high doses resulted in an increased incidence of neoplastic effects in liver and the formation of tumors. The significance of the neoplastic effect in mouse liver is unknown with respect to potential human exposure.

VIII. REACTIVITY DATA

Conditions Contributing to Instability: Avoid overheating.

Incompatibility: Avoid contact with strong alkalis.

Hazardous Decomposition Products: In case of fire, HF, HCl and HCN may be evolved

Hazardous Polymerization: Material not known to polymerize.

IX. SPILL OR LEAK PROCEDURES

Steps To Be Taken If Material Is Released Or Spilled:

Keep out of lakes, streams or ponds. Contain spills. Absorb the spilled liquid with dry clay, sawdust, or diatomaceous earth. Remove as much contaminated absorbent material as possible by shoveling and sweeping. Place contaminated materials in closed, labeled containers and store in a safe place to await proper disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Persons performing this work should wear adequate personal protective equipment and clothing.

Waste Disposal Method:

Waste portions of this product and contaminated absorbent materials may be disposed of by incineration provided the following conditions are observed:

Incinerate in a suitable oven fed by a mixture of air and methane, at 1100-1200° C temperature;

The HF and HCl which form in the incinerator exhaust gas must be conveyed into an aqueous absorption system containing 18-20% of Ca(OH)₂.

X. INDUSTRIAL HYGIENE CONTROL MEASURES

Ventilation Requirements

Good industrial hygiene practice dictates that indoor work areas be isolated and provided with adequate local exhaust ventilation. Work upwind in out-of-doors batch operations.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

EYE: Splashproof goggles or face shields.

GLOVES: Wear protective chemical-resistant gloves to minimize skin-contact.

OTHER CLOTHING AND EQUIPMENT

Protective clothing consisting of long sleeve shirt, long pants, socks and shoes should be worn when handling this product. Clothing should be changed at least daily. Persons exposed routinely to this active material should shower prior to leaving work each day. Safety shower and eye-wash stations should be provided in all areas in which this product is stored and/or handled. Contaminated clothing should be removed and washed thoroughly before re-using. Do not wear leather shoes, as such material cannot be decontaminated.

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