



MATERIAL SAFETY DATA SHEET

1 PRODUCT INFORMATION

Product Name: Fungo Flo 45% T-Methyl

Chemical Family: Thioallophanate

Manufactured for:

The Andersons, Inc.

P.O. Box 119

Maumee, OH 43535

EMERGENCY PHONE NUMBERS:

Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center

(866) 767-5089 (24Hrs)

Phone Number	Available Hrs
610-878-6100	8:00am - 5:00pm EST
1-800-438-6071	8:00am - 5:00 pm EST

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
Thiophanate-methyl	23564-05-8	45	Y
Propylene glycol	57-55-6	<20	Y
Polyglycol	9003-11-6	<15	N

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

3 HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! KEEP OUT OF REACH OF CHILDREN. HARMFUL IF ABSORBED THROUGH SKIN. CAUSES EYE IRRITATION. MAY CAUSE THYROID & LIVER DAMAGE AFTER REPEATED EXPOSURE BASED ON ANIMAL DATA MAY CAUSE ALLERGIC SKIN REACTION. MAY CAUSE LUNG DAMAGE AFTER REPEATED EXPOSURE BASED ON ANIMAL DATA AVOID CONTACT WITH EYES, SKIN AND CLOTHING. AVOID BREATHING DUST.



Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be practically non-toxic if swallowed, no more than slightly toxic if absorbed through skin, slightly toxic if inhaled, non-irritating to skin and slightly irritating to eyes. Repeated exposure may cause an allergic skin reaction. Repeated or long-term exposure may cause adverse effects on the liver or thyroid.

Polyglycol

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be practically non-toxic if swallowed or absorbed through skin, moderately toxic if inhaled and practically non-irritating to eyes. Overexposure to aerosol may cause lung inflammation and pulmonary edema (accumulation of fluid in the lungs). Repeated dose inhalation studies in animals have shown that some block polymers may cause lung inflammation and slight lung damage (fibrosis).

4 FIRST AID MEASURES

IF IN EYES, Flush eyes with plenty of water. Call a physician if irritation persists.

IF ON SKIN, Wash with plenty of soap and water. Get medical attention if irritation persists.

IF SWALLOWED, Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

IF INHALED, Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature	NA NA	
Flash Point		Flash Point Method
Flammable Limits- Upper	NA NA	
Lower		

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly

decontaminated after use.



Fire and Explosion Hazards

None known.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Contain spill. Sweep or scoop up and remove to suitable container. Flush with water. Prevent spilled product from entering sewers or natural water. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

Handling

Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Do not get in eyes, on skin or on clothing. Do not breathe dust.

HANDLING AND STORAGE

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA. This pesticide is toxic to fish. Do not apply directly to water or wetlands. Do not apply directly to water by cleaning of equipment or disposal of wastes.

Storage

This material is not hazardous under normal storage conditions; however, material should be stored in closed containers, in a secure area to prevent container damage and subsequent spillage.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

**Eye / Face Protection**

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment immediately available.

Skin Protection

Minimize skin contamination by following good industrial hygiene practice. Wearing rubber gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory Protection

Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

Exposure Limit Value

Propylene glycol

WEEL TWA -10 mg/m³ (50 ppm) -Only those components with exposure limits are printed in this section.-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor White to light pink liquid pH 5-7 Specific Gravity 1.1-1.2 @ 20 C Vapor Pressure NE Vapor Density NE Melting Point NE Freezing Point NE Boiling Point NE Solubility In Water Dispersible Evaporation Rate NA Percent Volatile NA



10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

Hazardous Polymerization

Does not occur.

Incompatibility

Strong oxidizers.

Hazardous Decomposition Products

N/A

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Data on this material and/or its components are summarized below. Single exposure (acute) studies indicate: Oral - Practically Non-toxic to Rats (LD50 >5,000 mg/kg) Dermal - No More than Slightly Toxic to Rabbits (LD50 >2,000 mg/kg) Inhalation - Slightly Toxic to Rats (4-hr LC50 1.8 mg/l) Skin Irritation - Non-irritating to Rabbits - Eye Irritation - Slightly Irritating to Rabbits Skin allergy was observed in guinea pigs following repeated exposure. Repeated or long-term oral administration produced effects on the thyroid, liver or kidneys in rats, mice or dogs. An increased incidence of liver tumors was observed in mice and thyroid tumors were observed in male rats following long-term oral exposure. No effects were seen on the ability of male or female rats to reproduce when exposed orally for 2 successive generations. No birth defects were observed in the offspring of rats exposed orally during pregnancy. In rabbits, developmental toxic effects were noted only at maternally toxic doses. No genetic changes were observed in tests using animal cells.

Polyglycol Repeated exposure of rats to aerosol of some block polymers produced an inflammatory response and slight fibrosis in the lung. Long-term dietary administration of a block polymer to dogs produced no adverse effects. Some block polymers have produced genetic changes in tests using bacteria or animal cells. Repeated exposure of rats to aerosol of some block polymers produced an inflammatory response and slight fibrosis in the lung. Long-term dietary administration of a block polymer to dogs produced no adverse effects. Some block polymers have produced genetic changes in tests using bacteria or animal cells.

Polyglycol Single exposure (acute) studies indicate that this material is practically non-toxic if swallowed (mouse LC50 >15,000 mg/kg) or absorbed through skin (rabbit LC50 >20,000 mg/kg), moderately toxic if inhaled (rat 4-hr LC50 0.1-0.34 mg/l) and practically non-irritating to rabbit eyes (10% aqueous solution).



12 ECOLOGICAL INFORMATION

Ecotoxicological Information

This material is practically non-toxic to carp (96-hr LC50 >100 mg/l) and fiddler crab (96-hr LC50 >560 mg/l). It is slightly toxic to bluegill (96-LC50 15.8 mg/l), Daphnid (48-hr EC50 15.6 mg/l) and shrimp (96-hr LC50 25.1 mg/l). It is moderately toxic to trout (96-hr LC50 2.2 mg/l) and oysters (96-hr LC50 4.6 ppm), and highly toxic to catfish.

Chemical Fate Information

No data are available.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Dispose of solid waste at properly permitted landfills observing all local, state and federal regulations. Contaminated liquids should be concentrated and incinerated at a properly permitted disposal site again observing all local, state and federal regulations.

14 TRANSPORT INFORMATION

DOT Name DOT Technical Name DOT Hazard Class UN Number DOT Packing Group RQ DOT Special Information Not Regulated By DOT.

PG

* When shipped internationally by vessel the shipping description should be: Environmentally hazardous substance, liquid, n.o.s. (Thiophanate methyl), 9,UN 3082, PG III, Marine Pollutant.

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y Y	Fire	Reactive	Sudden Release of Pressure	N	N	N
(Chronic) Health							

Ingredient Related Regulatory Information:

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
Propylene glycol	NE	
Polyglycol	NE	NE
Thiophanate-methyl	10 LBS	NE

**SARA Title III, Section 313**

This product does contain chemical(s) which are defined as toxic chemicals under and subject to the reporting requirements of, Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. See Section 2

Thiophanate-methyl

California Prop 65 - Developmental Toxin

This product does contain the following chemical(s), as indicated below, currently on the California List of Developmental Toxins. Thiophanate-methyl

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List. Thiophanate-methyl

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Propylene Glycol

16 OTHER INFORMATION**Revision Information**

Revision Date 25 AUG 2006 Revision Number 6 Supercedes

Revision Dated 25-AUG-2006

Revision Summary

Update section 16 to reflect new RQ quantity

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

Miscellaneous

Topsin (R) is a registered trademark of Nippon Soda Company, Ltd.

EPA RQ for Thiophanate-methyl is 10 lbs

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Manufacturer:

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