



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

Page 1

M0000501 "DuPont" "TANOS" FUNGICIDE
Revised 27-JUN-2005

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"DuPont", "TANOS" are trademarks of DuPont.

Grade : 50% Formulation

Tradenames and Synonyms

KP481 50DF FUNGICIDE
KP481 FUNGICIDE
DPX-KP481 50DF FUNGICIDE
DPX-KP481 FUNGICIDE
"TANOS" 50DF FUNGICIDE
FAMOXADONE
CYMOXANIL

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-800-441-7515 (outside the U.S.
302-774-1000)
Transport Emergency : CHEMTREC 1-800-424-9300(outside U.S.
703-527-3887)
Medical Emergency : 1-800-441-3637 (outside the U.S.
302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
FAMOXADONE	131807-57-3	25
CYMOXANIL	57966-95-7	25
INERT INGREDIENTS		50

HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! Harmful if swallowed. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Harmful if inhaled. Avoid breathing (dust, vapor or spray mist). Remove contaminated clothing and wash clothing before reuse.

Potential Health Effects

Skin contact with Tanos may cause irritation with itching, redness, or swelling.

Eye contact with Tanos may cause eye irritation with tearing, pain or blurred vision.

Based on animal data, ingestion of Cymoxanil may cause temporary central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness; changes in hematology measurements, pathological changes in the liver, and weight loss. Lens opacities have been observed in dog studies with Famoxadone.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF SWALLOWED: Call poison control center or doctor

(FIRST AID MEASURES - Continued)

immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

FIRE FIGHTING MEASURES

Flammable Properties

Flammability, self-ignition, explosive and oxidizing properties:

Tanos is non-flammable and not sensitive to thermal, impact or friction stimuli. Tanos does not self-ignite and is a non-oxidizer.

Extinguishing Media

Water Spray, Foam, Dry Chemical, CO2.

Avoid high volume water jet (contamination risk).

Fire Fighting Instructions

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment.

On small fires: If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with water spray.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus.

Initial Containment

Prevent material from entering sewers, waterways, or low areas.

(ACCIDENTAL RELEASE MEASURES - Continued)

Spill Clean Up

Clean up promptly by sweeping or vacuum. Use approved industrial vacuum cleaner for removal. Shovel into a suitable container for disposal.

Accidental Release Measures

Shovel or sweep up. Place in closed containers for disposal
DO NOT RAISE DUST.

HANDLING AND STORAGE

Handling (Personnel)

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wash clothing after use. Keep away from food, drink and animal feeding stuff. Wash hands before breaks and immediately after handling product. When using, do not eat, drink or smoke.

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Storage

Store product closed in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

Do not generate dust.

When handlers use enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

Personal Protective Equipment

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all greater than or equal to 14 mils.

Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls.

Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all greater than or equal to 14 mils.

Shoes plus socks.

Exposure Guidelines

Applicable Exposure Limits

FAMOXADONE

AEL * (DuPont) : 2 mg/m³, 8 & 12 Hr. TWA

CYMOXANIL

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

AEL * (DuPont) : 2 mg/m³, 8 & 12 Hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Form : Dry Flowable Granules.
Color : Brown.
pH : 4.5-7.5
Solubility in Water : Dispersible

STABILITY AND REACTIVITY

Chemical Stability

No decomposition if stored and applied as directed.

Decomposition

Hazardous decomposition products: carbon oxides, nitrogen oxides.

TOXICOLOGICAL INFORMATION

Animal Data

Famoxadone

Oral LD50: >5000 mg/kg in rats
Dermal LD50: >2000 mg/kg in rabbits
Inhalation LC50, 4 hr: >5.3 mg/L in rats

Animal testing indicates that famoxadone is a mild eye irritant and a mild or slight skin irritant, but is not a skin sensitizer.

Repeated dermal administration of famoxadone in rats produced increased liver weight and slight increase in liver enzymes (in males only), suggestive of minimal hepatotoxicity.

Repeated ingestion of famoxadone caused reduced body weight, increased weight of liver and spleen, liver lesions, anemia, and ocular effects. The ocular effects were only observed in dogs.

Animal testing indicates famoxadone does not have carcinogenic, immunotoxic, neurotoxic, developmental, or reproductive effects. Genetic toxicity tests in bacterial and mammalian cell cultures were generally negative. It has not produced genetic damage in tests on animals.

Cymoxanil

Oral LD50: 960 mg/kg in rats (slightly toxic)
Dermal LD50: > 2000 mg/kg in rabbits (moderately toxic)
Inhalation LC50, 4 hrs: > 5.06 mg/L in rats (moderately toxic)

Animal testing indicates that Cymoxanil is a slight eye irritant, and a slight to mild skin irritant, but it is not a skin sensitizer.

Overexposure to Cymoxanil by skin contact did not produce irritation in guinea pigs. In a repeated dermal exposure test with rats, the NOEL was 1000 mg/kg.

(TOXICOLOGICAL INFORMATION - Continued)

Effects of single exposure by ingestion of Cymoxanil included weight loss, altered righting reflexes, weakness, labored breathing, lethargy, incoordination, and nasal discharge. Repeated oral exposure caused increased liver weight, reduced weight gain, and testicular and epididymal histological changes. Other effects included diarrhea, altered hematology, lethargy, and increased mortality.

Long term exposure by ingestion of Cymoxanil to high concentrations caused body and organ weight decreases, pathological changes of the liver, gastrointestinal tract, lungs, eyes, nerves, testes, sperm, bone marrow, spleen and thymus, altered hematology, weakness and increased mortality.

Effects of single exposure by inhalation to high concentrations of Cymoxanil included diarrhea, altered respiratory rate, nasal and ocular discharge, changes in posture, decreased motor activity, tremors and lethargy.

In animal testing Cymoxanil has not caused carcinogenicity. Animal testing show developmental effects only at similar exposure levels producing other toxic effects in the adult animal. Tests have shown Cymoxanil to cause reproductive toxicity in animals, however, only at levels producing toxic effects in the adult animal. Cymoxanil has not produced genetic damage in bacterial cultures. In mammalian cell cultures Cymoxanil has caused genetic toxicity. It has not produced genetic damage in tests on animals. In animal testing, Cymoxanil has not caused permanent genetic damage in reproductive cells of mammals (has not produced heritable genetic damage).

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

FAMOXADONE

96 hour LC50 - Bluegill sunfish: 0.013 mg/L.
96 hour LC50 - Rainbow trout: 0.011 mg/L.
96 hour LC50 - Sheepshead minnow: 0.049 mg/L.
48 hour EC50 - Daphnia magna: 11.8 ug/L.
120 hour, EC50, Freshwater algae: 23 ug/L.

AVIAN TOXICITY:

FAMOXADONE

LD50 - Bobwhite Quail: >2250 mg/kg.
LC50 - Bobwhite Quail: >5620 ppm.
LC50 - Mallard Duck: >5620 ppm.

AQUATIC TOXICITY:

CYMOXANIL

96 hour LC50 - Rainbow trout: 61 mg/L.
96 hour LC50 - Bluegill sunfish: 29 mg/L.
48 hour EC50 - Daphnia magna: > 126 mg/L.

(ECOLOGICAL INFORMATION - Continued)

AVIAN TOXICITY:

CYMOXANIL

LD50 - Bobwhite Quail: > 2250 mg/kg.

LD50 - Mallard Duck: > 2250 mg/kg.

LC50 - Bobwhite Quail: > 5620 ppm.

LC50 - Mallard Duck: > 5620 ppm

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

Container Disposal

For Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Fiber Sacks: Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration if allowed by State and local authorities.

For Fiber Drums with Liners: Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same

(DISPOSAL CONSIDERATIONS - Continued)

manner.

For Bags Containing Water Soluble Packets: Do not reuse the outer box or the re-sealable plastic bag. When all water-soluble packets are used, the outer packaging should be clean and may be disposed of in a sanitary landfill or by incineration, or if allowed by State and local authorities, by open burning. If burned, stay out of smoke. If the resealable plastic bag contacts the formulated product in any way, the bag must be triple-rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer wrap as described above.

For Metal Containers (non aerosol): Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

For Paper and Plastic Bags: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

TRANSPORTATION INFORMATION

Shipping Information

DOT
Proper Shipping Name : NOT REGULATED BY DOT UNLESS IN
BULK PACKAGING OR SHIPPED BY
WATER.
DOT/IMO : ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, SOLID, N.O.S.
(FAMOXADONE).
HAZARD CLASS : 9
UN NO. : UN 3077
PACKING GROUP : III
MARINE POLLUTANT : YES (FAMOXADONE 25%)

REGULATORY INFORMATION

U.S. Federal Regulations

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes
Chronic : No
Fire : No
Reactivity : No
Pressure : No

(REGULATORY INFORMATION - Continued)

In the United States this product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

EPA Reg. No. 352-604

OTHER INFORMATION

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : DuPont Crop Protection
Address : Wilmington, DE 19898
Telephone : 1-888-638-7668

Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS