

Thiram 480 DP

Seed Treatment Fungicide

Intended for use by professional applicators only

Active Ingredient: (% by weight)	
thiram (tetramethylthiuram disulfide)*	42%**
Other Ingredients:	58%
Total	100%

*CAS No. 137-26-8

**Contains 4 pounds of thiram per gallon, or 480 grams of thiram per liter

KEEP OUT OF REACH OF CHILDREN CAUTION

First Aid, Precautionary Statements and Directions for Use are inside this booklet.

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Net Contents: 30 gallons

Manufactured for:
MacDermid Agricultural Solutions, Inc.
245 Freight Street
Waterbury, CT 06702-1818

EPA REG. NO. 400-434
EPA EST. NO. 070815-GA-001

121615V008
524052-B (1216)

FIRST AID

IF SWALLOWED

- Call a poison control center or doctor 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.

IF ON SKIN OR ON CLOTHING

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED

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

IF IN EYES

- Hold eye open and rinse slowly and gently with water for 15 to 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.

NOTE TO PHYSICIAN: No specific antidote is available. Treat symptomatically. In the presence of consumed alcohol, thiram responds similarly to Disulfiram.

SYMPTOMS OF POISONING: No specific symptoms. Acute poisoning is accompanied by general depression and illness. Consumption of alcoholic beverages with exposure to Thiram may cause flushing, breathing difficulty, nausea, vomiting and low blood pressure.

EMERGENCY ASSISTANCE: Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24-HOUR MEDICAL EMERGENCY ASSISTANCE CALL

PROPHARMA: 1-866-303-6952 or +1-651-603-3432.

FOR 24-HOUR CHEMICAL EMERGENCY (Spills, leaks, fire, exposure or accident) CALL

CHEMTREC: 1-800-424-9300 or +1-703-527-3887.

For PRODUCT USE INFORMATION: 1-866-761-9397

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist or vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not use or store near food or feed.

Routinely shower or bathe after work. Consumption of alcoholic beverages increases the toxic effects of thiram.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are made of any waterproof material. 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

- shoes plus socks

- chemical resistant gloves, except when applying while driving motorized ground equipment

All mixers, loaders, applicators, people participating in dip treatments, and other handlers must wear: Long-sleeved shirt and long pants; shoes plus socks; chemical-resistant gloves, except when applying while driving motorized ground equipment; chemical resistant apron when mixing, loading, participating in dip treatments, or cleaning up spills, cleaning equipment or otherwise exposed to the concentrate.

USER SAFETY REQUIREMENTS

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- **Users should remove clothing/PPE immediately if pesticide gets inside.**
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Endangered Species

This bag contains seed treated with Thiram. This product may have effects on federally listed, threatened, or endangered species, or their critical habitat in some counties. It is a violation of federal law to kill, harm or harass listed animal species without authorization. To limit the potential for such impacts when using this product, consult and follow the instructions provided in the EPA Endangered Species bulletin for the county or Parish in which you are applying the treated seed. To determine whether your county or Parish has a Bulletin, consult <http://www.epa.gov/espp> before each season's use of this product.

ENVIRONMENTAL HAZARDS

This pesticide product is **toxic to fish, aquatic invertebrates, oysters and shrimp**. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. **Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.**

Treated seeds and bulbs are hazardous to fish, birds and mammals. Do not plant treated seeds or bulbs by broadcasting to the soil surface. Ensure that all seeds and bulbs are thoroughly covered with soil, especially in turn areas. If seeds or bulbs are not thoroughly incorporated by the planter during planting, additional incorporation may be required to thoroughly cover exposed seeds or bulbs.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all label directions and precautions carefully before use.

Do not apply this product through any type of irrigation system. Do not apply by air.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the **restricted entry interval (REI) of 24 hours**.

Exception: Once treated seeds or bulbs are planted in soil or other planting media, the Worker Protection Standard allows workers to enter the treated area without restriction, if there will be no contact with the treated seeds or bulbs.

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, shoes plus socks, chemical resistant gloves made of any waterproof material, protective eyewear.

ALWAYS SHAKE OR STIR THIS PRODUCT WELL BEFORE USE.

TREATED SEED

Seeds or Bulbs that are treated with this product and are then packaged or bagged for future use by growers or researchers must contain the following labeling on the outside of the seed or bulb package or bag:

- This bag contains seeds or bulbs treated with thiram fungicide (**THIRAM 480 DP**). When opening this bag or loading/pouring the treated seeds or bulbs wear long-sleeved shirt, long pants, shoes, socks and chemical resistant gloves.
- Treated seeds or bulbs. Do Not Use for Food, Feed or Oil Purposes.
- Store treated seed away from food and feedstuffs.
- Do not allow children, pets or livestock to have access to treated seeds.
- Treated seeds exposed on soil surface may be hazardous to wildlife. Cover or collect treated seeds spilled during loading and planting.
- Dispose of all excess treated seed by burying seed away from bodies of water.
- Dispose of seed packaging or containers in accordance with local requirements.
- Endangered Species" section of this label must be included on the seed tag.
- After the seeds or bulbs have been planted, do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours. Exception: Once the seeds or bulbs are planted in soil or other planting media, the Worker Protection Standard allows workers to enter the treated area without restriction if there will be no worker contact with the seeds or bulbs.
- Treated seeds or bulbs are hazardous to fish, birds and mammals. Do not plant treated seeds or bulbs by broadcasting to the soil surface. Ensure that all seeds or bulbs are thoroughly covered with soil, especially in turn areas. If seeds or bulbs are not thoroughly incorporated by the planter during planting, additional incorporation may be required to thoroughly cover exposed seeds or bulbs. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of planting equipment washwater or rinsate or by disposal of wastes.
- Plant cotton, wheat, barley, oats, and sugarbeet seed a minimum of 1 inch deep.

Seeds or Bulbs that are treated with this product and are then packaged or bagged for future use by homeowners or other residential users must contain the following labeling on the outside of the seed or bulb package or bag:

Treated seeds. Do not use for food, feed or oil purposes.

USE PRECAUTIONS AND RESTRICTIONS

This product does not contain dye and is not covered by an appropriate tolerance, tolerance exemption, or other clearance under the Federal Food, Drug and Cosmetic Act. To comply with 40 CFR 153.155, therefore, all seed treated with this product must be colored with an EPA-approved dye or colorant of a suitable color to prevent accidental use as food for man or feed for animals.

For Treatment of Coniferous Seed

Damping-off protection: Use 2 quarts of **THIRAM 480 DP** per 100 pounds of seed. Slowly add to the seed while turning in a tumbler such as a concrete mixer. Tumble seed for approximately 2 minutes or until **THIRAM 480 DP** is evenly distributed and then spread coated seed on a screen to dry.

For the Treatment of Ornamental Bulbs, Corms and Tubers:

Treat any time after drying. Dip in a suspension made by mixing 1 ½ pints of **THIRAM 480 DP** in 8 gallons of water. Agitate the suspension. If bulbs are to be stored, spread out to dry. Bulbs or tubers that are treated with this product must bear distinct labeling that instructs:

CAUTION: Treated with thiram. Wear rubber gloves and protective clothing when handling products treated with thiram. Direct exposure to skin may result in severe dermatitis.

Cotton Seed: The maximum thiram application rate for cotton seed is 1.6 oz ai/cwt (equivalent to 3.2 fl. oz./cwt **THIRAM 480 DP**). Plant treated cotton seed a minimum of 1 inch deep.

Barley Seed: Plant barley seed a minimum of 1 inch deep.

Oat Seed: Plant oat seed a minimum of 1 inch deep.

Sugar Beet Seed: Plant sugar beet seed a minimum of 1 inch deep.

Wheat Seed: Plant wheat seed a minimum of 1 inch deep.

Onion Seed: When 1.5 lbs ai/cwt is used, the onion seed must undergo pelletized treatment.

RECOMMENDATIONS FOR USE AS A COMMERCIAL SEED TREATMENT

THIRAM 480 DP Fungicide is a liquid fungicide recommended for the treatment of seeds listed in the following table. Used according to directions, **THIRAM 480 DP** will usually increase stands and yields by reducing losses from seed decay, damping-off and seedling blights caused by many seedborne and soilborne organisms. **THIRAM 480 DP** will usually control covered smuts or bunt of wheat, barley and rye and covered kernel smut of sorghum and will usually prevent basal rot and decay of ornamental bulbs and tubers. **THIRAM 480 DP** aids in the control of *Alternaria* and *Phoma* on canola. **THIRAM 480 DP** aids in the control of seedborne conidia produced from the honeydew inoculum from field infection of *Claviceps africana* (ergot) on sorghum seed.

For "Commercial Seed Treatment: Apply with mechanical, slurry, or mist-type seed treating equipment, provided that the equipment is calibrated to accurately apply the product to seed. For maximum effectiveness, seed must be treated uniformly and covered thoroughly."

If it is desirable to prepare slurries in large containers for addition to the slurry tank, entire contents should be thoroughly agitated before withdrawing any of the slurry.

SEEDS	THIRAM 480 DP Treating Rate Fluid Ounces Per 100 pound Weight
Barley, Millet, Oats**, Rye, Sorghum, Triticale**, Wheat	3.3/100 lbs
Beans (Lima) and Peas	3/100 lbs
Beans (Snap & Dry, Cowpeas)	2/100 lbs.
Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kale, Kohlrabi, Mustard, Turnip	8/100 lbs.
Beet (Garden), Swiss Chard	8/100 lbs.
Canola**	6.4/100 lbs.
Cantaloupe, Cucumber, Pumpkin, Squash, Watermelon	4.5/100 lbs.
Carrot, Endive, Lettuce, Pepper, Radish, Spinach	8/100 lbs.
Castor beans**	4.5/100 lbs.
Chicory**	5.2/100 lbs.
Corn (Field)	2.7/100 lbs
Corn (Sweet)	5/100 lbs.
Cotton – acid – delinted	3/100 lbs.
Cotton – reginned and fuzzy	3/100 lbs.
Eggplant	6.5/100 lbs.
Flax	5.0/100 lbs.
Grasses	8/100 lbs.
Okra	6/100 lbs.
Onion	6/100 lbs.
Ornamental flower seed	8/100 lbs.
Peanuts*	3/100 lbs.
Rice (see For the Treatment of Rice Seed in CA specific directions)	3.3/100 lbs.
Safflower, Sunflower	8.3/100 lbs.
Sesame	3/100 lbs.
Small seed legumes	8/100 lbs.
Soybeans	2/100 lbs.
Sugar beets	8/100 lbs.
Tomato	6/100 lbs.

*Note: In the treatment of peanuts, do not dilute with water

**Not registered for use in California

For the Treatment of Rice Seed in California

THIRAM 480 DP Fungicide is a liquid fungicide recommended for the treatment of rice seed in California. Used according to directions, **THIRAM 480 DP** will usually increase stands and yields by reducing losses from seed decay, damping-off and seedling blights caused by Seedborne and soilborne organisms.

THIRAM 480 DP is recommended for use on well cured rice seed in California prior to pre-plant soaking. **THIRAM 480 DP** should be used with water as a suspension in treaters suitable for adequate mixing and accurate application to the seed. If it is desirable to prepare slurries in large containers for addition to treater tanks, entire contents should be thoroughly agitated before withdrawing any of the slurry for seed treatment.

How to Use: Rice seed treatment in California

SLURRY TREATERS:

Treater Tank Concentration Mix 1 gallon of **THIRAM 480 DP** with 1 gallon of water

Application Rate 4 fluid ounces per 100 pounds seed

MIST-O-MATIC TREATER:

Treater Tank Concentration Mix 1 gallon of **THIRAM 480 DP** with 1 gallon of water.

Application Rate 4 fluid ounces per 100 pounds seed

Note: To prevent water contamination in irrigation or drainage canals soak water should be retained in settling basins.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in original container only. After partial use, replace lid and close tightly to prevent evaporation. Store in a secure place that is temperate, dry and out of direct sunlight.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Non-refillable container. Do not reuse or refill this container. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer or contact the Ag Container Recycling Council (ACRC) at 1-877-952-2272 (toll free) or www.acrecycle.org.

For containers greater than 5 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

If pressure rinsing: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

IMPORTANT NOTICE—Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to seller, and to the extent consistent with applicable law, the buyer assumes the risk of any such use.

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Seed Treatment Fungicide

Intended for use by professional applicators only

Active Ingredient: (% by weight)	
thiram (tetramethylthiuram disulfide)*	42%**
Other Ingredients:	58%
Total	100%

*CAS No. 137-26-8

**Contains 4 pounds of thiram per gallon, or 480 grams of thiram per liter

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Net Contents: 30 gallons

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CAUTION

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Routinely shower or bathe after work. Consumption of alcoholic beverages increases the toxic effects of thiram.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

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Applicators and other handlers must wear:

- long sleeved shirt and long pants

- shoes plus socks

- chemical resistant gloves, except when applying while driving motorized ground equipment

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Users should:

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Endangered Species

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ENVIRONMENTAL HAZARDS

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PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.