



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505T)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

40285-21

Date of Issuance:

12/27/23

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

U-Phos® Technical

Name and Address of Registrant (include ZIP Code):

Anna Armstrong  
Senior Regulatory Specialist, Agent for  
Degesch America, Inc.  
153 Triangle Drive  
Weyers Cave, VA 24486

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

*Continues page 2*

Signature of Approving Official:

Venus Eagle, Product Manager 01  
Invertebrate & Vertebrate Branch 3  
Registration Division (7505T)

Date:

12/27/23

2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 40285-21.”
3. Submit one copy of the final printed label for the record before you release the product for shipment.
4. You are required to submit a sample of the analytical grade of the active ingredient. Please contact the Analytical Chemistry Branch regarding the need/scheduling for submittal of the analytical method used to assay the active ingredient in the product.

Thuy L. Nguyen, Chief  
US EPA Environmental Science Center  
701 Mapes Road  
Fort Meade, MD 20755-5350  
Phone: 410-305-2905  
Email: [nguyen.thuy@epa.gov](mailto:nguyen.thuy@epa.gov)

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

The record for this product currently contains the following CSF(s):

- Basic CSF dated 04/24/2023

If you have any questions, please contact Ralph Narain at 202-566-2853 or at [Narain.Ralph@epa.gov](mailto:Narain.Ralph@epa.gov).

Enclosure: Stamped label

**RESTRICTED USE PESTICIDE**  
**DUE TO HIGH ACUTE INHALATION TOXICITY OF PHOSPHINE GAS. FOR USE ONLY IN THE**  
**MANUFACTURE OF PHOSPHINE FUMIGANTS.**

**U-PHOS® Technical**  
For Formulation Use Only

**ACTIVE INGREDIENT:**PHOSPHINE GAS (PH<sub>3</sub>) ..... 99.35%**INERT INGREDIENTS:**

..... 0.65%

**Total:** ..... **100.00%**

**KEEP OUT OF REACH OF CHILDREN**  
**DANGER - POISON - PELIGRO**

**FIRST AID**

Symptoms of exposure to this product are headache, dizziness, nausea, difficult breathing, vomiting, and diarrhea. In all cases of overexposure get medical attention immediately. Take victim to a doctor, hospital or emergency treatment facility.

<b>If Inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on Skin:</b>	<ul style="list-style-type: none"> <li>• May cause frostbite to unprotected skin upon contact with dispensing equipment while gas is discharged rapidly.</li> <li>• Take off contaminated clothing and allow clothes to aerate in ventilated room prior to laundering.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in Eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with cool water for 15-20 minutes in case of freezing or cryogenic "burns". Do not rinse eyes with hot or even tepid water.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> <li>• Never introduce oil or ointment into eyes without medical advice.</li> </ul>

**HOTLINE NUMBER**

Have the product label with you when calling a poison control center or doctor, or when going for treatment. **CONTACT 1-800-308-4856 FOR ASSISTANCE WITH HUMAN OR ANIMAL MEDICAL EMERGENCIES.** You may also contact DEGESCH AMERICA, INC. 540-234-9281/1-800-330-2525 or CHEMTREC 1-800-424-9300.

**NOTE TO PHYSICIAN - THIS IS PHOSPHINE**

Mild exposure by inhalation of U-PHOS® Technical causes malaise (indefinite feeling of sickness), ringing of ears, fatigue, nausea and pressure in chest, which are relieved by removal to fresh air. Moderate poisoning causes weakness, vomiting, epigastric pain (pain just above the stomach), chest pain, diarrhea and dyspnea (difficulty in breathing). Symptoms of severe poisoning may occur within a few hours or up to several days, resulting in pulmonary edema (fluid in lungs) and may lead to dizziness, cyanosis (blue or purple skin color), unconsciousness and death.

In sufficient quantity it affects the liver, kidneys, lungs, nervous system, and circulatory system. Inhalation can cause lung edema (fluid in lungs) and hyperemia (excess of blood in a body part), small perivascular brain hemorrhages and brain edema (fluid in brain). Poisoning may result in (1) pulmonary edema, elevated MB-creatinine phosphokinase fraction of cardiac enzymes, cardiac dysrhythmia, (2) elevated serum GOT, LDH and alkaline phosphatase, reduced prothrombin, hemorrhage and jaundice (yellow skin color) and (3) hematuria (blood in urine) and anuria (abnormal or lack of urination). Pathology is characteristic of hypoxia (oxygen deficiency in body tissue). Frequent exposure over a period of days or weeks may cause poisoning. Treatment is symptomatic.

The following measures are suggested for use by the physician in accordance with the physician's own judgment:

1. Exposure of skin to rapidly evaporating liquid may cause cryogenic "burn". Treat the "burn" in a similar manner as a thermal burn.
2. In case of freezing or cryogenic "burns" to eyes by rapidly evaporating liquid, RINSE EYES WITH COOL WATER. Do not rinse eyes with hot or even tepid water.
3. In its milder to moderate forms (symptoms of poisoning may take up to 24 hours to appear), the following is suggested: Complete rest 1-2 days during which the patient must be kept quiet and warm. If the patient suffers from vomiting or increased blood sugar, appropriate solutions must be administered. Treatment with oxygen is recommended, as is the administration of cardiac and circulatory stimulants.
4. In cases of severe poisoning (intensive care unit is recommended): Where pulmonary edema is observed, steroid therapy must be considered and close medical supervision is recommended. Blood transfusions may be necessary. In case of manifest pulmonary edema, venesection must be performed under vein pressure control. Heart glycosides (I.V.) can be used in case of hemoconcentration. Venesection may result in shock. In the case of progressive edema of the lungs, immediately intubate and remove edema fluid and administer oxygen over-pressure respiration, as well as any measures required for shock treatment. In case of kidney failure, extracorporeal hemodialysis is necessary. There is no specific antidote known for this poisoning.

**Manufactured for:**

Degesch America, INC.

P. O. Box 116 - 153 Triangle Drive, Weyers Cave, VA 24486 USA, Telephone: (540) 234-9281/1-800-330-2525

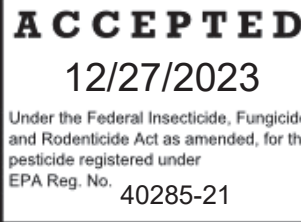
Internet: [www.degeschamerica.com](http://www.degeschamerica.com)E-mail: [degesch@degeschamerica.com](mailto:degesch@degeschamerica.com)

EPA Est. No. \_\_\_\_\_

EPA Reg. No. 40285-ER

Net Contents: \_\_\_\_\_ lbs. (\_\_\_\_ kg)

Batch No. \_\_\_\_\_



# PRECAUTIONARY STATEMENT HAZARDS TO HUMANS AND DOMESTIC ANIMALS

## DANGER/PELIGRO – POISON

Fatal if inhaled. The liquid may cause burns. Working in an area with undetermined concentrations requires a self-contained breathing apparatus (SCBA) with full face-piece operated in a pressure-demand mode. Do not get in eyes, in nose, on skin or on clothing. Do not breathe vapor. Do not eat, drink or smoke while handling U-PHOS® Technical. Phosphine gas may deaden the sense of smell. Do not depend solely on the odor to detect U-PHOS® Technical. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

### ENVIRONMENTAL HAZARDS

This product is highly toxic to fish and wildlife. Non-target organisms exposed to phosphine gas will be killed.

### PHYSICAL AND CHEMICAL HAZARDS

Phosphine may ignite spontaneously at levels above its lower flammability limit of 1.8% v/v (18,000 ppm). It is important not to exceed this concentration. Ignition of high concentration of phosphine can produce an explosive reaction. Explosions can occur under these conditions and may cause severe personal injury. **Never allow the buildup of phosphine to exceed explosive concentrations.**

**Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting. Do not drop the container.**

Never open cylinder in confined space without a self-contained breathing apparatus (SCBA) with full face-piece and operated in a pressure-demand mode. Never enter a space under fumigation with U-PHOS® Technical without first checking the gas concentration levels and wearing the appropriate breathing apparatus. Phosphine gas has a low solubility in water and oils and is stable at normal fumigation temperatures. However, it may react with certain metals and cause corrosion, especially at higher temperatures and relative humidities. Metals such as copper, brass and other copper alloys, and precious metals such as gold and silver are susceptible to corrosion. Phosphine gas will also react with certain metallic salts and therefore, sensitive items such as photographic film, some inorganic pigments, etc., must not be exposed. Under high vacuum conditions, phosphine gas blended with forced air may cause an explosive hazard. Do not apply U-PHOS® in vacuum chambers.

### DIRECTIONS FOR USE

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

The following types of fumigation and use sites are allowed phosphine:

- Space: tarp, mill, warehouse, food plant, packaging facility, temperature-controlled storage structures suitable for fumigation.
- Transport Vehicle: railcar, truck, van, container, refrigerated container for railcars or trucks.
- Storage: vertical silo, farm storage, flat storage, cold temperature storage spaces.
- Vessels or ships (not for use on barges) refrigerated containers.

Formulators using this product are responsible for obtaining EPA registration of their formulated product. Only for formulation into phosphine fumigant end use products registered for the following uses:

#### 1. Terrestrial food and feed crop use:

##### A. Fresh Commodities:

- Alfalfa
- Avocado
- Banana (includes Plantains)
- Cabbage (Chinese)
- Citrus Citron
- Dill
- Eggplant
- Endive
- Grapefruit
- Kumquat
- Legume Vegetables (Succulent, except Soybean)
- Lemon
- Lettuce
- Lime
- Mango
- Okra
- Orange
- Papaya
- Pepper
- Persimmon
- Pimento
- Salsify Tops
- Sweet Potato
- Tangelo
- Tangerine
- Tomato

##### B. Other Raw Commodities:

- Almonds
- Barley
- Brazil Nuts
- Cashews
- Cocoa Beans
- Coffee Beans
- Corn
- Cottonseed
- Dates
- Filberts
- Flower Seed
- Grass Seed
- Legume Vegetables (Dried)
- Millet
- Oats
- Peanuts
- Pecans
- Pistachio Nuts
- Popcorn
- Rice
- Rye
- Safflower Seed
- Sesame Seeds
- Sorghum
- Soybeans
- Sunflower Seeds
- Triticale
- Vegetable Seeds
- Walnuts
- Wheat

##### C. Processed foods and food crop:

- Processed candy and sugar
- Cereal flours and bakery mixes
- Cereal foods (including cookies, crackers, macaroni, noodles, pasta, pretzels, snack foods and spaghetti)
- Processed cereals (including milled fractions and packaged cereals)
- Cheese and cheese by-products
- Chocolate and chocolate products (such as assorted chocolate, chocolate liquor, cocoa, cocoa powder, dark chocolate coating and milk chocolate)
- Processed coffee
- Corn grits
- Cured, dried and processed meat products and dried fish
- Dates
- Dried eggs and egg yolk solids
- Dried milk, dried powdered milk, non-dairy creamers, and non-fat dried milk
- Dried or dehydrated fruits (such as citrus, apples, dates, figs, peaches, pears, prunes, raisins, and sultanas)
- Dried and dehydrated vegetables (such as beans, carrots, lentils, peas, potato flour, potato products and spinach)
- Malt
- Peanuts

- Processed herbs, spices, seasonings, and condiments
- Processed nuts (almonds, apricot kernels, Brazil nuts, cashews, filberts, peanuts, pecans, pistachio nuts, walnuts and other processed nuts)
- Processed oats (including oatmeal)
- Rice (brewers rice grits, enriched and polished, wild rice)
- Soybean flour and milled fractions
- Processed tea
- Yeast (including primary yeast)
- Wild rice

D. All animal feed and feed ingredients.

E. Fumigation under cold storage for fresh commodities and processed foods:

- Refer to the commodities listed under sections 1A, 1B, and 1C listed above

**2. Terrestrial non-food crop use:**

- Tobacco
- Fresh or dried plants and flowers (non-food)
- Bulbs, tubers, corms and rhizomes (ornamentals, non-food use)
- Seeds (grass seeds and ornamental herbaceous plant seeds)

**3. Terrestrial non-food indoor for fumigation of non-food commodities:**

A. Commodities:

- Animal hides; leather products
- Processed or unprocessed cotton, wool, or other natural fibers, cloth or clothing
- Feathers, furs, human hair, rubberized hair, vulcanized hair, mohair
- Wood, cut trees, wood chips and wood and bamboo products
- Dunnage
- Tires
- Paper and paper products
- Non-food flour (used in non-food coatings, sizings, etc.)
- Non-food starch (used in non-food coatings, sizings, etc.)
- Straw or hay
- Psyllium seed and psyllium seed husks\*\*

B. Commodities kept refrigerated or in cold storage

- Refer to the commodities listed under sections 2 and 3A listed above

**4. Rodents and other vertebrate pests. Not for use in burrows.**

\*\*Psyllium seed and psyllium seed husks destined for shipment to pharmaceutical manufacturers may be fumigated. Such dedicated lots may be fumigated in transport vehicles (truck trailers, railcars and containers) prior to shipment. However, in-transit fumigation (including aeration) of any vehicle is prohibited on public roads or waterways. In addition, psyllium seed and husks may be fumigated at stationary locations only under direct instructions from the pharmaceutical company.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area. Store cylinders upright (vertical) position to a rack or wall to prevent tipping with safety caps and protective bonnets securely in place. Do not store cylinders in areas where temperature may exceed 125 °F (51.7 °C).

### **INDOOR STORAGE**

Indoor storage in a separate building with no other occupancy is suitable. If cylinders are stored in an enclosed area without proper ventilation, the area must be tested for leaks. An approved low range phosphine monitor can be used to ensure that phosphine levels are below the TLV of 0.3 ppm before entry into the storage.

Storing indoors in occupied areas in buildings is prohibited. If the storage area is in an occupied building, the storage area must have either 1) a forced air ventilation system that meets required local ordinances for the storage of hazardous materials and operates continuously; or 2) be equipped with a permanently mounted and properly maintained and functioning phosphine monitoring system designed to alert occupants of the building if phosphine in the air of the storage area is greater than Threshold Limit Value (TLV) of 0.3 ppm.

### **OUTDOOR STORAGE**

It is recommended that U-PHOS® Technical cylinders be stored outdoors on a firm and level surface that is well drained. Store away from heat and building ventilation intakes.

### **SECURING CYLINDERS**

Cylinders (filled or empty) must be stored in an upright position and protected from falling.

### **CONTAINER HANDLING (CYLINDER):**

Cylinders must not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging, or sliding beyond that which would normally occur when moving cylinders. Do not transport any cylinders in closed vehicles where they occupy the same common airspace as personnel. Transport securely only in an upright position. Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and valve protection bonnet when cylinder is not in use.

Refillable container. Only Degesch America, Inc is authorized to refill cylinders. Do not use cylinders for any other purpose.

### **LEAK PROCEDURES:**

Evacuate immediate area of leak. Use a NIOSH approved positive pressure self-contained breathing apparatus (SCBA, not SCUBA) or combination air-supplied/SCBA respirator, such as manufactured by Draeger, Ranger, Survivair, Scott, or MSA, for entry into affected areas to correct problem. Move leaking or damaged cylinder outdoors or to an isolated location, observing strict safety precautions. Work upwind if possible. Do not permit entry into leakage area by unprotected persons until concentration of phosphine fumigant is determined to be 3 parts per million (ppm) or less, as determined by a detection device with sufficient sensitivity.

For emergencies involving spill, leak, fire, exposure, or accident call CHEMTREC: 1-800-424-9300. CONTACT 1-800-308-4856 FOR ASSISTANCE WITH HUMAN OR ANIMAL MEDICAL EMERGENCIES. You may also contact DEGESCH AMERICA, INC. – (540) 234-9281/1-800-330-2525.

EMERGENCY RESPONDERS (Use Guide 119 from the Emergency Response Guidebook for First Responders)

All emergency responses must be made in level B protection, which includes neoprene, butyl rubber or PVC gloves, Seranex coated Tyvek suit, rubber boots and an air-supplied respirator. Refer to the Safety Data Sheet for more detailed recommendations for handling, storage, spill, and leak procedures.

### **PESTICIDE DISPOSAL:**

Promptly return all empty U-PHOS® Technical cylinders to Degesch America, Inc. All unused or unwanted partially used cylinders must be returned to Degesch America, Inc. Follow proper CONTAINER HANDLING directions above. Pesticide wastes may be hazardous. Improper disposal of excess pesticide is a violation of Federal law. Consult your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**NO WARRANTIES:** To the extent consistent with applicable law (i) THE MANUFACTURER AND SELLER DISCLAIM ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; and (ii) in no case shall the Manufacturer or Seller be liable for special, incidental, or consequential damages resulting from the use, handling, storage, or disposal of this product.

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