

1/9 2548-73 PM-32

179

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 13 1987

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

Research Products Company
P.O. Box 1469
Salina, KS 67402-1460

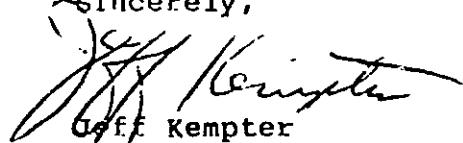
SUBJECT: Aluminum and Magnesium Phosphide Registration Standard
Your letters of February 23 and March 4, 1987
EPA Reg. Nos. 2548-59
2548-62
2548-63
2548-67
2548-68
2548-69
2548-70
2548-73
2548-74

Gentlemen:

Your submission has been reviewed and found to be acceptable for the products listed above.

Enclosed for each product is stamped, approved labeling. Incorporate any comments noted on the labeling and submit five copies of finished printed labeling for our records.

Sincerely,



Jeff Kempter
Product Manager 32
Registration Division (TS-767C)

Enclosures

BEST AVAILABLE COPY

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR 16 1987

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

2548-073

00050 DETIAPHOS ROTOX MT (small label) -- FRONT PANEL

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RESTRICTED USE PESTICIDE
DUE TO ACUTE INHALATION TOXICITY OF HIGHLY
TOXIC HYDROGEN PHOSPHIDE (PHOSPHINE, PH₃) GAS

00450 For retail sale to and use only by certified applicators for
00500 those uses covered by the applicator's certification or persons
00550 trained in accordance with the attached product manual working
00600 under the direct supervision and in the physical presence of the
00650 certified applicator. Physical presence means on site or on the
00700 premises. Read and follow the label and the Research Products
00750 Company product manual which contains complete instructions for
00800 the safe use of this pesticide.

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Detiaphos(R) ROTOX(R) MT

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Active Ingredient: Magnesium Phosphide.....34%
Inert Ingredients:.....66%
TOTAL.....100%

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KEEP OUT OF REACH OF CHILDREN

01400
01450

DANGER/PELIGRO-POISON

01500 PRECAUCION AL USUARIO: SI usted no lee ingles, no use este
01550 producto hasta que la etiqueta se le haya sido explicado
01600 ampliamente.

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STATEMENT OF PRACTICAL TREATMENT

01800 Symptoms of overexposure to hydrogen phosphide are headache,
01850 dizziness, nausea, difficult breathing, vomiting and diarrhea.
01900 In all cases of overexposure get medical attention immediately.
01950 Take victim to the doctor or emergency treatment facility.

02000
02050 IF GAS OR DUST FROM TABLETS IS INHALED: Get exposed person to
02100 fresh air. Keep warm and make sure person can breathe freely.
02150 If breathing has stopped, give artificial respiration by
02200 mouth-to-mouth or other means of resuscitation. Do not give
02250 anything by mouth to an unconscious person.

02300
02350 IF THE TABLETS OR THEIR DUST ARE SWALLOWED: Drink or administer

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02450 one or two glasses of water and induce vomiting by touching back
 02500 of throat with finger, or if available, administer syrup of
 02550 ipecac. Do not give anything by mouth if victim is unconscious
 02600 or not alert.

02650
 02700 IF TABLETS OR THEIR DUST GET ON SKIN OR CLOTHING: Brush or
 02750 shake material off clothes and shoes in well ventilated area.
 02800 Allow clothes to aerate in a ventilated area prior to
 02850 laundering. Do not leave contaminated clothing in occupied
 02900 and/or confined areas such as automobiles, vans, motel rooms,
 02950 homes, etc. Wash contaminated skin thoroughly with soap and
 03000 water.

03100 IF DUST FROM THE TABLETS GETS IN EYES: Flush with plenty of
 03150 water. Get medical attention.

03200
 03250 See side panels for additional precautionary statements.
 (00

03350 Manufactured by: Detia Freyberg, GMBH
 03400 P. O. Box 10
 03450 6947 Laudenbach
 03500 F.R. of Germany

03650 Distributed by: Research Products Company
 03700 Div. of McShares, Inc.
 03750 P. O. Box 1460
 03800 Salina, KS 67402-1460

03950 EPA Establishment No. 33982WG01 Net Contents:
 04000 EPA Registration No. 2548-~~67~~73 Net Contents:

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04150
 04200 LEFT PANEL

04250
 04300 HAZARDS TO HUMANS AND DOMESTIC ANIMALS

04350
 04400 KEEP OUT OF REACH OF CHILDREN
 04450 DANGER/POISON

04500
 04550 Magnesium phosphide in tablets or their dust can be fatal if
 04600 swallowed. Do not get in eyes, in nose, on skin or on clothing.
 04650 Do not eat, drink or smoke while handling magnesium phosphide
 04700 fumigants. When the container is opened Detiaphos(R) ROTDX(R) MT
 04750 will begin to release hydrogen phosphide (phosphine) which is an
 04800 extremely toxic gas. Contact with water, acids and some other
 04850 liquids will accelerate this reaction. ~~If a garlic odor is~~
 04900 ~~detected, refer to section on respiratory protection or~~
 04950 ~~applicator/worker exposure for appropriate monitoring~~
 05000 ~~procedures.~~ Pure hydrogen phosphide gas is odorless; the odor is
 05050 due to a contaminant. Since an odor may not be detected under

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05150 certain circumstances, the absence of a garlic odor does not
 05200 mean that hydrogen phosphide gas is absent. Observe proper
 05250 application, aeration, reentry and disposal procedures specified
 05300 elsewhere in the labeling to prevent overexposure.

05350
 05400 FREQUENT EXPOSURE TO LOW CONCENTRATIONS ABOVE PERMISSIBLE LEVELS
 05450 OVER A PERIOD OF DAYS OR WEEKS MAY CAUSE POISONING.

05500 NOTE TO PHYSICIAN

05600 Refer to "Detiaphos(R) ROTOX(R) MT and Detiaphos(R) ROTOX(R) MP
 05650 Instruction Booklet" for this section.

05750 RIGHT PANEL

05800 DIRECTIONS FOR USE

05950
 06000 It is a violation of federal law to use this product in a
 06050 manner inconsistent with its labeling.

06100
 06150 The "Detiaphos(R) ROTOX(R) MT and Detiaphos(R) ROTOX(R) MP
 06200 Instruction Booklet" is a part of labeling. Refer to it for
 06250 application procedures and other information necessary to
 06300 properly use Detiaphos(R) ROTOX(R).

06350
 06400 THIS PRODUCT IS ACCOMPANIED BY THE LABELING LISTED ABOVE. READ
 06450 AND UNDERSTAND THE ENTIRE LABELING. ALL PARTS OF THE LABELING
 06500 ARE EQUALLY IMPORTANT FOR SAFE AND EFFECTIVE USE OF THIS
 06550 PRODUCT. CALL RESEARCH PRODUCTS COMPANY OR EPA IF YOU HAVE ANY
 06600 QUESTIONS OR DO NOT UNDERSTAND ANY PART OF THIS LABELING.

06700
 06750 STORAGE AND DISPOSAL

06800 Refer to "Detiaphos(R) ROTOX(R) MT and Detiaphos(R) ROTOX(R) MP
 06900 Instruction Booklet" for this section.
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ACCEPTED
with COMMENTS
in EPA Letter Dated:

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Fungicide, and Rodenticide Act
as amended, for the pesticide
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DETIAPHOS ROTOX MT LABEL -- FRONT PANEL

RESTRICTED USE PESTICIDE
DUE TO ACUTE INHALATION TOXICITY OF HIGHLY
TOXIC HYDROGEN PHOSPHIDE (PHOSPHINE, PH₃) GAS

For retail sale to and use only by certified applicators for
those uses covered by the applicator's certification or persons
trained in accordance with the attached product manual working
under the direct supervision and in the physical presence of the
certified applicator. Physical presence means on site or on the
premises. Read and follow the label and the Research Products
Company product manual which contains complete instructions for
the safe use of this pesticide.

Detiaphos(R) ROTOX(R) MT

Active Ingredient: Magnesium Phosphide.....34%
Inert Ingredients:.....66%
TOTAL.....100%

KEEP OUT OF REACH OF CHILDREN

DANGER/PELIGRO-POISON

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este
producto hasta que la etiqueta se le haya sido explicado
ampliamente.

STATEMENT OF PRACTICAL TREATMENT

Symptoms of overexposure to hydrogen phosphide are headache,
dizziness, nausea, difficult breathing, vomiting and diarrhea.
In all cases of overexposure get medical attention immediately.
Take victim to the doctor or emergency treatment facility.

IF GAS OR DUST FROM TABLETS IS INHALED: Get exposed person to
fresh air. Keep warm and make sure person can breathe freely.
If breathing has stopped, give artificial respiration by
mouth-to-mouth or other means of resuscitation. Do not give
anything by mouth to an unconscious person.

IF THE TABLETS OR THEIR DUST ARE SWALLOWED: Drink or administer

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02500 of throat with finger, or if available, administer syrup of
02550 ipecac. Do not give anything by mouth if victim is unconscious,
02600 or not alert.

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02750 shake material off clothes and shoes in well ventilated area.
02800 Allow clothes to aerate in a ventilated area prior to
02850 laundering. Do not leave contaminated clothing in occupied
02900 and/or confined areas such as automobiles, vans, motel rooms,
02950 homes, etc. Wash contaminated skin thoroughly with soap and
03000 water.

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03150 water. Get medical attention.

03200 See side panels for additional precautionary statements.

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03950 EPA Establishment No. 33982WG01 Net Contents:
04000 EPA Registration No. 2548-73 Net Contents:
04050

04100
04200 LEFT PANEL

04250 HAZARDS TO HUMANS AND DOMESTIC ANIMALS

04300 KEEP OUT OF REACH OF CHILDREN
04350 DANGER/POISON
04400
04450
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04550 Magnesium phosphide in tablets or their dust can be fatal if
04600 swallowed. Do not get in eyes, in nose, on skin or on clothing.
04650 Do not eat, drink or smoke while handling magnesium phosphide
04700 fumigants. When the container is opened Detiaphos(R) RUTOX(R)
04750 MT will begin to release hydrogen phosphide (phosphine) which is
04800 an extremely toxic gas. Contact with water, acids and some
04850 other liquids will accelerate this reaction. If a garlic odor
04900 is detected, refer to section on ~~Application of your machinery or~~
04950 ~~applicator/worker exposure for appropriate monitoring~~
05000 ~~procedures~~ Pure hydrogen phosphide gas is odorless, the odor
05050 is due to a contaminant. Since an odor may not be detected

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05100 under certain circumstances, the absence of a garlic odor does
 05150 not mean that hydrogen phosphide gas is absent. Observe proper
 05200 application, aeration, reentry and disposal procedures specified
 05250 elsewhere in the labeling to prevent overexposure.

05300
 05350 FREQUENT EXPOSURE TO LOW CONCENTRATIONS ABOVE PERMISSIBLE LEVELS
 05400 OVER A PERIOD OF DAYS OR WEEKS MAY CAUSE POISONING.
 05450

05500 NOTE TO PHYSICIAN

05550
 05600 Magnesium phosphide in tablets or their dust reacts with
 05650 moisture from the air, water, acids, and many other liquids to
 05700 release hydrogen phosphide (phosphine) gas. Mild exposure by
 05750 inhalation causes malaise (indefinite feeling of sickness),
 05800 ringing of ears, fatigue, nausea and pressure in chest which are
 05850 relieved by removal to fresh air. Moderate poisoning causes
 05900 weakness, vomiting, epigastric pain (pain just above the
 05950 stomach), chest pain, diarrhea and dyspnea (difficulty in
 06000 breathing). Symptoms of severe poisoning may occur within a few
 06050 hours or up to several days, resulting in pulmonary edema (fluid
 06100 in lungs) and may lead to dizziness, cyanosis (blue or purple
 06150 skin color), unconsciousness and death.

06200
 06250 In sufficient quantity, hydrogen phosphide affects the liver,
 06300 kidneys, lungs, nervous system and circulatory system.
 06350 Inhalation can cause lung edema (fluid in lungs) and hyperemia
 06400 (excess of blood in a body part), small perivascular brain
 06450 hemorrhages and brain edema (fluid in brain). Ingestion can
 06500 cause lung and brain symptoms, but damage to the viscera (body
 06550 cavity organs) is more common. Hydrogen phosphide poisoning may
 06600 result in (1) pulmonary edema, (2) liver elevated serum GPT, LDH
 06650 and alkaline phosphatase, reduced prothrombin, hemorrhage and
 06700 jaundice (yellow skin color) and (3) kidney hematuria (blood in
 06750 urine) and anuria (abnormal or lack of urination). Pathology is
 06800 characteristic of hypoxia (oxygen deficiency in body tissue).
 06850 Treatment is symptomatic.

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RIGHT PANEL

DIRECTIONS FOR USE

07250 It is a violation of federal law to use this product in a
 07300 manner inconsistent with its labeling.

07400 The "Detiaphos(R) ROTOX(R) MT and Detiaphos(R) ROTOX(R) MF
 07450 Instruction Booklet" is a part of labeling. Refer to it for
 07500 application procedures and other information necessary to
 07550 properly use Detiaphos(R) ROTOX(R).

07750 THIS PRODUCT IS ACCOMPANIED BY THE LABELING LISTED ABOVE. READ

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07800 AND UNDERSTAND THE ENTIRE LABELING. ALL PARTS OF THE LABELING
 07850 ARE EQUALLY IMPORTANT FOR SAFE AND EFFECTIVE USE OF THIS
 07900 PRODUCT. CALL RESEARCH PRODUCTS COMPANY OR EPA IF YOU HAVE ANY
 07950 QUESTIONS OR DO NOT UNDERSTAND ANY PART OF THIS LABELING.

08000
 08050
 08100 STORAGE AND DISPOSAL

08150
 08200 STORAGE

08250
 08300 Flasks should be stored in a dry, well ventilated area, away
 08350 from heat and under lock and key. Post as a pesticide storage
 08400 area. Do not contaminate water, food or feed by storing
 08450 pesticides in the same areas used to store these commodities.

08500
 08550 Do not store in buildings where humans or domestic animals
 08600 reside. Refer to the "Detiaphos(R) ROTOX(R) MT and Detiaphos(R)
 08650 ROTOX(R) MP Instruction Booklet" for additional storage
 08700 instructions.

08750
 08800 DISPOSAL OF UNREACTED OR PARTIALLY REACTED TABLETS (From spills,
 08850 leaking flasks or other sources)

08900
 08950 Unreacted or partially reacted Detiaphos(R) ROTOX(R) tablets are
 09000 acutely hazardous. Improper disposal of this product is a
 09050 violation of federal law.

09100
 09150 If this product cannot be disposed of by ordinary use or
 09200 according to labeling instructions, contact your state pesticide
 09250 or environmental control agency or the hazardous waste
 09300 representative at the nearest EPA regional office for guidance.
 09350 Do not contaminate water by disposal.

09400
 09450 Reacted tablets are not hazardous. For complete disposal, spill
 09500 and leak procedures refer to the booklet "Detiaphos(R) ROTOX(R)
 09550 MT and Detiaphos(R) ROTOX(R) MP Instruction Booklet."

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 09650
 09700 DISPOSAL OF EMPTY FLASKS

09750
 09800 METHOD ONE: Triple rinse flasks and lids with water. Then
 09850 offer for recycling or reconditioning, or puncture and dispose
 09900 of them in a sanitary landfill or other approved site or by
 09950 other procedures approved by state and local authorities.
 10000 Dispose of rinsate in a sanitary landfill or by other approved
 10050 procedures.

10100
 10150 METHOD TWO: Remove lids and place empty flasks outdoors or in
 10200 structure being fumigated until residue in flasks is reacted.
 10250 Puncture and dispose of them in a sanitary landfill or other
 10300 approved site or by other procedures approved by state and local
 10400 authorities.

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10500 GENERAL

- 10550
- 10600 Consult federal, state and local disposal authorities for
- 10650 approved procedures other than those given above. Approved
- 10700 procedures vary for different types of generators.
- 10750
- 10800 *If in doubt concerning whether the dust is reacted and/or
- 10850 concerning proper disposal techniques contact Research Products
- 10900 Company.



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