

3125-337

rm 12

10810

FEB 10 1984

BEST AVAILABLE COPY

Mr. G. E. Brussell
Mobay Chemical Corporation
Agricultural Chemicals Division
P.O. Box 4913
Kansas City, MO 64120

Dear Mr. Brussell:

Subject: Guthion ZF
EPA Registration No. 3125-337
Your Application Dated November 4, 1983

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records.

We reiterate our position as stated in our letter of January 25, 1983.

"Additional data comparing residues resulting from use of these flowable formulations with those from the already registered Guthion formulations on representative commodities should be submitted."

Since the data previously submitted showed residues that exceeded established tolerances, the Agency feels it is necessary to conduct additional side-by-side studies to resolve this issue.

Sincerely yours,

BEST DOCUMENT AVAILABLE

Jay S. Ellenberger
Product Manager (12)
Insecticide-Rodenticide Branch
Registration Division (TS-767)

*was removed
from lab 8.*

Enclosure

DCR-28470;Ellenberger;2/6/84;RD- 01;CM#2;Rm.217;557-2380;del.2/23/84;pac

CONCURRENCES

SYMBOL ▶							
SURNAME ▶							
DATE ▶							

0120-251
2 of 10

YLD8

Base Pre-Reg. (4894)

U.S. LABEL

Reason to Issue: To delete crops not supported by residue data; to revise according to Label Improvement Program.

Date of Draft: 10/14/83 (Pre-Reg) (G)
Supersedes Pre-Reg Draft Dated: 7/14/81

EPA Reg. No. 3125-337

RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

[®]GUTHION 2 Flowable

INSECTICIDE

FEB 10 1984

Under the Federal Insecticide, Fungicide, and Rodenticide Act
Registration No. 3125-337

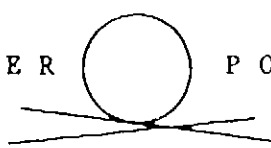
FOR EFFECTIVE ECONOMICAL INSECT CONTROL

Contains 2 lbs. O,O-Dimethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] phosphorodithioate per gallon.

ACTIVE INGREDIENT: 3125-337
O,O-Dimethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] phosphorodithioate 20%

INERT INGREDIENTS: 80%
100%

NET CONTENTS GALLONS

D A N G E R  P O I S O N

EPA Reg. No. 3125-337
EPA Est. No. 3125-M0-1

KEEP OUT OF REACH OF CHILDREN

STOP - READ THE LABEL BEFORE USE

(See rear panel for Statements of Practical Treatment and Other Precautionary Statements)

PROTECT FROM HEAT
SHAKE WELL BEFORE USING

MOBAY CHEMICAL CORPORATION
AGRICULTURAL CHEMICALS DIVISION
Box 4913, Kansas City, Missouri 64120

Note: Underlined letters in chemical nomenclature should be italicized when printed, not underlined.

DIRECTIONS FOR USE

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

IMPORTANT: Read these entire Directions and Conditions of Sale before using GUTHION 2 Flowable insecticide.

CONDITIONS OF SALE: THE DIRECTIONS ON THIS LABEL WERE DETERMINED THROUGH RESEARCH TO BE THE DIRECTIONS FOR CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED FOR A RANGE OF WEATHER CONDITIONS SIMILAR TO THOSE WEATHER CONDITIONS THAT ARE ORDINARY AND CUSTOMARY IN THE GEOGRAPHIC AREA WHERE THE PRODUCT IS USED. INSUFFICIENT CONTROL OF PESTS MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL WEATHER, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO THE CROP TO WHICH THE PRODUCT IS APPLIED, OTHER CROPS, ANIMALS, MAN, OR THE ENVIRONMENT. MOBAY AND THE SELLER OFFER, AND THE BUYER ACCEPTS AND USES, THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL WEATHER OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF MOBAY AND ARE, THEREFORE, THE RESPONSIBILITY OF THE BUYER.

MIXING: GUTHION 2 Flowable insecticide mixes readily with water and is suitable for use in all power-operated ground sprayers and aircraft sprayers. Fill the spray tank 1/4 to 1/3 full with clean water and add GUTHION 2 Flowable at the recommended rate. Mix thoroughly and add water to fill spray tank. GUTHION 2 Flowable may also be applied in a 1:1 ratio with water as an ultra-low volume spray with either ground or aircraft equipment that has been adapted and calibrated for ultra-low volume spraying as described below under "Recommended Applications" for those crops specified.

DOSAGE: Use specified dosage of GUTHION 2 Flowable in the amount of water necessary to give complete coverage of foliage. The type of equipment used will determine the concentration required.

SPRAYING: Work to windward. Protect sprayer operators from drift or mist. When low volumes of spray are applied, complete coverage and thorough application are essential for most effective results. Schedule applications in accordance with local conditions. Consult your State Agricultural Extension Service or Experiment Station for specific use information in your area.

RECOMMENDED APPLICATIONS

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
FIELD CROPS			Apply specified dosage per acre using a minimum of 10 gallons of water per acre when applying with ground equipment, and a minimum of 5 gallons per acre for aerial applications for alfalfa weevils and at least 1 gallon per acre for the other insects listed. It may be necessary to use 20 to 25 gallons of water per acre on heavy growth for control of alfalfa weevil or Egyptian alfalfa weevil with ground equipment. (REMARKS CONTINUED ON PAGE 3.)
.....	Alfalfa weevil	1 to 3	
.....	Leafhoppers	1 to 2	
Alfalfa Clover	Egyptian alfalfa weevil	1-1/2 to 3	
.....	Alfalfa plant bug	2 to 3	
.....	Leafhopper		
.....	Grasshoppers		
.....	Lygus bugs		
.....	Spittlebug		

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
FIELD CROPS (Cont.)			(CONTINUED FROM PAGE 2)
Alfalfa Clover	Alfalfa weevil	1 to 3	Apply twice per cutting at the 1 pint rate at intervals of 10 to 11 days. Do not apply more than twice per cutting at the 1 pint rate. Apply only once per cutting at rates above 1 pint per acre. Do not apply within 14 days of harvest at the rates of 1 to 1-1/2 pints per acre or within 16 days at the rate of 2 pints per acre. Do not apply rates above 2 pints per acre within 21 days of harvest.
	Leafhoppers Mites	1 to 2	
	Egyptian alfalfa weevil	1-1/2 to 3	
	Alfalfa plant bug Fleahopper Grasshoppers Lygus bugs Spittlebug	2 to 3	
Cotton (Conventional or Low Volume Spray)	Boll weevil	1/2 to 1	Apply specified dosage per acre by air or ground equipment in at least 1 gallon of water. For early season control of bollworm and pink bollworm in States West of Rocky Mountains use 2 to 3 pints per acre and for mid-to-late season applications use 3 to 4 pints per acre. Repeat as necessary. Do not apply within 1 day of picking at rates up to 2 pints per acre or within 7 days of picking at rates above 2 pints per acre. Cotton receiving late season applications should not be pastured.
	Brown cotton leafworm	1	
	Cotton fleahopper Cotton leafworm		
	Lygus bugs Thrips	1 to 2	
	Rapid plant bug Tarnished plant bug		
	Stink bug	2	
	Bollworm Pink bollworm	East of Rocky Mts. 2 West of Rocky Mts. 2 to 4	
Cotton(1) (Ultra Low Volume Spray)	Boll weevil	1/2 to 1	Apply specified dosage per acre. GUTHION 2 Flowable may be used in a 1:1 ratio with water in any ground or aerial spray equipment that has been adapted and calibrated for ultra-low volume spraying. Spray machines must be equipped with accepted low volume devices that will produce droplets within the range of 30 to 100 microns in size. ULV aerial applications should be made at altitudes of 10 to 20 feet. Repeat applications as necessary but not within 2 days of hand picking. Cotton may be machine harvested any time after application. Do not graze livestock in treated areas. Early and Mid-season control: Apply specified dosage per acre in accordance with local recommendations.
		1	Diapause Weevil Control: The one pint per acre rate only is recommended for control of diapausing boll weevils. Schedule applications in accordance with local recommendations.

RECOMMENDED APPLICATIONS
(Continued)

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
<u>FIELD CROPS</u> Barley Oats Rye Wheat	(Cont'd) Cereal leaf beetle	1-1/2 to 2	Apply specified dosage per acre by air or ground equipment in sufficient water for complete coverage but not less than 1 gallon per acre. Do not apply more than once per season. Do not harvest for food, feed, forage or graze within 30 days of treatment.
Sugarcane (Conventional Spray) (Florida, Louisiana and Texas only)	Sugarcane borer	3	Apply specified dosage per acre by air application using a minimum of 2 gallons of water per acre. For best results applications should be made at approximately cane top level and not more than 10 feet above cane top level. Do not apply more than 5 times per season nor within 30 days of harvest. Bagasse from sugarcane treated with GUTHION may be used for feed of cattle, goats, and sheep. Consult your State Agricultural Extension Service or Experiment Station for specific use information.
Sugarcane (1) (Ultra Low Volume Spray) (Florida, Louisiana and Texas only)	Sugarcane borer	3	Apply specified dosage per acre. GUTHION 2 Flowable may be used in a 1:1 ratio with water in any aerial spray equipment that has been adapted and calibrated for ultra-low volume spraying. Planes must be equipped with accepted low volume devices that will produce droplets within the range of 30 to 100 microns in size. For best results applications should be made at approximately cane top level and not more than 10 feet above cane top level. Do not apply more than 5 times per season nor within 30 days of harvest. Bagasse from sugarcane treated with GUTHION may be used for feed of cattle, sheep and goats. Consult your State Agricultural Extension Service or Experiment Station for specific use information.

(1)
Note: This formulation, when used ultra-low-volume, may cause spotting of automobile finishes if prolonged exposure is permitted. Do not spray directly over automobiles. If accidental exposure does occur, automobiles should be washed immediately.

BEST AVAILABLE COPY

GUTHION 2 Flowable

3125-557
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RECOMMENDED APPLICATIONS
(Continued)

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
Broccoli Brussels Sprouts Cabbage Cauli- flower	Aphids Cabbage looper Diamondback moth Imported cabbageworm	2 to 3 2	Apply specified dosage per acre in sufficient water for complete coverage but not less than 1 gallon per acre. Repeat as necessary. Do not apply within 7 days of harvest for Brussels sprouts, 15 days of harvest for broccoli and cauliflower, nor within 21 days of harvest for cabbage.
	Cabbage maggot	1/2	Mix specified dosage in 50 gallons of water. Apply 4 to 6 ounces of this emulsion per plant immediately after transplanting.
	Cabbage maggot (Transplant Fields in California only)	3	Apply specified dosage in 300 to 400 gallons of water per acre as a soil drench in the rows when damage first appears. Additional applications may be necessary. Do not apply within 21 days of harvest.
	Cabbage maggot (Direct Seeded Fields in California only)	3	Apply specified dosage per acre in sufficient water for uniform distribution. Mix in the upper 2 inches of soil prior to seeding or spray in the seed row at planting time. Usually 2 to 3 additional sprays are necessary during the growing season depending upon time of year and maggot population. Do not apply within 21 days of harvest.
ORNAMENTALS			
Ornamen- tals Nursery Plants Forest & Shade Trees	Aphids Cercococcus scale Euonymus scale Juniper scale Lace bugs Leafhoppers Mites Olive scale Oystershell scale Pulvinaria scale Thrips	1 1/2 to 2	Apply specified dosage per 100 gallons of water (2 teaspoonfuls per gallon). Spray all foliage surfaces including the underside of leaves for complete coverage. For control of black pine leaf, brown soft, European elm, and Putnam scales, use 1 tablespoonful per gallon. Repeat as necessary.
	Brown soft scale Putnam scale	4	
	European elm scale Black pine leaf scale	3 to 4	

RECOMMENDED APPLICATIONS
(Continued)

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
ORNAMENTALS (Cont'd)			
Ornamentals Nursery Plants, Forest & Shade Trees (Cont'd)	Cone midge Cone moth	8 to 16	Apply specified dosage per 100 gallons of water. Time applications to coincide with moth flight when cones are open for pollination. Thorough coverage of cones is necessary for maximum control. Repeat as necessary.
	European pine shoot moth Nantucket pine tip moth	1 1/2 to 3	Apply specified dosage per acre in sufficient water for good coverage. Time applications to coincide with moth flights. For application to individual trees, use 1 tablespoonful of GUTHION 2 Flowable per gallon of water.
Injury to hawthorn or American linden may occur under some conditions. Do not allow children or pets on treated area until material has been washed into soil and treated area is dry.			
Southern Pine Orchards	Coneworm Seedworm	See Remarks	Use 6 pints per 100 gallons of water (0.2% dilution) as a full coverage spray.* Use 3 pints per 10 gallons of water (1% dilution) for low volume sprayers. Apply first application within 30 days following conelet closure, followed by 3 to 5 applications (at least 30 days apart). Apply approximately 5 to 10 gallons of the 0.2% dilution with high volume sprayers or approximately 1 to 2 gallons of the 1% dilution with low volume sprayers per tree. Thorough coverage of cones is necessary for maximum control.

*This concentration is calculated for conventional hydraulic-type sprayers. When lower volumes of spray are applied per acre with concentrate sprayers, increase the concentration of GUTHION 2 Flowable in the spray mixture in order to apply amount of GUTHION 2 Flowable per acre equivalent to a full coverage spray. Where conditions dictate aerial application, apply dosage per acre equivalent to a full coverage ground spray in not less than one gallon of water per acre.

RESTRICTIONS

Do not use on other crops used for food or forage. Use only according to label directions. Application at rates above those shown may result in illegal crop residues. Do not graze livestock in treated orchards or groves for 21 days after treatment. Do not treat food crops grown in the greenhouse.

Reason to Issue: To delete crops not supported by residue data; to revise according to Label Improvement Program.

Date of Draft: 10/14/83 (Pre-Reg) (G)
Supersedes Pre-Reg Draft Dated: 7/14/81

EPA Reg. No. 3125-337

RESTRICTED USE PESTICIDE
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

® **GUTHION 2 Flowable**

INSECTICIDE

FEB 10 1984

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

FOR EFFECTIVE ECONOMICAL INSECT CONTROL

ACTIVE INGREDIENT: 3125-337
O,O-Dimethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] phosphorodithioate 20%

Contains 2 lbs. O,O-Dimethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] phosphorodithioate per gallon.

INERT INGREDIENTS: 80%
100%

NET CONTENTS GALLONS

D A N G E R  P O I S O N

EPA Reg. No. 3125-337

EPA Est. No. 3125-MO-1

KEEP OUT OF REACH OF CHILDREN

STOP - READ THE LABEL BEFORE USE

(See rear panel for Statements of Practical Treatment and Other Precautionary Statements)

**PROTECT FROM HEAT
SHAKE WELL BEFORE USING**

MOBAY CHEMICAL CORPORATION
AGRICULTURAL CHEMICALS DIVISION
Box 4913, Kansas City, Missouri 64120

Note: Underlined letters in chemical nomenclature should be italicized when printed, not underlined.

GUTHION 2 Flowable

3125-337

DIRECTIONS FOR USE

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

IMPORTANT: Read these entire Directions and Conditions of Sale before using GUTHION 2 Flowable insecticide.

CONDITIONS OF SALE: THE DIRECTIONS ON THIS LABEL WERE DETERMINED THROUGH RESEARCH TO BE THE DIRECTIONS FOR CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED FOR A RANGE OF WEATHER CONDITIONS SIMILAR TO THOSE WEATHER CONDITIONS THAT ARE ORDINARY AND CUSTOMARY IN THE GEOGRAPHIC AREA WHERE THE PRODUCT IS USED. INSUFFICIENT CONTROL OF PESTS MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL WEATHER, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO THE CROP TO WHICH THE PRODUCT IS APPLIED, OTHER CROPS, ANIMALS, MAN, OR THE ENVIRONMENT. MOBAY AND THE SELLER OFFER, AND THE BUYER ACCEPTS AND USES, THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL WEATHER OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF MOBAY AND ARE, THEREFORE, THE RESPONSIBILITY OF THE BUYER.

MIXING: GUTHION 2 Flowable insecticide mixes readily with water and is suitable for use in all power-operated ground sprayers and aircraft sprayers. Fill the spray tank 1/4 to 1/3 full with clean water and add GUTHION 2 Flowable at the recommended rate. Mix thoroughly and add water to fill spray tank. GUTHION 2 Flowable may also be applied in a 1:1 ratio with water as an ultra-low volume spray with either ground or aircraft equipment that has been adapted and calibrated for ultra-low volume spraying as described below under "Recommended Applications" for those crops specified.

DOSAGE: Use specified dosage of GUTHION 2 Flowable in the amount of water necessary to give complete coverage of foliage. The type of equipment used will determine the concentration required.

SPRAYING: Work to windward. Protect sprayer operators from drift or mist. When low volumes of spray are applied, complete coverage and thorough application are essential for most effective results. Schedule applications in accordance with local conditions. Consult your State Agricultural Extension Service or Experiment Station for specific use information in your area.

RECOMMENDED APPLICATIONS

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
FIELD CROPS			
	Alfalfa weevil	1 to 3	Apply specified dosage per acre using a minimum of 10 gallons of water per acre when applying with ground equipment, and a minimum of 5 gallons per acre for aerial applications for alfalfa weevils and at least 1 gallon per acre for the other insects listed. It may be necessary to use 20 to 25 gallons of water per acre on heavy growth for control of alfalfa weevil or Egyptian alfalfa weevil with ground equipment. (REMARKS CONTINUED ON PAGE 3.)
.....	Leafhoppers	1 to 2	
Alfalfa		
Clover	Egyptian alfalfa weevil	1-1/2 to 3	
.....	Alfalfa plant bug	2 to 3	
.....	Fleahopper		
.....	Grasshoppers		
.....	Lygus bugs		
.....	Spittlebug		
.....		

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
FIELD CROPS (Cont.)			(CONTINUED FROM PAGE 2)
Alfalfa Clover	Alfalfa weevil	1 to 3	Apply twice per cutting at the 1 pint rate at intervals of 10 to 11 days. Do not apply more than twice per cutting at the 1 pint rate. Apply only once per cutting at rates above 1 pint per acre. Do not apply within 14 days of harvest at the rates of 1 to 1-1/2 pints per acre or within 16 days at the rate of 2 pints per acre. Do not apply rates above 2 pints per acre within 21 days of harvest.
	Leafhoppers	1 to 2	
	Mites		
	Egyptian alfalfa weevil	1-1/2 to 3	
	Alfalfa plant bug		
Cotton (Conventional or Low Volume Spray)	Fleahopper	2 to 3	Apply specified dosage per acre by air or ground equipment in at least 1 gallon of water. For early season control of bollworm and pink bollworm in States West of Rocky Mountains use 2 to 3 pints per acre and for mid-to-late season applications use 3 to 4 pints per acre. Repeat as necessary. Do not apply within 1 day of picking at rates up to 2 pints per acre or within 7 days of picking at rates above 2 pints per acre. Cotton receiving late season applications should not be pastured.
	Grasshoppers		
	Lygus bugs		
	Spittlebug		
	Boll weevil	1/2 to 1	
	Brown cotton leafworm	1	
	Cotton fleahopper		
	Cotton leafworm		
	Lygus bugs		
	Thrips		
Rapid plant bug	1 to 2		
Tarnished plant bug			
Stink bug	2		
Bollworm	East of Rocky Mts. 2		
Pink bollworm	West of Rocky Mts. 2 to 4		
Cotton(1) (Ultra Low Volume Spray)	Boll weevil	1/2 to 1	Apply specified dosage per acre. GUTHION 2 Flowable may be used in a 1:1 ratio with water in any ground or aerial spray equipment that has been adapted and calibrated for ultra-low volume spraying. Spray machines must be equipped with accepted low volume devices that will produce droplets within the range of 30 to 100 microns in size. ULV aerial applications should be made at altitudes of 10 to 20 feet. Repeat applications as necessary but not within 2 days of hand picking. Cotton may be machine harvested anytime after application. Do not graze livestock in treated areas. Early and Mid-season control: Apply specified dosage per acre in accordance with local recommendations.
		1	Diapause Weevil Control: The one pint per acre rate only is recommended for control of diapausing boll weevils. Schedule applications in accordance with local recommendations.

RECOMMENDED APPLICATIONS
(Continued)

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
FIELD CROPS (Cont'd) Barley Oats Rye Wheat	Cereal leaf beetle	1-1/2 to 2	Apply specified dosage per acre by air or ground equipment in sufficient water for complete coverage but not less than 1 gallon per acre. Do not apply more than once per season. Do not harvest for food, feed, forage or graze within 30 days of treatment.
Sugarcane (Conventional Spray) (Florida, Louisiana and Texas only)	Sugarcane borer	3	Apply specified dosage per acre by air application using a minimum of 2 gallons of water per acre. For best results applications should be made at approximately cane top level and not more than 10 feet above cane top level. Do not apply more than 5 times per season nor within 30 days of harvest. Bagasse from sugarcane treated with GUTHION may be used for feed of cattle, goats, and sheep. Consult your State Agricultural Extension Service or Experiment Station for specific use information.
Sugarcane (1) (Ultra Low Volume Spray) (Florida, Louisiana and Texas only)	Sugarcane borer	3	Apply specified dosage per acre. GUTHION 2 Flowable may be used in a 1:1 ratio with water in any aerial spray equipment that has been adapted and calibrated for ultra-low volume spraying. Planes must be equipped with accepted low volume devices that will produce droplets within the range of 30 to 100 microns in size. For best results applications should be made at approximately cane top level and not more than 10 feet above cane top level. Do not apply more than 5 times per season nor within 30 days of harvest. Bagasse from sugarcane treated with GUTHION may be used for feed of cattle, sheep and goats. Consult your State Agricultural Extension Service or Experiment Station for specific use information.

(1)

Note: This formulation, when used ultra-low-volume, may cause spotting of automobile finishes if prolonged exposure is permitted. Do not spray directly over automobiles. If accidental exposure does occur, automobiles should be washed immediately.

GUTHION 2 Flowable

3125-337

RECOMMENDED APPLICATIONS
(Continued)

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
Broccoli Brussels Sprouts Cabbage Cauli- flower	Aphids Cabbage looper Diamondback moth Imported cabbageworm	2 to 3 2	Apply specified dosage per acre in sufficient water for complete coverage but not less than 1 gallon per acre. Repeat as necessary. Do not apply within 7 days of harvest for Brussels sprouts, 15 days of harvest for broccoli and cauliflower, nor within 21 days of harvest for cabbage.
	Cabbage maggot	1/2	Mix specified dosage in 50 gallons of water. Apply 4 to 6 ounces of this emulsion per plant immediately after transplanting.
	Cabbage maggot (Transplant Fields in California only)	3	Apply specified dosage in 300 to 400 gallons of water per acre as a soil drench in the rows when damage first appears. Additional applications may be necessary. Do not apply within 21 days of harvest.
	Cabbage maggot (Direct Seeded Fields in California only)	3	Apply specified dosage per acre in sufficient water for uniform distribution. Mix in the upper 2 inches of soil prior to seeding or spray in the seed row at planting time. Usually 2 to 3 additional sprays are necessary during the growing season depending upon time of year and maggot population. Do not apply within 21 days of harvest.
ORNAMENTALS			
Ornamen- tals Nursery Plants Forest & Shade Trees	Aphids Cercococcus scale Euonymus scale Juniper scale Lace bugs Leafhoppers Mites Olive scale Oystershell scale Pulvinaria scale Thrips	1 1/2 to 2	Apply specified dosage per 100 gallons of water (2 teaspoonfuls per gallon). Spray all foliage surfaces including the underside of leaves for complete coverage. For control of black pine leaf, brown soft, European elm, and Putnam scales, use 1 tablespoonful per gallon. Repeat as necessary.
	Brown soft scale Putnam scale	4	
	European elm scale Black pine leaf scale	3 to 4	

RECOMMENDED APPLICATIONS
(Continued)

CROP	INSECT	Pints GUTHION 2 Flowable	REMARKS
ORNAMENTALS (Cont'd)			
Ornamentals Nursery Plants, Forest & Shade Trees (Cont'd)	Cone midge Cone moth	8 to 16	Apply specified dosage per 100 gallons of water. Time applications to coincide with moth flight when cones are open for pollination. Thorough coverage of cones is necessary for maximum control. Repeat as necessary.
	European pine shoot moth Nantucket pine tip moth	1 1/2 to 3	Apply specified dosage per acre in sufficient water for good coverage. Time applications to coincide with moth flights. For application to individual trees, use 1 tablespoonful of GUTHION 2 Flowable per gallon of water.
Injury to hawthorn or American linden may occur under some conditions. Do not allow children or pets on treated area until material has been washed into soil and treated area is dry.			
Southern Pine Orchards	Coneworm Seedworm	See Remarks	Use 6 pints per 100 gallons of water (0.2% dilution) as a full coverage spray.* Use 3 pints per 10 gallons of water (1% dilution) for low volume sprayers. Apply first application within 30 days following conelet closure, followed by 3 to 5 applications (at least 30 days apart). Apply approximately 5 to 10 gallons of the 0.2% dilution with high volume sprayers or approximately 1 to 2 gallons of the 1% dilution with low volume sprayers per tree. Thorough coverage of cones is necessary for maximum control.

*This concentration is calculated for conventional hydraulic-type sprayers. When lower volumes of spray are applied per acre with concentrate sprayers, increase the concentration of GUTHION 2 Flowable in the spray mixture in order to apply amount of GUTHION 2 Flowable per acre equivalent to a full coverage spray. Where conditions dictate an air application, apply dosage per acre equivalent to a full coverage ground spray in not less than one gallon of water per acre.

RESTRICTIONS

Do not use on other crops used for food or forage. Use only according to label directions. Application at rates above those shown may result in illegal crop residues. Do not graze livestock in treated orchards or groves for 21 days after treatment. Do not treat food crops grown in the greenhouse.

RE-ENTRY STATEMENTS

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas without protective clothing until 24 hours after application. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings should include those statements found under the label heading "Precautionary Statements" and "Re-entry Statements" included on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: DANGER, area treated with GUTHION 2 Flowable on (date of application). Do not enter without appropriate protective clothing until 24 hours after application. If on skin, remove contaminated clothing and wash skin immediately with soap and warm water. If eyes are contaminated, wash with flowing water for at least 15 minutes. If swallowed, vomiting should be induced. (See Precautionary Statements on label).

STORAGE AND DISPOSAL

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

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use 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: 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.

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If container is leaking invert to prevent leakage. If the container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary... Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides above. In spill or leak incidents, keep unauthorized people away. You may contact the Mobay Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Mobay Kansas City Emergency Response Telephone No. is 816-242-2582, or contact Chem-Trec at 800-424-9300.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER



POISON

Poisonous if swallowed, inhaled, or absorbed through the skin. Do not get in eyes or on skin. Do not breathe fumes or spray mist. Spray operator should work to windward to stay out of drift or mist.

When loading spray tank or handling the concentrate at any other time, wear protective clothing, natural rubber gloves, and goggles. When handling the concentrate, wear a pesticide respirator jointly approved by the Mining Enforcement and Safety Administration (formerly the U. S. Bureau of Mines) and by the National Institute for Occupational Safety and Health under the provisions of 30 CFR Part II.

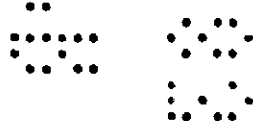
Do not contaminate feed or foodstuffs. Keep out of reach of children and domestic animals. Keep all unprotected persons out of the operating area or vicinity where there may be danger of drift. Wash hands, arms, and face thoroughly with soap and warm water before eating or smoking.

HANDLING OF CONTAMINATED ARTICLES: Clothing and rags receiving undiluted GUTHION 2 Flowable as a result of leaks, spills, or mishaps should be removed immediately and not reused. These contaminated articles should be buried in the same manner as the empty container; see container disposal section for directions. (Contaminated articles which should be discarded would include: hats, gloves, aprons, coats, boots, etc. not made of rubber or coated with rubber or other similar materials). Clothing receiving spray mist or droplets from the mixed, diluted GUTHION 2 Flowable should be removed and decontaminated before reuse. This clothing can be decontaminated by machine washing separately from other items with soap or detergent and bleach in hot water twice before reuse. Protective clothing and equipment should be washed down with detergent or soap and bleach in water. Wash water from the cleaning of protective clothing or equipment should not be allowed to run off or otherwise enter water supplies.

SYMPTOMS OF POISONING: A sense of "tightness" in the chest. Sweating. Contracted pupils. Stomach pains. Vomiting and diarrhea.

STATEMENTS OF PRACTICAL TREATMENT

In case of poisoning call a physician immediately. Have patient lie down and keep quiet. If swallowed, vomiting should be induced. Administer milk or water freely and induce vomiting by giving one dose (1/2 oz. or 15 ml.) of syrup of ipecac. If vomiting does not occur within 10 to 20 minutes, administer second dose. If syrup of ipecac is not available, induce vomiting by sticking finger down throat. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Professional medical assistance should be secured immediately. If on skin, remove contaminated clothing and wash skin immediately with soap and warm water. If eyes are contaminated, wash with flowing water for at least 15 minutes.



GUTHION 2 Flowable

3125-337

TO PHYSICIAN:

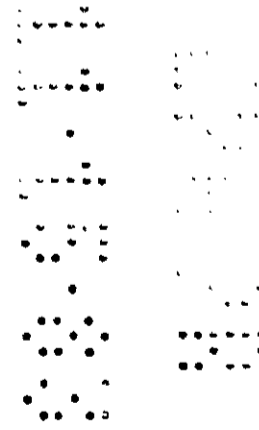
ANTIDOTE - Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. 2-PAM is also antidotal and may be administered in conjunction with atropine.

Compound inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves. Do not give morphine. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 12 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

ENVIRONMENTAL HAZARDS

Highly toxic to fish and wildlife. Do not contaminate any body of water nor apply to any area not specified on the label.

GUTHION is a Reg. TM of the Parent Company of Farbenfabriken Bayer GmbH, Leverkusen.



FEB 10 1984

Mr. G. E. Brussell
Mobay Chemical Corporation
Agricultural Chemicals Division
P.O. Box 4913
Kansas City, MO 64120

Dear Mr. Brussell:

Subject: Guthion ZF
EPA Registration No. 3125-337
Your Application Dated November 4, 1983

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records.

We reiterate our position as stated in our letter of January 25, 1983.

"Additional data comparing residues resulting from use of these flowable formulations with those from the already registered Guthion formulations on representative commodities should be submitted."

Since the data previously submitted showed residues that exceeded established tolerances, the Agency feels it is necessary to conduct additional side-by-side studies to resolve this issue.

Sincerely yours,

BEST DOCUMENT AVAILABLE

Jay S. Ellenberger
Product Manager (12)
Insecticide-Rodenticide Branch
Registration Division (TS-767)

*uses removed
from label.*

Enclosure

DCR-28470:Ellenberger:2/6/84:RD-01:CM#2:Rm.217:557-2380:del.2/23/84:pac

CONCURRENCES

SYMBOL ▶							
SURNAME ▶							
DATE ▶							