

678 H 707-71
PM 12
p. 1048

Kay L. McCarthy, Ph.D.
Product Registration Manager
Rohm and Haas
Independence Mall West
Philadelphia, PA 19105

JUN 25 1985

Dear Dr. McCarthy:

Subject: Karathane Liquid Concentrate
EPA Registration No. 707-71
Date of Submission: May 23, 1985

The labeling referred to above has been reviewed and is being accepted on the condition that you comply with the following requirements for revising your labeling.

Add the following:

When mixing/loading and spraying, wear midforearm to elbow length chemical resistant gloves and boots or overshoes, one-piece overalls which have long sleeves and long pants, and face shield or goggles. Mixer/loaders should in addition wear a chemical resistant apron.

Any article of clothing worn while applying product must be cleaned before reusing. Clothing which has been drenched or heavily contaminated should be disposed of in accordance with state or local regulations.

Instead of clothing and equipment specified above, the applicator can use an enclosed tractor cab with filtered air supply.

Your statement "The Signal Word Changes for the technical and Liquid Concentrate have been made to reflect the potential for severe eye irritation with these products" is inaccurate. Rather, the signal word is based on eye irritation studies which show dinocap in these formulations as a severe irritant. Refer to summary of data submitted March 1, 1985.

If you have further questions please call or write to me.

Sincerely yours,

BEST AVAILABLE COPY

Jay S. Ellenberger
Product Manager (12)

CONCURRENCES

Insectic & Rodenticide Branch
Registration Division (767)

SYMBOL									
SURNAME									
DATE	JOB: 92915	Kendrick	898-1270	RD: 85/34	6/18/85	DEL: 6/28/85	80		

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FOR AGRICULTURAL USE ONLY OR ONLY
FOR SALE TO, USE, AND STORAGE BY SERVICEPERSONS

KARATHANE[®]

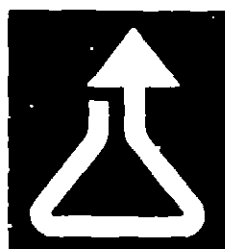
LIQUID CONCENTRATE

AGRICULTURAL FUNGICIDE & MITICIDE

KEEP OUT OF REACH OF CHILDREN

WARNING

Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions on side and back panels and attached use directions. If the Conditions of Sale and Warranty are not acceptable, return the product unopened within thirty days of purchase to the place of purchase.



**ROHM
& HAAS**
PHILADELPHIA, PA. 19105

ACTIVE INGREDIENTS

2,4-Dinitro-6-octyl* phenyl crotonate	35.0%**
2,6-Dinitro-4-octyl* phenyl crotonate	
Nitrooctyl* phenols (principally dinitro)	2.4%
INERT INGREDIENTS	62.6%

Total 100.0%

*A mixture of 1-methylheptyl, 1-ethylhexyl, and 1-propylpentyl isomers.

**Equivalent to 48% or 4 lbs. Technical Karathane.

EPA Reg. No. 707-71

EPA Est. No. 279-NJ-1

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NET CONTENTS **1 GALLON** (3.785 LITERS)

ACCEPTED
with COMMENTS
in EPA Letter Dated

JUN 25 1985

54Y-1085 Rev. — Rohm and Haas — 2A — 4/26/85
Disc. 45 — File W

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

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PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

Harmful if swallowed, absorbed through the skin, or inhaled. Causes severe eye irritation. May cause allergic skin reaction in susceptible individuals. Avoid breathing vapors or spray mist. Do not get in eyes, or on skin, or on clothing.

During mixing, loading and application with air-blast sprayers wear long sleeved shirt, long pants, hat, impervious gloves and boots, and goggles or face shield.

During other applications wear long sleeved shirt, long pants and hat.

Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Dilute by giving 2 glasses of water to drink. Call a physician. Never give anything by mouth to an unconscious person.

NOTE TO PHYSICIAN: Because of the presence of xylene (petroleum distillates) it may not be advisable to induce emesis. Careful gastric lavage may be indicated depending on the extent of involvement.

IF INHALED: Remove the victim to fresh air. Treat the person symptomatically. Call a physician.

IF ON SKIN: Wash exposed areas with plenty of soap and water. If irritation persists, call a physician.

IF IN EYES: Flush eyes with plenty of water for at least 15 minutes. If irritation persists, call a physician.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water or wetlands. Do not apply when weather conditions favor drift from areas treated. Do not apply where runoff is likely to

occur. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

PHYSICAL AND CHEMICAL HAZARDS FLAMMABLE

Do not use, pour, spill or store near heat or open flame. Do not use in the vicinity of pilot lights.

CONDITIONS OF SALE AND WARRANTY

Rohm and Haas warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. ROHM AND HAAS MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. Handling, storage and use of the product by Buyer or User are beyond the control of Rohm and Haas and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. IN NO CASE WILL ROHM AND HAAS OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

DIRECTIONS FOR USE

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

(SEE ATTACHED PAMPHLET ON SIDE PANEL FOR COMPLETE USE DIRECTIONS)

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RE-ENTRY AND WORKER PROTECTION STATEMENTS:

Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information. 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. SEE USE DIRECTIONS FOR ADDITIONAL RE-ENTRY STATEMENTS.

STORAGE AND DISPOSAL

STORAGE: Do not store at temperatures above 90°F for periods longer than 48 hours.

PESTICIDE DISPOSAL: Do not contaminate water, food or feed by storage or 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 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 puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate ignition sources. Ventilate area. Avoid breathing vapors. Use approved self-contained breathing apparatus or air respirators for large spills in confined areas. Dike or contain liquid. Scoop or shovel into a suitable container for recovery or disposal. Remove contaminated clothing promptly and wash exposed skin areas with soap and water. Wash clothing before re-use. Keep spill out of all sewers and open bodies of water. REFER TO PRECAUTIONARY STATEMENTS.

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NOTICE: Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions. If the Conditions of Sale and Warranty are not acceptable, return the product unopened within thirty days of purchase to the place of purchase.

KEEP OUT OF REACH OF CHILDREN

WARNING

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

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During mixing, loading and application with air-blast sprayers wear long sleeved shirt, long pants, hat, impervious gloves and boots, and goggles or face shield.

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Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse.

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IF IN EYES — Flush eyes with plenty of water for at least 15 minutes. If irritation persists, call a physician.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water or wetlands. Do not apply when weather conditions favor drift from areas treated. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of wastes. Apply this product only as specified on this label.

PHYSICAL AND CHEMICAL HAZARDS

FLAMMABLE

Do not use near open flame or other source of ignition. Do not use in the vicinity of hot surfaces.

CONDITIONS OF SALE AND WARRANTY

Rohm and Haas warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. **ROHM AND HAAS MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE.** Handling, storage and use of the product by Buyer or User are beyond the control of Rohm and Haas and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pests, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. **IN NO CASE WILL ROHM AND HAAS OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.**

DIRECTIONS FOR USE

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

RE-ENTRY AND WORKER PROTECTION STATEMENTS

Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information. 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.

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 must be given if there is reason to believe that written warnings cannot be understood by workers. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Written warnings must include the following information:

CAUTION

(Insert area or field description) treated with KARATHANE LIQUID CONCENTRATE fungicide-miticide on (insert date of application). Do not enter treated areas without protective clothing until sprays have dried. In case of accidental exposure: Call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to KARATHANE WD fungicide-miticide and describe his condition. For further information see the "Statement of Practical Treatment."

Oral warnings must include the same information that is in the written warnings.

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KARATHANE LIQUID CONCENTRATE fungicide-miticide also provides effective control or suppression of the following mites, including those that may be resistant to other miticides:

Citrus Red Clover	European Red Peach Silver	Plum Nursery Red Spider (two-spotted)
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KARATHANE LIQUID CONCENTRATE fungicide-miticide possesses short residual activity and is effective only against motile mite forms. Although of short residual active, effective reduction of motile mite populations may provide economic mite control for many weeks. When used alone, application should be repeated every 7 to 10 days to kill mites emerging from eggs unaffected by previous sprays. Alternating sprays or tank-mix combinations with other miticides will delay the development of mite resistance to other miticides and improve initial mite kill.

USE RATE DETERMINATION

Carefully read, understand, and follow label rates and use limitations.

Label use rates are for single strength (dilute) sprays. KARATHANE LIQUID CONCENTRATE fungicide-miticide may be used in concentrate or airblast sprayers but correct use rates must be maintained. Do not use in concentrate sprays in California.

When spray volumes of less than 100 gallons are required to provide a thorough full coverage spray, the following table may be used to determine the proper use rate:

Recommended KARATHANE LIQUID CONCENTRATE Label Use Rate Per 100 Gals. Spray	Milliliters KARATHANE LIQUID CONCENTRATE Required in Various Single-Strength Spray Gallonages*				
(Oz.)	1 gal.	2 gals.	3 gals.	5 gals.	10 gals.
3	0.9	1.8	2.6	4.4	8.9
4	1.2	2.4	3.5	5.9	11.8
6	1.8	3.6	5.4	9.0	18.0
8	2.4	4.8	7.0	11.8	23.6

*15 milliliters = 1 teaspoon

COMPATIBILITY

KARATHANE LIQUID CONCENTRATE fungicide-miticide is compatible with DIKAR®, DITHANE® captan, ferbam, glyodin, and thiram fungi-

cides, user should consult current spray compatibility charts or State Cooperative Extension Service Specialists prior to actual use.

SPRAY ADJUVANTS:

The addition of agricultural surfactants, to KARATHANE LIQUID CONCENTRATE fungicide-miticide sprays, will improve initial spray deposits, redistribution, and weatherability. The following spray adjuvants have been especially formulated to optimize the performance of foliar applied agricultural chemicals:

TRITON AG-98™	A low foam nonionic general purpose spray adjuvant. May be used in dilute or concentrate sprays applied by aircraft or ground equipment.
TRITON® B-1956®	A water-dispersible, resin-based nonionic surfactant which resists re-wetting and removal by rain. Effective with dilute sprays applied by ground equipment.
TRITON CS-7™	A spreader-binder designed specifically for use in concentrate and low volume sprays applied by aircraft or ground equipment.

Place KARATHANE LIQUID CONCENTRATE fungicide-miticide into solution prior to adding an adjuvant. Read and carefully observe the precautionary statements and all other information appearing on both product labels prior to spray preparation.

APPLICATION:

Thorough full coverage foliar sprays generally result in optimum powdery mildew and mite control. To achieve good foliar coverage use proper spray pressure, gallonage per acre, spray nozzles, discs, nozzle spacing, and tractor speed. Consult spray nozzle and accessory catalogues for specific information on proper equipment calibration.

When applied with hand pressurized sprayers, thoroughly spray plant foliage until runoff.

PEST MONITORING:

KARATHANE LIQUID CONCENTRATE fungicide-miticide should be applied when the first signs of powdery mildew are noted or when adult mites are observed on plant foliage.

RESTRICTIONS:

Users should carefully read, understand, and follow all use restrictions prior to using KARATHANE LIQUID CONCENTRATE.

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FRUITS

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Crop	Control of:	Rate of KARATHANE LIQUID CONCENTRATE per Application		Timing and Remarks	Restrictions
		Oz./100 Gal.	Oz./A		
Apples (orchard)	Powdery mildew	4 to 6	20 to 48	For powdery mildew begin application at delayed dormant to pink stage and continue sprays at 7 to 14 day intervals until terminal growth is completed or mildew activity has ceased. Applications should not be more than 14 days apart. Control measures are needed from the time buds break or at first signs of mildew activity, and should be continued through terminal growth and new bud formation to reduce overwintering infection in the buds. From 4 to 8 applications are usually required per season depending on variety, location and disease severity. Thorough coverage is necessary. When mildew growth is heavy add a spreader-sticker for thorough wetting of mildew spores and mycelium. Certain spreader-stickers will reduce the deposit on maturing fruit. TRITON B-1956 is recommended at 1 to 2 ozs. per 100 gals. of dilute spray.	Do not apply when day temperatures are expected to exceed 90°F. Do not use with oil or oil-based pesticides or apply to foliage within 30 days after an oil spray application. Do not use within 21 days of harvest. Do not graze treated areas to livestock or feed cover crops grown in treated orchards to animals.
	Clover mites European red mites Red spider (two-spotted) mites			For mites, apply at first signs of an infestation and continue on a 7 to 14 day schedule as long as necessary. Do not use more than 1/2 lb. of 25% wettable parathion with KARATHANE LIQUID CONCENTRATE from pink through second cover or apply in separate applications. Other phosphate insecticides such as azinphos-methyl, demeton, and malathion, appear to be compatible with KARATHANE LIQUID CONCENTRATE.	
Apples (nursery)	Powdery mildew Red spider mites Clover mites	4	—	On non-bearing nursery stock, apply at first sign of powdery mildew and/or mites, at 7 to 10 day intervals or as necessary.	Do not graze treated areas to livestock or feed cover crops grown in treated areas to animals.
Apricots	Powdery mildew Clover mites European red mites Peach silver mites Plum rust mites Two spotted spider mites	4	20 to 32	Begin application at pink bud and petal fall and in subsequent spring sprays if disease persists, and post harvest.	Do not apply within 45 days of harvest. Do not graze treated areas to livestock or feed cover crops grown in treated orchards to animals. Avoid drift to bearing trees. Do not use in California.
Cherries (nursery)	Refer to Apples (nursery)				Do not apply to trees that will bear fruit within one year of treatment.
Citrus (nursery)	Citrus red mites	4 to 8	—	Apply two sequential sprays, the first when mites appear and the second 10 to 14 days later.	Apply only to nursery trees or to young trees that will not bear fruit within one year. Avoid drift to bearing trees. Do not use in California.
Grapes	Powdery mildew	4 to 8	22 to 24	Begin applications when mildew first appears (usually during early stages of leafage growth) and repeat at 10 to 14 day intervals. From 2 to 6 applications may be required.	Do not use within 21 days of harvest.
Peaches (orchard)	Refer to Apricots				Do not use in California.
Peaches (nursery)	Refer to Apples (nursery)				Do not use in California.
Pears	Refer to Apples (orchard)				

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VEGETABLES

Crop	Control of:	Rate of KARATHANE LIQUID CONCENTRATE per Application		Timing and Remarks	Restrictions
		Oz./100 Gal.	Oz./A		
Cantaloupes	Powdery mildew	3 to 4	3 to 6	Apply when powdery mildew signs are first observed and repeat at 7 to 10 day intervals. From 3 to 10 applications may be required.	Do not use within 7 days of harvest. Do not use in California.
Cucumbers	Powdery mildew	3 to 4	3 to 6	Apply in a light, thorough spray. Begin when mildew first appears and repeat at 5 to 7 day intervals or as necessary. Spray a maximum of 3 to 4 times to an individual fruit.	Do not apply when temperatures exceed 90°F. Do not use within 7 days of harvest. Do not use in California.
Melons	Refer to Cantaloupes				Do not use in California.
Pumpkins	Refer to Cantaloupes				Do not use in California.
Squash	Refer to Cantaloupes			On summer squash, spray a maximum of 3 to 4 times to an individual fruit.	Do not use in California.

STORAGE AND DISPOSAL

STORAGE — Do not store at temperatures above 90°F for periods longer than 48 hours.

PESTICIDE DISPOSAL — Do not contaminate water, food or feed by storage or 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 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 puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED — Eliminate ignition sources. Ventilate area. Avoid breathing vapors. Use approved self contained breathing apparatus or air respirators for large spills in confined areas. Dike or contain liquid. Scoop or shovel into a suitable container for recovery or disposal. Remove contaminated clothing promptly and wash exposed skin areas with soap and water. Wash clothing before re-use. Keep spill out of all sewers and open bodies of water. REFER TO PRECAUTIONARY STATEMENTS.

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