

PM13

5905-444

File
10/17



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

APR 6 1994

Beverly Neale
HELENA CHEMICAL CO
6075 Poplar Ave - Suite 500
Memphis, TN 38119

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 03/10/94 in Response to PR Notice 93-7
EPA Reg. No. 5905-444
HELENA DIAZINON 40W INSECTICIDE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable
Printed with Soy/Canola ink on paper that
contains at least 50% recycled fiber

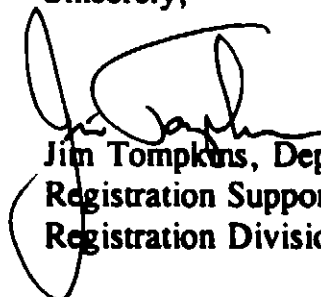
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

30/17

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division

Beverley Neale
HELENA CHEMICAL CO
6075 POPLAR AVE SUITE 500
MEMPHIS TN 38119

Comment for: EPA Reg Nr.5905-444
HELENA DIAZINON 40W INSECTICIDE

The following specific comments pertain to your WPS labeling submission concerning the product cited above:

The apron requirement for "applicators and other handlers" in the Personal Protective Equipment" section on your proposed labeling is missing or incorrect. Remove the incorrect requirement (if any) and add: "Chemical-resistant apron when cleaning equipment, mixing or loading."
EXCEPTION: If you have an entirely separate PPE section specifying what "Mixers and loaders must wear," the apron requirement under the header "Applicators and other handlers must wear" is: "Chemical-resistant apron when cleaning equipment". The exact location is shown in Sections A and B on Part I of the Product Worksheet in Supplement Three-A to PR Notice 93-7.

The headgear requirement for "applicators and other handlers" in the "Personal Protective Equipment" section on your proposed labeling is missing or incorrect. Remove the incorrect requirement (if any) and add "Chemical-resistant headgear for overhead exposure". The exact location is shown in Sections A and B on Part I of the Product Worksheet in Supplement Three-A to PR Notice 93-7.

Remove the statement "Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application." from its current position within the Agricultural Use Box and place it above the Agricultural Use Box.

The headgear requirement for early entry in the Agricultural Use Requirements box on your proposed labeling is missing or incorrect. Remove the incorrect requirement (if any) and add "Chemical-resistant headgear for overhead exposure." The exact location is shown in Sections F and G on Part 2 of the

HELENA CHEMICAL CO
EPA Reg. Number: 5905-444
HELENA DIAZINON 40W INSECTICIDE
Application date: 03/10/94
Original Submission

Product Worksheet in Supplement Three A to PR Notice 93-7.

The circled statement(s) in the Non-Agricultural Use Requirements box should be deleted. Use each statement exactly as it appears on your original label.

Stamp 9/7/87 w/WPS

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THIS PRODUCT MUST NOT BE USED ON GOLF COURSES AND SOD FARMS.

**HELENA
DIAZINON 40W
INSECTICIDE**

**For Control of Certain Insects and Mites on Fruits, Nuts, Vegetables,
Field Crops, and Ornamentals.**

Diazinon 40W is a wettable powder.

**ACCEPTED
with COMMENTS
in EPA Letter Dated**

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

5905-1444

ACTIVE INGREDIENT:

Diazinon: O,O-Diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl)
phosphorothioate.....40.00%

INERT INGREDIENTS.....60.00%

TOTAL.....100.00%

KEEP OUT OF REACH OF CHILDREN

WARNING AVISO

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

See Additional Precautionary Statements Inside Booklet

EPA REG. NO.: 5905-414
EPA EST. NO.: First letters of product
batch code indicate producing
establishment: 5905-GA-1=CG.
5905-AR-1=WA. 5905-CA-1=KC.
5905-IA-1=DI

NET CONTENTS:

**MANUFACTURED BY
HELENA CHEMICAL COMPANY
MEMPHIS, TN 38137**

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING**

May be fatal if swallowed. May be absorbed through skin. Do not breathe spray mist. Do not get in eyes, on skin, or on clothing. Avoid contamination of food.

Keep out of reach of domestic animals. Do not contaminate feed or use on household pets or livestock.

**STATEMENT OF PRACTICAL TREATMENT
Organophosphate**

If Swallowed: Call a physician or Poison Control Center immediately. Drink one or two glasses of water and induce vomiting by touching back of throat with finger. Repeat until vomit fluid is clear. Do not induce vomiting or give anything by mouth if person is unconscious or convulsing.

If Inhaled: Remove victim to fresh air and apply artificial respiration if indicated.

If on Skin: Wash promptly with soap and water. Rinse thoroughly.

If in Eyes: Rinse eyes with plenty of water and call a physician immediately.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

ENVIRONMENTAL HAZARDS

This product is toxic to birds, fish and other wildlife, including waterfowl. Birds and waterfowl feeding or drinking on treated areas may be killed. Apply this product only as specified on this label. Do not exceed maximum permitted label rates, as rates above those recommended significantly increase potential hazards to birds and waterfowl. Avoid overlapping of sprays. Where irrigation (watering) is recommended, apply a minimum of ¼ inch water immediately after application. Stop irrigation before puddling occurs. Keep out of lakes, streams, ponds, tidal marshes and estuaries (except for effluence from treated watercress beds.) Do not apply to water that will be used for recreational purposes and human and livestock consumption. Shrimp and crab may be

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killed at application rates recommended on this label. Do not apply where fish, shrimp, crab, and other aquatic life are important resources. This product must not be used in areas where impact on threatened endangered species is likely. Contact your State Fish and Game Agency for information pertaining to areas having threatened endangered species. Apply this product only as specified on this label.

This pesticide is highly toxic to bees exposed to direct treatment or to residues remaining on the treated area. Do not apply when bees are actively visiting the crop, cover crop, or weeds blooming in the treatment area. Applications should be timed to provide the maximum possible interval between treatment and the next period of bee activity.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill, or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the areas during application.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep children and pets out of the treated area until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR INSECT CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

Note: The California Department of Agriculture has set a 5-day reentry for Diazinon on citrus, grapes, peaches, and nectarines. Five days should elapse between the time of application and the time a worker may enter the field to engage in any activity requiring substantial contact with treated foliage. When a mixture of two or more organic phosphate pesticides is applied, the interval shall be prolonged by adding to the longest applicable interval an additional 50% of that interval.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal. Open dumping is prohibited.

Pesticide:

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If pesticide, spray mixture or rinsate 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:

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities by burning. If burned, stay out of smoke.

GENERAL INFORMATION

In the directions for use given below, unless otherwise noted, Diazinon® 40W should be mixed with sufficient water to assure thorough coverage. Best control is obtained when application is made at first sign of insects. Applications should be repeated as necessary to maintain control.

NOTE: The California Department of Agriculture has a set 5-day reentry for Diazinon® on citrus, grapes, peaches and nectarines. Five days should lapse between the time of application and the time a worker may enter the field to engage in any activity requiring substantial contact with treated foliage. When a mixture of two or more organic phosphate pesticides are applied in combination, the interval should be prolonged by adding to the largest applicable interval an additional 50% of that interval.

Since Diazinon® 40W is a wettable powder formulation, constant agitation is necessary during application.

DIRECTIONS FOR USE

FRUIT AND NUT INSECTS

ALMONDS: Mites, Twig Borers: Apply 1½ - 1 4/5 lbs. per 100 gals. of water. Parlatoria Scales, San Jose Scales: Mix 1½ - 1 4/5 lbs. Diazinon® 40W plus 2 - 3 gals. dormant oil per 100 gals. of water and apply as a dormant spray. Almond hulls may be fed to livestock.

APPLES: San Jose Scales, Mealybugs, Apple Aphid eggs, European Red Mite eggs, Brown Mite eggs: Mix 1½ lb. of Diazinon® 40W plus 1 gal. of superior type oil or 2 gals. of dormant oil per 100 gals. of water. Apply as a dormant or delayed dormant spray. Eye-Spotted Bud Moths, Fruit-Tree Leaf Rollers, Mealybugs: Mix 1½ lb. per 100 gals. of water. Make 3 to 8 cover spray applications beginning in the pink state. Do not apply within 14 days of harvest.

APPLES AND PEARS: Codling Moths, Rosy Apple Aphids, Green Apple Aphids, Woolly Apple Aphids, Mites: Mix 1½ lb. Diazinon® 40W per 100 gals. of water. Make 3 to 8 cover spray applications, beginning with the first cover. Applications should be timed according to insect infestations. Apple Maggots: Mix 1½ lb. of Diazinon® 40W per 100 gals. of water. Make at least 3 cover spray applications when flies are active and laying eggs. San Jose Scale Crawlers, Forbes Scale Crawlers: Mix 1½ lb. per 100 gals. of water. Apply early in the season when crawlers first appear. If infestation warrants, make a second application 7 to 10 days later. For Codling Moth and Apple Maggot control - apply at petal fall and every 10 - 14 days thereafter until control is achieved.

Note: Mites will be suppressed if Diazinon® 40W is used in the regular cover spray program. Slight russeting may occur on some varieties of apples, such as Golden Delicious. Do not apply to apples or pears within 14 days of harvest. 9/17

APRICOTS: San Jose Scales, Brown Apricot Scales, Walnut Scales, Apricot Mealybugs: Mix 1½ lb. of Diazinon® 40W plus 2 gals. of dormant oil per 100 gal. of water. Apply as dormant spray. Aphids, Brown Mites (Clover Mites), Two-Spotted Spider Mites, Olive Scale Crawlers, San Jose Scale Crawlers: Mix 1½ lb. per 100 gals. of water. Apply when aphids, mites and scale crawlers first appear. Olive Scale Crawlers: Mix 5/8 lb. of Diazinon® 40W plus 1½ gals. of light medium horticultural oil per 100 gals. of water. Apply when scale crawlers are present. Apricot Mealybugs: Mix 1½ lb. per 100 gals. of water. Apply as a cover spray from petal to June. Do not apply within 10 days of harvest.

BLUEBERRIES: Cranberry Fruitworms, Cherry Fruitworms, Blueberry Maggots, Aphids, Thrips, Two-Spotted Mites: Mix 1½ lb. per 100 gals. of water. Apply up to 200 gals. of spray per acre, or apply 2½ lbs. per acre in sufficient water for thorough coverage. Do not apply within 7 days of harvest.

CANEBERRIES (i.e. Blackberries, Boysenberries, Dewberries, Loganberries, Raspberries): Leafhoppers, Thrips, Aphids, Two-Spotted Mites, Raspberry Sawflies: Mix 1½ lb. per 100 gals. of water and apply up to 200 gals. of spray per acre, or apply 2½ lbs. per acre in sufficient water for thorough coverage. Raspberry Fruitworms: Apply at the above rates when blossom buds separate and repeat application immediately before blossoms open. Dryberry Mites: Mix 2½ lbs. per 100 gals. of water. Apply as a dormant spray in early spring when canes are still on the ground and buds are closed. Make a second application when the buds are well developed, but still closed. Raspberry Crown Borers (Raspberry Root Borers): Mix 5 lbs. per 100 to 200 gals. of water and apply as a drench to the crown area and to the lower canes. Apply either in the spring before berries begin to form, or in the fall after harvest. Do not apply within 7 days of harvest.

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CHERRIES: Brown Apricot Scales, San Jose Scales, Black Scales, Black Cherry Aphid eggs, Brown Mite eggs: Mix 1½ lbs. of Diazinon® 40W plus 3 gals. of dormant oil per 100 gals. of water. Apply as a dormant spray. Eye-Spotted Bud Moths, Fruit-Tree Leaf Rollers: Mix 1½ lb. per 100 gals. of water. Apply in cover sprays as necessary, beginning with petal fall. Leafhoppers: Apply 1½ lb. per 100 gals. of water in 3-5 applications beginning at petal fall and continuing through the growing season, or apply as infestations develop. Cherry Fruit Flies: Mix 5/8 - 1¼ per 100 gals. of water. Make 3 or 4 applications, beginning when adult flies begin to emerge and repeating at 10-day intervals. Black Cherry Aphids: Mix 1½ lb. per 100 gals. of water. Apply as a cover spray when aphids appear and repeat after 10 days. San Jose Scale Crawlers: Mix 1½ lb. per 100 gals. of water. Apply during the pre-pink stage or when crawlers first appear. Cherry Rust Mites: Mix 5/8 - 1¼ lb. per 100 gals. of water. Apply as a supplemental spray after harvest. Do not apply within 10 days of harvest.

CRANBERRIES: Black-Headed Fireworms, Sparganthis sulfureana: Apply 5 lbs. in 400 gals. of water per acre. Cranberry Fruitworms: Apply 7½ lbs. in 400 gals. of water per acre. Do not apply within 7 days of harvest.

FIGS: Vinegar Flies (*Drosophila* spp.), Dried Fruit Beetles: Apply 1½ lb. per 100 gals. of water. Do not apply within 5 days of harvest.

FILBERTS: Filbert Leaf Rollers, Aphids: Apply 2½ - 5 lbs. in 250 - 400 gals. of water per acre, as a thorough cover spray.

CITRUS FRUITS (Grapefruits, Lemons, Limes, Oranges, Tangelos, Tangerines, Citrus Citron, Kumquats, and hybrids of these): Citrus Aphids, Cottony-Cushion Scale Crawlers, and Soft Scale Crawlers: Apply 5/8-1¼ lb. per 100 gals. of water (maximum 1000 gals. per acre) as a thorough cover spray when aphids and crawler stages of scale insects first appear. Fruit Tree Leaf Rollers: Mix 5/8-1¼ lb. per 100 gals. of spray (maximum 1000 gals. per acre) when an average of 50 percent of eggs in egg masses have hatched in the spring. Citrus Thrips: Apply 1½ lb. in 100 gals. of water (maximum 1000 gals. per acre) when thrips first appear. Citrus Snow Scales: Apply 1½-2½ lbs. per 100 gals. of water (maximum 1000 gals. per acre) as a post-bloom spray and again as a summer spray. For heavy snow scale infestations use the higher dosage rate. Thorough coverage of tree trunk, limbs, and twigs is essential. Do not apply during bloom. Do not apply to citrus within 21 days of harvest.

GRAPES: Pacific Spider Mites, Leafhoppers, Grape Berry Moths, Grape Leaf Folded: Mix 1½ lb. per 100 gals. of water and apply as a thorough cover spray, or apply 2½ lbs. per acre in sufficient water for thorough coverage. Do not apply within 18 days of harvest. *Drosophila* spp: Mix 7½ oz. per 100 gals. of water and apply as a thorough cover spray, or apply maximum of 22½ oz. per acre in sufficient water for thorough coverage when insects first appear. Make additional applications at weekly intervals as necessary. Do not apply within 7 days of harvest. If a spreader-sticker is used, do not apply within 18 days of harvest.

OLIVES: Olive Scales: Mix 1-1¼ lb. of Diazinon® 40W plus 1½ gals. of light medium summer horticultural oil per 100 gals. of water. Apply as a cover spray in June or July. Do not apply during bloom to avoid injury to pollinating insects or within 75 days of harvest.

PEACHES AND NECTARINES: San Jose Scales, Brown Apricot Scales, Walnut Scales, Apricot Mealybugs: Mix 1½ lb. of Diazinon® 40W plus 2 gals. of dormant oil per 100 gals. of water. Apply as a dormant spray. Peach Twig Borers, Parlatoria Scales: Mix 1¼ lb. Diazinon® 40W plus 1 gal. of light medium summer horticultural oil per 100 gals. of water. Apply at petal fall. Aphids, Brown Mites (Clover Mites), Two-Spotted Spider Mites, Olive Scale Crawlers, San Jose Scale Crawlers: Mix 1½ lb. per 100 gals. of water. Apply when aphids, mites and scale crawlers first appear. Olive Scale Crawlers: Mix 5/8 lb. of Diazinon® 40W plus 1½ gals. light medium horticultural oil per 100 gals. of water. Apply when scale crawlers are present. Oriental Fruit Moths: Mix 1½ lb. per 100 gals. of water. Apply at petal fall and every 10-14 days thereafter until control is achieved. Peach Twig Borers: Mix 1¼ lb. per 100 gals. of water and apply to peaches in May and June. Leafhoppers (Peaches only): Apply 1½ lb. per 100 gals. of water in 3-5 applications beginning at petal fall and continuing through the growing season, or apply as infestations develop. White Peach Scale (Peaches only): As a post-harvest spray, apply 1 4/5-2½ lbs. per 100 gals. of water timed to coincide with peak crawler and immature scale activity. Under conditions of heavy infestations, 2 applications may be necessary. Do not apply to peaches within 20 days, or to nectarines within 10 days, of harvest.

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PEARS: Pear Leaf Blister Mit Mealybugs, San Jose Scales, Brown Apricot Scales: Mix 1½ lb. of Diazinon® 40W plus 2 gals. of dormant oil per 100 gals. of water. Apply as a dormant spray. Pear Psylla: Mix 5/8-1½ lb. per 100 gals. of water. Apply as a cover spray at pre-pink stage. Make 1 to 2 additional applications during the first and second cover sprays if necessary. Tentiform Leaf Miners, Mealybugs: Mix 1½ lb. per 100 gals. of water. Apply in 3 cover sprays, beginning in April. Refer also to Apples and Pears above. Do not apply within 14 days of harvest.

PECANS: Aphids, Mites, Pecan Nut Case-Bearers, Walnut Caterpillars: Apply 2½-7½ lbs. per acre as a foliage spray. Do not apply after husks crack.

PLUMS AND PRUNES: Peach Twig Borer, Mealy Plum Aphid eggs, San Jose Scales, Parlatoria Scales, Brown Almond Mites: Mix 1½ lb. of Diazinon® 40W plus 2½ gals. of dormant oil per 100 gals. of water. Apply as dormant spray. For late April or May applications, mix 1½ lb. of Diazinon® 40W plus 1 gal. of light medium summer horticultural oil per 100 gals. of water. Brown Mites (Clover Mites), European Red Mites: Apply 1½ lb. in 100 gals. of water. Leaf Curl Plum Aphids, Mealy Plum Aphids, Thistle Aphids: Apply 5/8-1½ lb. per 100 gals. of water. Do not apply within 10 days of harvest.

STRAWBERRIES: Aphids, Two-Spotted Spider Mites: Apply 1½ lb. in 100 gals. of water per acre. Cyclamen Mites: Apply 2½ lbs. in 100 gals. of water per acre, directing spray to plant crowns. Plants should be sufficiently agitated to assure thorough coverage of the foliage. Make additional applications, if necessary, after harvest. Mole Crickets: Broadcast 2½ lbs. per acre when insects are present. Apply 1 to 2 days before transplanting and mix into the top 1-2 inches of soil immediately. Strawberry Leaf Rollers: Mix 1-1½ lb. per 100 gals. of water. Apply 200 gals. spray per acre when blossoms show color. Do not apply within 5 days of harvest.

WALNUTS: Aphids, Mites: Apply 2½ lbs. per acre as a foliage spray. Codling Moths, Scale Crawlers, Walnut Caterpillars: Apply 7½ lbs. per acre. Apply at petal fall and every 10-14 days thereafter until control is achieved. Do not apply after the husks open.

VEGETABLE FOLIAR INSECTS

Diazinon® 40W should always be applied as a spray in sufficient water to assure thorough coverage of the foliage.

BEANS (Pole ns, Snap Bean, Lima Beans): Black Bean Aphids, Mexican Bean Beetles, Leaf Miners: Apply 1½-1 4/5 lbs. per acre. Cucumber Beetles: Apply 5/8-1 lb. in 100 gals. of water per acre. Do not apply within 7 days of bean harvest. Bean Forage or bean hay may be fed to dairy and beef cattle and sheep. Wait 4 days following treatment if forage is to be cut for hay.

LIMA BEANS: Dipterous Leaf Miners, Leafhoppers, Mites: Apply 1½ lb. per acre. Do not apply within 7 days of bean harvest. Bean forage or bean hay may be fed to dairy and beef cattle and sheep. Wait 4 days following treatment if forage is to be cut for hay.

BROCCOLI, CABBAGE, AND CAULIFLOWER: Aphids, Diamondback Moths, Imported Cabbageworms, Dipterous Leaf Miners: Apply 5/8-1½ lb. per acre. Applications at 7-10 day intervals will usually be required. Do not apply to broccoli or cauliflower within 5 days, or to cabbage within 7 days of harvest.

BRUSSELS SPROUTS: Aphids, Diamondback Moths, Imported Cabbageworms: Apply 1½ lb. per acre. Applications at 7-10 day intervals will usually be required. Do not apply to brussels sprouts within 7 days of harvest.

CARROTS: Aphids: Apply 1½ lb. per acre. Do not apply within 10 days of harvest.

CELERY: Aphids, Flea Beetles: Apply 1½ lb. in 100 gals. of water per acre. Dipterous Leaf Miners: Apply 5/8-1½ lb. per acre in sufficient water to achieve thorough coverage when infestations first appear. Repeat as necessary. Do not apply within 10 days of harvest. Plants should be market trimmed (tops removed) before being shipped or used. Tops should not be used for feed or food.

COLLARDS, KALE, SWISS CHARD, AND TURNIP TOPS: Aphids, Imported Cabbageworms, Diamondback Moths, Harlequin Cabbage Bugs, Corn Earworms: Apply 5/8-1½ lb. per acre. Do not apply to collards, kale, or turnip tops within 10 days, or to Swiss chard within 12 days of harvest.

CUCUMBERS: Aphids, Serpentine Leaf Miners, Thrips: Apply 1½ lb. per acre. Do not apply within 7 days of harvest.

MELONS AND SQUASH (Cantaloupes, Casabas, Crenshaws, Honeydew Melons, Muskmelons, Persian Melons, and hybrids of these; Watermelons and their hybrids; Summer and Winter Squash): Aphids, Leafhoppers, Mites: Apply 1½-1 4/5 lbs. per acre. Serpentine Leaf Miners, Thrips: Apply 5/8-1½ lb. per acre. Do not apply to melons or winter squash within 3 days, or to summer squash within 7 days, of harvest.

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ONIONS: Onion Thrips: Apply 1 1/2 lb. per acre. Do not apply within 10 days of harvest.

PEAS: Aphids, Leaf Miners: Apply 1-1 1/2 lb. per acre. Peas may be picked immediately. Pea vines and pea vine hay may be fed to dairy and beef cattle and sheep. Wait 4 days following treatment if forage is to be cut for hay.

PEPPERS: Aphids, Serpentine Leaf Miners: Apply 5/8 lb. per acre. Do not apply within 5 days of harvest.

POTATOES: Aphids, Flea Beetles, Colorado Potato Beetles, Dipterous Leaf Miners: Apply 5/8-1 lb. per acre. Banded Cucumber Beetles, Leafhoppers, Southern Armyworms: Apply 1-1 1/2 lb. per acre. Do not apply within 35 days of harvest.

RADISHES, PARSNIPS, AND TURNIPS: Aphids, Flea Beetles, Dipterous Leaf Miners: Apply 5/8-1 1/2 lbs. per acre. Do not apply within 10 days of harvest.

SPINACH AND BEETS: Aphids, Dipterous Leaf Miners: Apply 5/8-1 1/2 lb. per acre. Do not apply to spinach within 10 days, or to beets within 14 days, of harvest.

SQUASH (Summer and Winter): See Melons and Squash above.

SWEET CORN: Corn earworms: Apply 2 1/2-3 1/8 lbs. per acre when silks first appear. Two or three repeat applications at 2-3 day intervals will usually be necessary. Corn may be picked immediately following last application. Corn forage may be fed to dairy and beef cattle and sheep. Refer also to Corn under Field and Forage Insects.

TOMATOES: Aphids, Dipterous Leaf Miners: Apply 5/8 lb. per acre. To control leaf miners, weekly applications are usually required. Banded Cucumber Beetles, Fall Armyworms, Southern Armyworms: Apply 1-1 1/2 lb. per acre. Vinegar Flies (*Drosophila* spp.): Apply 5/8-1 4/5 per acre. Weekly applications are usually required. Do not apply within 1 day of harvest.

VEGETABLE SOIL INSECTS

Diazinon © 40W should always be applied as a spray in sufficient water to assure thorough coverage of the soil.

CARROT FLIES: Carrots: Apply 5 lbs. per acre as a drench to the seed furrow at planting time.

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Cutworms: (Surface and Subterranean)

Broccoli	Muskmelons
Brussels Sprouts	Parsley
Cabbage	Peas
Cantaloupes	Peppers
Cauliflower	Potatoes
Celery	Snap Beans
Collards	Spinach
Cucumbers	Summer Squash
Endive (escarole)	Sweet Corn
Kale	Swiss Chard
Lettuce	Tomatoes
Lima Beans	Watermelons
	Winter Squash

Broadcast 5-10 lbs. per acre just prior to planting. Work into the soil immediately. 2-3 inches for surface cutworms, 3-6 inches for subterranean cutworms.

Garden Symphylans (Centipedes):

Cabbage	Radishes
Carrots	Red Beets
Corn	Snap Beans
Lettuce	Tomatoes
Peas	Turnips
Pole Beans	

Broadcast 25 lbs. per acre just prior to planting. Work into soil 4-8 inches immediately. This pre-plant treatment will also control cutworms (surface and subterranean), mole crickets, root maggots, and wireworms.

Mole Crickets:

Broccoli	Kale
Brussels Sprouts	Lettuce
Cabbage	Mustard
Cauliflower	Peppers
Collards	Radishes
Endive (escarole)	Tomatoes
	Turnips

Broadcast 2 1/2 lbs. per acre when insects are present. Make application to plant beds or fields 1-2 days prior to sowing of seed or transplanting, and work into soil 1-2 inches immediately.

ONION MAGGOTS: Onions: Furrow Application: Apply 2 1/2 lbs. per acre in sufficient water to drench the seed furrow at planting time. Broadcast 5-10 lbs. per acre just prior to planting. Work into soil 3-4 inches immediately.

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ROOT MAGGOTS: Broccoli, Brussels Sprouts, Cabbage, and cauliflower: Broadcast Application: Broadcast 5-7½ lbs. per acre and immediately work into the soil 3-4 inches before seeding, either in the seedbed or in the field or before transplanting. Transplant Water (Drench) Application: Mix ½-5/8 lb. in 50 gals. of transplant water, when 200-300 gals. of water are used per acre. May be applied at the rate of 5/8-1½ cupful per plant, either by hand or by tractor-mounted sprayer equipped with drop nozzles to direct spray to the base of the plant. Transplant water treatments may result in stand reduction due to plant stress at time of transplanting. Radishes: Mix 2½ lbs. in 50 gals. of water. Apply 80-100 gals. per acre (1-1½ gals. per 1,000 linear feet of row) in the seed furrow at planting time.

Wireworms:

- | | |
|-------------------|----------------|
| Broccoli | Muskmelons |
| Brussels Sprouts | Onions |
| Cabbage | Parsley |
| Cantaloupes | Peas |
| Carrots | Peppers |
| Cauliflower | Snap Beans |
| Celery | Spinach |
| Collards | Summer Squash |
| Cucumbers | Sweet Corn |
| Endive (escarole) | Sweet Potatoes |
| Kale | Swiss Chard |
| Lettuce | Tomatoes |
| Lima Beans | Watermelons |
| | Winter Squash |

Broadcast 7½-10 lbs. per acre prior to planting, and work into soil 4-8 inches immediately. Potatoes: Broadcast 7½-15 lbs. per acre prior to planting. Immediately disk or harrow into soil 4-8 inches.

SOUTHERN POTATO WIREWORMS: Potatoes (Southeastern U.S.): For potatoes on mineral soils, broadcast 5-10 lbs. per acre prior to planting, and immediately work into soil 3-6 inches depending on location of wireworms.

FIELD AND FORAGE INSECTS

Diazinon® 40W should always be applied as a spray in sufficient water to assure thorough coverage of the foliage or soil, depending on the type of application.

ALFALFA AND CLOVER: Spotted Alfalfa Aphids, Yellow Clover Aphids, Pea Aphids, Leafhoppers, Plant Bug Nymphs, Mites: Apply 1½ lb. per acre. Grasshoppers: Apply 1½ lb. per acre. Cutworms (Surface and Subterranean): Broadcast 5-10 lbs. per acre just prior to planting. Work into the soil immediately, 2-3 inches for surface cutworms, 3-6 inches for subterranean cutworms. Dairy and beef cattle and sheep may be grazed immediately following

application. may be fed green alfalfa or clover immediately following cutting and (3, may be fed hay provided alfalfa or clover is not cut for hay 7 days following treatment. Alfalfa Weevil Larvae: For control in the spring, apply 2½-3½ lbs. per acre when feeding damage to growing tips becomes evident. Repeat application, if necessary. If damage is already extensive, cut the hay and make application to the stubble. Do not graze dairy and beef animals or sheep for 2 days. Do not cut for hay for 10 days following treatment. Do not spray livestock directly with either air or ground equipment except as directed below under Livestock Insects. Do not treat during bloom to avoid injury to pollinating insects.

CORN: Corn Rootworm Larvae: Postemergence Basal Treatment: Apply 1½-3 1/8 oz. per 1,000 linear feet of corn row in sufficient water to wet base of corn plant and a narrow band of soil next to the plant. Refer to row spacing chart for amounts recommended per acre. Cover treated band with 2-3 inches of soil using a disk hiller or cultivator immediately after spraying. Application should be made at the first sign of corn rootworm larvae. Application should not be made later than June 24 in the Middle Corn Belt or July in the Northern Corn Belt.

**SUGGESTED RATES
ACCORDING TO ROW SPACING
FOR CORN ROOTWORM LARVAE CONTROL**

Row spacing	Linear feet of Corn row/acre	Amount of Diazinon® 40W per acre
		Postemergence Basal treatment
48"	10.699	17.5-35oz.
42"	12.455	19.4-38.75 oz.
40"	13.068	20-40 oz. (1.25-2.5 lbs.)
36"	13.939	21.9-43.75 oz.
36"	14.250	22.5-45 oz.
30"	17.424	27.5-55 oz. (1.9-3.44 lbs.)
24"	21.780	34.4-68.75 oz.
20"	26.136	40-80 oz. (2.5-5 lbs.)
15"	34.848	55-110 oz.

Note: For row spacings not listed, calculate the appropriate dosage rates based on the 40-inch row figures.

Seed Corn Maggots: Broadcast 5-10 lbs. per acre just prior to planting. Work into soil 2 inches immediately. Cutworms (Surface and Subterranean): Broadcast 5-10 lbs. per acre. For surface cutworms apply just prior to planting or when larvae first appear and work into soil 1-2 inches immediately. Do not apply later than July. For subterranean

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cutworms apply just prior planting and work into soil 3-6 inch immediately. Wireworms: Apply 7½-10 lbs. per acre prior to planting and work into the soil 4-8 inches immediately. Corn Rootworm Adult: Apply 5/8-1½ lb. per acre. Corn leaf Aphids: Apply 1½-2½ lbs. per acre in sufficient water to provide complete coverage of the upper portions of plants. Repeat application as necessary. Grasshoppers: Apply 1½ lb. per acre. Sap Beetles: Apply 2½-3 1/8 lbs. per acre. Add 1-2 gals. of soluble mineral oil per acre to the spray mixture. Consult local agricultural authorities for proper timing of sprays. Corn may be picked immediately following last application. Corn forage may be fed to dairy and beef cattle and sheep.

COTTON: Spider mites, Aphids, Leafhoppers, Lygus Bug, Cotton Leafworms, Cotton Leaf Perforators: Apply 1½-2½ lbs. in 5-25 gals. of water per acre. Repeat as infestation warrants. Do not apply within 14 days of harvest. Do not graze treated cotton plants, or feed gin waste to livestock.

COWPEAS: Cutworms (Surface and Subterranean): Broadcast 5-10 lbs. per acre, just prior to planting. Work into the soil immediately. 2-3 inches for surface cutworms, 3-6 inches for subterranean cutworms.

HOPS: Aphids, Mites: Apply 2½ lbs. per acre. Do not apply within 14 days of harvest.

LESPEDEZA: Cutworms (Surface and Subterranean): Broadcast 5-10 lbs. per acre just prior to planting. Work into the soil immediately. 2-3 inches for surface cutworms, 3-6 inches for subterranean cutworms.

PEANUTS: Cutworms: Apply 5 lbs. per acre in a 12-inch band over the row. Use sufficient water to achieve thorough coverage. Begin application when small larvae appear. Two or three additional applications at three-week intervals may be necessary. Do not apply within 21 days of peanut harvest.

Note: Livestock (1) may be fed peanut hulls, (2) May be fed peanut forage 7 days following treatment, and (3) may be fed peanut hay 21 days following treatment.

SORGHUM: Sorghum Midge: Apply 5/8-1½ lb. per acre when 90% of the heads have emerged from the boot. Repeat application within 4 days. Crop may be fed to livestock immediately following treatment. Do not apply within 7 days of harvesting for grain. Cutworms (Surface and Subterranean): Broadcast 5-10 lbs. per acre just prior to planting. Work into the soil immediately. 2-3 inches for surface cutworms, 3-6 inches for subterranean cutworms.

SOYBEANS Cutworms (Surface and Subterranean): Broadcast 5-10 lbs. per acre just prior to planting. Work into the soil immediately. 2-3 inches for surface cutworms, 3-6 inches for subterranean cutworms. 14 of 17

SUGAR BEETS: Leafhoppers, Dipterous Leaf Miners, Aphids: Apply 1-1½ lb. per acre. Grasshoppers: Apply 1½ lb. per acre. Wireworms: Broadcast 7½-10 lbs. per acre just prior to planting, and work into soil 4-8 inches immediately. Tops may be fed to beef and dairy animals.

SUGARCANE: Aphids: Apply 5/8-1½ lb. per acre.

Note: Allow 1 day between last application and harvest. Bagasse and forage may be fed to livestock.

Wireworms: Apply 10 lbs. per acre in a 12-inch band centered over the furrow in sufficient water to obtain thorough coverage. Make application directly to seed pieces in open furrow at covering time.

TOBACCO: Aphids, Flea Beetles: Apply 5/8-1 lb. per acre. Do not apply within 3 days of harvest. Cutworms: Broadcast 5-7½ lbs. per acre before transplanting and work immediately into the soil 2-4 inches. Green June Beetle Larvae: Mix 5/8 lb. in 50 gals. of water and apply as a drench (100 gals. per 100 sq. yds.) to uprooted areas of plant beds with sprinkling can. Mole Crickets: Broadcast 2½ lbs. per acre, when insects are present. Make application to beds or fields 1-2 days prior to sowing of seed or transplanting, and work into soil 1-2 inches immediately. Seed-corn Maggots: Broadcast Application: Broadcast 3¾ lbs. per acre, 3-4 weeks before transplanting. Work into 2 inches immediately. Transplant Water Application: Mix 1 4/5-3¾ oz. in 50 gals. of transplant water. Wireworms: Broadcast Application: Broadcast 5-7½ lbs. per acre, 3-4 weeks before transplanting. Work into soil 6-9 inches immediately. Transplant Water Application: Mix 1 4/5-3¾ oz. in 50 gals. transplant water.

RANGE, PASTURE, AND GRASSLAND INSECTS

BERMUDA GRASS: Thrips, Whiteflies, Grasshoppers: Apply 1½ lb. per acre.

RANGELAND, PASTURE, GRASS FORAGE, DITCH BANKS, ROADSIDES, WASTELAND, NONCROP AREAS, AND BARRIER STRIPS: Grasshoppers: Apply 1-1½ lb. per acre in sufficient water or oil to obtain thorough coverage when insects first appear, preferably in the nymphal stage. Dairy and beef cattle and sheep (1) may be grazed immediately following application. (2) may

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be fed green forage immediately following cutting, and (3) may be fed hay provided grass is not cut for hay for 21 days if the spray is a water solution, or for 30 days if the spray is an oil solution. Do not spray livestock directly except as directed below under Livestock Insects with either air or ground equipment. Do not repeat application for 30 days.

ORNAMENTAL INSECTS

To control certain insects on Arborvitae, Azalea, Birch, Boxwood, Camellia, Carnation, Chrysanthemum, Douglas Fir, Elm, Gladioli, Hawthorn, Holly, Juniper, Lilac, Locust, Maple, Oak, Pine, Plum, Poplar, Rhododendron, Rose, Spruce, and Willow, apply the recommended rates indicated below:

Insects	Amount Diazinon® 40W to use	
	per 3 gals. water	per 100 gals. water
Aphids, Bagworms, Carnation Bud Mites, Carnation Shoot Mites, Clover Mites, Cyclamen Mites, Dipterous Leaf Miners, European Pine Shoot Moths, European Red Mites, Flea Beetles, Holly Bud Moths, Leafhoppers, Obscure Root Weevils, Omnivorous Leaf Tiers, Privet Mites, Scale Crawlers (Cottony-Cushion, Lecanium, Pine Needle, San Jose, Soft Scale), Thrips, Two-Spotted Mites, Web-worms, Whiteflies	5/8 oz.	1 1/4 lb.
Apple-and-Thorn Skeletonizers, Cotton-caster Webworms, Fall Webworms, Hemlock Chermes, Oak Leafers, Delaware-banded Leaf Eaters, Pear Slugs, Tent Caterpillars	1 4/5 oz.	3 3/4 lb.

Do not use on certain Ferns, Poinsettia, Hibiscus, Papaya, Pilea, and Gardenia, since injury to the plants may occur.

MIMOSA WEBWORMS: Mix 5/8 oz. in 3 gals. of water (or 1 1/4 lb. in 100 gals. of water) and apply as a thorough foliar spray when adults first appear. Make a second and third application at 4-5 week intervals.

LAWN INSECTS

To control insects listed below, apply recommended rates. For Ants, Brown Dog Ticks, Clover Mites, Crickets, Earwigs, Fleas, Millipedes, Sowbugs, and Collembola (Spring-tails), which are commonly found near the house and may enter the house, spray a 5-ft. band of soil around the house as well as the house foundation wall to a height of 2-3 ft. Repeat application if necessary.

Insects	Rate/1,000 sq. ft.		Remarks
	Diazinon 40W	Water	
Lawn Chinch Bugs	2 1/2-3 1/2 oz. or 3 1/2-7 1/2 oz.	25 gals.*	Use higher rate for longer residual control and in lawns of dense growth, such as St. Augustine lawns.
Ants, Armyworms, Clover Mites, Collembola (Springtails), Crickets, Cutworms, Digger Wasps, Earwigs, Fruit Flies, Lawn Billbugs, Sod webworms (Lawn Moths), Sowbugs	5 oz.	3 gals.	Spot spray ant hills and wasp ground nest openings. For lawn billbugs, irrigate the lawn thoroughly immediately after treatment. For fruit flies, mow grass and water well before treatment but delay application until grass is dry. Do not water again until necessary.
Brown Dog Ticks, Bermuda Mites, Chiggers, Fleas, Leafhoppers, Ticks	1 1/2 oz.	3 gals.	Do not apply to animals. For brown dog ticks spray grass and under shrubbery, particularly near house.
Millipedes	10 oz.	3 gals.	
Rhodes-grass Scales	6 1/2 oz.	25 gals.*	Apply when crawlers first emerge.

*Alternately, make application in 3 gals. of water per 1,000 sq. ft. and thoroughly water immediately following application.

BOXELDER BUGS: Spray bugs outside the home with 1 1/2-3 1/8 oz. in 1 gal. of water. At the same time spray thoroughly around foundation, windows, doors, tree trunks, and into cracks and other places where the insects hide.

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FLY CONTROL

Fly control in Barns and Animal Sleeping Quarters (except dairy barns, milk rooms and poultry houses):

Residual Sprays: Remove animals from buildings prior to treatment and keep animals out for at least four hours. Mix 2 1/2 lbs. of Diazinon® 40W in 25 gals. of water and apply as an overall spray to ceilings and walls of livestock sheds, calf barns, hog barns, loafing sheds and other farm building except poultry houses, dairy barns, and milk rooms. Areas where flies congregate, such as garbage dumps and corrals, should be sprayed thoroughly. Longer residual control may be obtained by increasing the rate to 5 lbs. in 25 gals. of water. Applications should be made to point of run-off. One gallon of the above spray should cover 350-750 sq. ft. of area, depending on the surface treated.

Repeat applications as fly populations warrant. **Bait Sprays:** Mix the appropriate amount of Diazinon® 40W with 1 lb. of sugar (or 2 cups of syrup or molasses) for the desired application. For knapsack or similar type sprayer, mix 5/8 lb. of Diazinon® 40W with the sugar in 2 1/2 gals. of water and spot treat areas frequented by flies including cracks, crevices, doorways and around windows or other areas where flies congregate. Repeat applications as fly populations warrant. For sprinkling can application, mix 2 1/2 oz. of Diazinon® 40W with the sugar in 5 gals. of water and sprinkle lightly over the floor in areas frequented by flies. Applications everyday or two will generally be required.

MAGGOT CONTROL: For control of fly maggots, use 2 1/2 oz. of Diazinon® 40W in 5 gals. of water per 500 sq. ft. of fly breeding areas, such as garbage dumps and manure piles. Apply as a coarse spray or with a sprinkling can. Repeat applications will be necessary as additional garbage or manure is added. For control of maggots in vine stacks and similar refuse, mix 5/8 lb. of Diazinon® 40W in 20 gals. of water and spray at the rate of 1 gal. per 100 sq. ft. Treated vines or refuse should not be fed to animals. Good sanitation and proper disposal of wastes, are necessary in any effective fly control program. Do not contaminate milk, feed drinking water or apply to animals or poultry. Do not use in edible product areas of food processing plants or other areas where food is commercially prepared or processed. Do not use in dwellings.

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CONDITIONS OF SALE - LIMITED WARRANTY
AND LIMITATIONS OF LIABILITY AND REMEDIES

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions, or good application practices, all of which are beyond the control of Helena or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. Helena warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of Helena. Helena makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warrant shall be implied by law.

The exclusive remedy against Helena for any cause of action relating to the handling or use of this product is a claim for damage and in no event shall damages or any other recovery of any kind against Helena exceed the price of the product which causes the alleged loss, damage, injury, or other claim. Helena shall not be liable and any and all claims against Helena are waived, for special, indirect, incidental, or consequential damages or expense, of any nature, including, but not limited to, loss of profits or income, whether or not based on Helena's negligence, breach of warranty, strict liability in tort or any other cause of action.

Helena and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

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