

Florel® Fruit Eliminator

Monterey Chemical Company recently received registration to use Florel® Fruit Eliminator to reduce or eliminate undesirable fruit development on many ornamental trees and shrubs such as: apples, carobs, cottonwood, crabapple, elm, flowering pear, horse chestnut, maples, oaks, olives, pines, sour oranges, sweetgum and sycamore.

Application must be made prior to fruit set; so apply at the mid to full-bloom stage in sufficient water to wet (do not spray to run off). If the buds or blooms are not covered, then incomplete fruit elimination may occur. Application made too early or too late will also not be effective. Apply at 1 quart per 10 gallons of water (3 oz gallon). The amount of spray used will depend upon the size of the tree. Temperatures at the time of application should be between 60 F and 95 F for the best results. Do not apply to trees that are under stress from drought, high temperatures, diseases, etc. In university tests, Florel® received 95-100% control of undesirable fruit on many species. However, timing is extremely critical.

Questions & Answers

What is Florel Fruit Eliminator?

A contact growth regulator based on the chemical ethephon. It is widely used in agriculture as a ripening agent.

How does It work?

Florel Fruit Eliminator breaks down into ethylene, a naturally occurring compound, in the plant. When a plant is under stress it produces ethylene. If the plant is in bloom at the time of excess ethylene production, the first symptom is blossom abortion. This is how Florel works, it causes the plant to abort it's blossoms.

When should I use Florel Fruit Eliminator?

The best time for application on any flowering plant is the mid to full bloom stage.

Can I spray after fruit has set?

No.

How much Florel Fruit Eliminator do I use?

3 oz. 1 gallon of water OR 1 qt. /10 gallons of water
OR 2.5 gallons /100 gallons of water

How much water do I use on each tree?

The tree needs to be sprayed to wet. Excessive run-off is a waste of material. 5 - 10 gallons of spray is recommended to treat an average size tree.

How many applications do I make with Florel Fruit Eliminator?

Only one.

Should I use a surfactant?

On evergreen trees (olives, citrus, etc.) a surfactant is not recommended. On deciduous trees a surfactant may be used.

The label says that fruit elimination may not be satisfactory on small, red-fruited crabapple varieties. What's the deal?

We don't know. This statement was put on the label years ago and no one remembers why! Our research to date shows that Florel does work on these varieties. We are currently trying to have this statement removed from the label.

Is it necessary to cover the lawn or shrubs growing under the Tree?

No. If concerned about drift simply wash off with water.

At what temperature should I use Florel Fruit Eliminator?

This product works best when the daytime temperature is between 60- 90 F.

Does Florel Fruit Eliminator kill bees?

Florel has no insecticidal properties.

I planted my apples, crabapples or pears to enjoy the flowers. If I use Florel will I loose my flowers?

If the above directions are followed, application at full bloom may cause you to loose about 2 days of flowering as they fall off the tree.

How do I mix Florel Fruit Eliminator?

Only mix enough solution to supply your morning spray needs. Because once mixed with water, Florel will start to hydrolyze. Then mix the amount you will need for afternoon spraying just before use. If the pH of the spray solution rises above pH 5 it will be ineffective.

Will Florel Fruit Eliminator cause corrosion to my equipment?

No, under normal conditions Florel will not cause corrosion. It cleans out easily with water. The pH is 2.5 when mixed with water so it is very acidic. Therefore, do not leave in a spray tank overnight. Spray out all the material that has been mixed.

Should I be concerned about drift when using Florel?

Yes. Do not allow the material to dry on shiny, painted surfaces such as car and trucks. Florel does not have any effect on sidewalks, house paint, etc.

Are there adverse effects on the leaves when Florel Fruit Eliminator is used?

No. Florel works on contact only, it does not enter the tree like other growth regulators. Therefore, it will not have adverse growth effects and there is no burn ("phytotoxicity) to the new leaf growth.

Does Florel Fruit Eliminator have any odor?

Florel is an odorless clear liquid.

Can I mix Florel Fruit Eliminator with insecticides, etc.?

Due to the acidity of the spray solution, mixing Florel with other materials such as insecticides is not recommended.

If the tree is stressed for any reason can I treat it anyway?

No. If the tree is already under stress Florel Fruit Eliminator may increase stress on the tree.

How much does Florel cost?

Florel Fruit Eliminator should cost less than \$10 per tree following the above directions.

Can I use Florel Fruit Eliminator on other trees to control nuisance fruit?

Florel Fruit Eliminator is registered to control nuisance fruit in ornamental trees and shrubs such as: Apple, Crabapple, Carob, Cottonwood, Elm, Flowering pear, Horsechestnut, Maple, Oak, Olive, Pine, Sour orange, Sweetgum and Sycamore trees.

How is Florel Fruit Eliminator packaged?

Florel is available to the homeowners in pint and quart containers. For commercial application, Florel is available in 1 gallon and 2.5 gallon containers

Where do I get Florel Fruit Eliminator?

From your local agricultural or horticultural chemical dealer and many garden centers.

Where can I get labels and additional information?

Give us a call at Monterey Lawn and Garden Products at (209)225-4770 or fax any requests to (209)225-1319.



FLOREL® Brand FRUIT ELIMINATOR

ELIMINATES UNDESIRABLE FRUIT

- For Use on Ornamentals for Removal of Nuisance Fruit From Trees and Shrubs
- For Earlier Ripening of Home Garden Tomatoes
- For the Removal of Dwarf Mistletoe Shoots in Ornamental Conifers
- For the Removal of Leafy Mistletoe Shoots in Ornamental Deciduous Trees

For use only on plants grown for aesthetic purposes or climatic modification and being grown at home or in ornamental gardens or parks, or on golf courses or lawns and grounds.

ACTIVE INGREDIENT:

Ethephon [(2-chloroethyl) phosphonic acid]*	3.90%
INERT INGREDIENTS:	96.10%
TOTAL	100.00%

*This product contains 0.33 lbs. ethephon per gallon.
FLOREL is a trademark of Rhone-Poulenc Ag Co.

EPA Reg. No. 264-543-54705

EPA Est. No. 48498-CA-1

For **MEDICAL** and **TRANSPORTATION EMERGENCY**
Information **ONLY** —
Call 24 Hours a Day 1-800-334-7577

For **PRODUCT USE** Information, Call 209-499-2100

Manufactured For:

LAWN AND GARDEN PRODUCTS, INC.
P. O. Box 5317 • Fresno, CA 93755 • 209-499-2100

KEEP OUT OF REACH OF CHILDREN CAUTION

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Immediately flush eyes with plenty of water. Get medical attention if irritation persists.

IF ON SKIN: Immediately wash with plenty of soap and water. Get medical attention.

NOTE TO PHYSICIAN: Treat symptomatically. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. No specific antidote is available. Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

Wear long-sleeved shirt and long pants, socks and shoes and chemical resistant gloves (such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate).

User Safety Recommendations:

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Do not allow people or pets to touch treated plants until sprays have dried.

ENVIRONMENTAL HAZARDS

Do not apply FLOREL® Brand FRUIT ELIMINATOR through any type of irrigation system.

Avoid spray drift to nearby plants as this product may cause temporary modifications in plant growth.

Do not contaminate water used for irrigation or domestic purposes.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

Prolonged exposure to spray deposits can damage acrylic plastics, certain paints, and metals. Remove automobiles and other vehicles from the treatment area prior to application to prevent spray deposits from falling on vehicles and potentially damaging finishes. Rinse acrylic plastic materials and painted surfaces exposed to inadvertent spray deposits using soap and water within an hour after exposure.

GENERAL INFORMATION

Apply FLOREL® Brand FRUIT ELIMINATOR spray solution within 4 hours after mixing. Mix only the amount of spray you plan to use immediately. DO NOT save unused diluted spray solutions as they will not be as effective as fresh solutions.

Temporary growth inhibition resulting from shortened internodes may be observed.

HOME GARDEN TOMATO RIPENING

FLOREL® Brand FRUIT ELIMINATOR can be used as an overall foliar spray to concentrate and accelerate tomato ripening. Applied at the end of the growing season FLOREL® Brand FRUIT ELIMINATOR will hasten ripening of mature green tomatoes and allow harvesting of fruit before frost.

UNDESIRABLE FRUIT ELIMINATION

A foliar spray of FLOREL® Brand FRUIT ELIMINATOR will reduce or eliminate undesirable fruit development on many ornamental trees and shrubs such as: Apple, Carob, Cottonwood, Crabapple, Elm, Flowering pear, Horsechestnut (Buckeye), Maple, Oak, Olive, Pine, Sour Orange, Sweetgum and Sycamore.

MISTLETOE SHOOT REMOVAL

A foliar spray of FLOREL® Brand FRUIT ELIMINATOR will cause the abscission of Dwarf Mistletoe shoots in ornamental conifers and Leafy Mistletoe shoots in ornamental deciduous trees.

DIRECTIONS FOR USE

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

Read entire label before using this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift.

HOME GARDEN TOMATO PRODUCTION USE

FLOREL® Brand FRUIT ELIMINATOR can be used as an overall foliar spray to concentrate and accelerate tomato ripening. Apply FLOREL® Brand FRUIT ELIMINATOR at the end of the growing season to hasten ripening of mature green tomatoes and allow harvesting of fruit before frost. FLOREL® Brand FRUIT ELIMINATOR spray will be most effective on healthy plants. Harvest fruit at proper maturity, generally 14 to 21 days after treatment. Some defoliation or yellowing of foliage following treatment will be observed.

Do not harvest tomatoes for processing treated with FLOREL® Brand FRUIT ELIMINATOR sooner than 14 days after the last application.

Amounts To Use

When treating several plants, mix 1 teaspoon of FLOREL® Brand FRUIT ELIMINATOR in 3 ounces (6 tablespoons) of water. When treating larger number of plants mix 1.75 ounces of FLOREL® Brand FRUIT ELIMINATOR in 1 quart of water. Apply with a clean hand sprayer. Thoroughly wet all leaves and fruit.

FRUIT ELIMINATION (Ornamental Use Only)

A foliar spray of FLOREL® Brand FRUIT ELIMINATOR will reduce or eliminate undesirable fruit on ornamental trees and shrubs such as: Apple, Crabapple, Carob, Cottonweed, Elm, Flowering pear, Horsechestnut (Buckeye), Maple, Oak, Olive, Pine, Sour Orange, Sweetgum, and Sycamore. Applications must be made before fruit set for best results.

When applied to plants, FLOREL® Brand FRUIT ELIMINATOR readily enters the plant and breaks down to ethylene, a naturally occurring plant hormone. Ethylene production within the plant is stimulated by stress. For this reason it is important that plants being treated are not under stress from drought, high temperature, disease or other environmental stress conditions. Treating stressed plants can cause severe injury to the plant such as defoliation or leaf scorching. Injury from FLOREL® Brand FRUIT ELIMINATOR usually does not kill the plant, but can render it unsightly.

Applications should be made at the mid to full bloom stage, prior to fruit set in spray volumes sufficient to wet, but not to runoff. Failure to wet blooms thoroughly will cause incomplete fruit elimination. Spraying too much (until runoff) may cause some defoliation or other plant injury. Sprays applied too early or too late will be less effective and result in incomplete fruit elimination. The activity of FLOREL® Brand FRUIT ELIMINATOR is linked to plant growth activity and is therefore slower acting when temperatures are low (60°F) or very high (95°F). Trees or shrubs should not be under stress when treated such as from drought, insects or diseases.

For most species mix 3/4 to 1 quart of FLOREL® Brand FRUIT ELIMINATOR in 10 gallons of water (750 to 1,000 ppm) and apply to thoroughly wet blooms but not to runoff. Amount of spray used will depend on tree size. Use the higher rate when temperatures are cool. Fruit elimination may not be satisfactory on small, red fruited varieties of crabapples. Some temporary leaf yellowing and leaf drop of old leaves may occur after treatment.

For sensitive species such as Carob: Mix 1/2 quart FLOREL® Brand FRUIT ELIMINATOR in 10 gallons of water (500 ppm) and apply to thoroughly wet buds and blooms but not to runoff. Amount of spray used will depend on tree size. Some temporary leaf yellowing and drop of old leaves may occur after treatment.

FLOREL® Brand FRUIT ELIMINATOR has not been tested on all varieties of trees or shrubs which may have undesirable fruit. If it is necessary to treat plant species not listed above, treat only a small portion of the plant using the lower rate of application to determine the effectiveness of the product and to evaluate plant injury.

NOTE: These recommendations are not intended to be used in commercial fruit production as a thinning agent.

DWARF MISTLETOE REMOVAL

Use FLOREL® Brand FRUIT ELIMINATOR as a foliar spray on ornamental conifers for removal of dwarf mistletoe shoots and seeds. Applications made in conjunction with silvicultural mistletoe management will prevent spread of the mistletoe parasite to other parts of the tree and to other trees. Mix 1 quart of FLOREL® Brand FRUIT ELIMINATOR in 4 gallons of water (2700 ppm) and spray to "wet." When treating mistletoe in Douglas Fir, mix 1 pint of FLOREL® Brand FRUIT ELIMINATOR in 4 gallons of water (1350 ppm). Application of higher rates on Douglas Fir may result in excessive needle drop. Use of a nonionic surfactant at recommended rates may increase effectiveness. Treat any mistletoe regrowth before seed dispersal occurs. Mature needle drop, that normally occurs in the fall, may be hastened by the use of FLOREL® Brand FRUIT ELIMINATOR.

LEAFY MISTLETOE REMOVAL

Use FLOREL® Brand FRUIT ELIMINATOR as a foliar spray on ornamental deciduous trees for removal of leafy mistletoe shoots and seeds. Make applications after fall leaf drop through midwinter. Mix 2 quarts of FLOREL® Brand FRUIT ELIMINATOR in 4 gallons of water (5400 ppm). For effective removal of all mistletoe, shoots must be sprayed to "wet." Use of a nonionic surfactant at recommended rates may increase effectiveness. Large mistletoe infections and mistletoe found in mesquite may be difficult to control with a single application and retreatment may be necessary. Should regrowth of mistletoe occur retreat prior to mistletoe seed dispersal during the labeled application window.

HOME SPRAY GUIDE

FLOREL® Brand FRUIT ELIMINATOR

Read Detailed Instructions In This Pamphlet First

	Amount to Use	
	FLOREL®	Water
Tomato Ripening	1.75 Ounces	1 Quart
Fall Season	(1 teaspoon)	3 Ounce
Fruit Elimination		
Carob	1.5 Ounces	1 Gallon
Other Species	2.5 to 3.0 Ounces	1 Gallon
Mistletoe Removal		
Dwarf Mistletoe	8 Ounces	1 Gallon
Leafy Mistletoe	16 Ounces	1 Gallon

NOTE: 1 fluid ounce = 2 tablespoons = 6 teaspoons

STORAGE AND DISPOSAL

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

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

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 open burning. If container is burned, stay out of smoke.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; and (c) that the directions, warnings and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness of toxicity to laboratory animals and to plants, and of residues on food crops and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. The manufacturer neither makes nor intends, nor does it authorize any agent or representative to make, any other warranties, express or implied, and it expressly excludes and disclaims all implied warranties of merchantability or fitness for a particular purpose.

This warranty does not extend to, and the buyer shall be solely responsible for, any and all loss or damage which results from the use of this product in any manner which is inconsistent with the label directions, warnings, or cautions.

Buyer's exclusive remedy and manufacturer's or seller's exclusive liability for any and all claims, losses, damages or injuries resulting from the use or handling of this product, whether or not based in contract, negligence, strict liability in tort or otherwise, shall be limited, at the manufacturer's option, to replacement of, or the repayment of the purchase price for, the quantity of product with respect to which damages are claimed. In no event shall manufacturer or seller be liable for special, indirect or consequential damages resulting from the use or handling of this product.

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