

PM 22

60063-7

10-15-98

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ECHO™ 720

Contains 6.0 Pounds Chlorothalonil  
Per Gallon (720 grams per liter)

ACTIVE INGREDIENT:

Chlorothalonil (tetrachloroisophthalonitrile)..... 54.0%

INERT INGREDIENTS:..... 46.0%

TOTAL:..... 100.0%

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 this label, find someone to explain it to you in detail).

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration preferably mouth-to-mouth. Get medical attention.

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

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

IF IN EYES: Flush with plenty of water. Call a physician if irritation persists.

See side panel for additional precautionary statements.

MANUFACTURED FOR:

SOSTRAM CORPORATION  
70 Mansell Court, Suite 230  
Roswell, Georgia 30076

NET CONTENTS: 2.5 Gallons/9.5 Liters

**ACCEPTED**

OCT 15 1998

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 60063-7

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★  
A Broad Spectrum Fungicide.

Read entire label carefully and use only as directed.

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

##### WARNING

May be fatal if inhaled. Harmful if swallowed, absorbed through skin. Causes (moderate) eye injury (irritation). Do not breathe dust (vapor or spray mist). Avoid contact with eyes, skin and clothing.

NOTE TO USER: This product may produce temporary allergic side effects characterized by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas. Persons having allergic reaction should contact a physician.

NOTE TO PHYSICIAN: Persons having a temporary allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids.

##### PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear: Long-sleeved shirt and long pants, waterproof gloves, shoes plus socks. In enclosed areas, use a respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). Outdoors, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

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.

##### ENGINEERING CONTROLS STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

##### USER SAFETY RECOMMENDATIONS

Users should: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This product is toxic to fish, aquatic invertebrates, and marine/estuarine organisms. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, 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. Do not apply when weather conditions favor drift from treated areas.

Apply only to areas specified on label.

**DIRECTIONS FOR USE**

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

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. 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 enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

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, waterproof gloves and shoes plus socks.

\* **MILDEW CONTROL ON PAINT FILM:** Echo 720 is a broad-spectrum fungicide for control of mildew on paint film. This flowable form provides excellent performance characteristics when used as a mildewcide in aqueous paint systems only.

Refer to technical bulletin for use directions.

**NOTE:** Mix contents slowly before using to assure uniform mixture.

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X) **PLANT DISEASES:** ECHO 720 is an excellent fungicide when used according to label directions for control of a broad spectrum of plant diseases.

ECHO 720 can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control.

Do Not use on greenhouse-grown crops.

Do not combine ECHO 720 in the spray tank with pesticides, surfactants or fertilizers, unless your prior use has shown the combination physically compatible, effective and noninjurious under your conditions of use.

Do not combine ECHO 720 with Dipel 4L, Triton AG-98, and Triton B-1956 as phytotoxicity may result from the combination when applied to some crops on this label.

Dipel is a registered trademark of Abbott Laboratories. Triton and Triton B-1956 are trademarks of Rohm and Haas Company.

**NOTE:** Slowly invert container several times to assure uniform mixture.

) Dosage rates on this label indicate pints of ECHO 720 acre, unless otherwise stated. Under conditions favoring disease development the high rate specified and shortest application interval should be used.

The required amount of ECHO 720 should be added slowly into the spray tank during filling. With concentrate sprays, pre-mix the required amount of ECHO 720 in a clean container and add to the spray tank as it is being filled. Keep agitator running when filling spray tank and during spray operations.

#### FIELD AND ROW CROPS:

) Apply ECHO 720 in sufficient water to obtain adequate coverage of foliage. Gallonage to be used will vary with crop and amount of plant growth. Spray volume usually will range from 20 to 150 gallons per acre (200 to 1400 liters per hectare) for dilute sprays and 5 to 10 gallons per acre (50 to 100 liters per hectare) for concentrate ground sprays and aircraft applications. Both ground and aircraft methods of application are recommended unless specific directions are given for a crop. Application through sprinkler irrigation systems if not recommended unless specific directions are given for a crop. See application and calibration instruction below.

#### APPLICATION AND CALIBRATION TECHNIQUES FOR SPRINKLER IRRIGATION

Apply this product only through center pivot, motorized lateral move, traveling gun, solid set and portable (wheel move, side roll, end tow, or hand move) irrigation system(s). Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not apply this product through irrigation systems connected to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days per year.

Controls for both irrigation water and pesticide injection systems must be functionally interlocked, so as to automatically terminate pesticide injection when the irrigation water pump motor stops. A person knowledgeable of the irrigation system and responsible for its operation shall be present so as to discontinue pesticide injection and make necessary adjustments, should the need arise.

The irrigation water pipeline must be fitted with a functional, automatic, quick-closing check valve to prevent the flow of treated irrigation water back toward the water source. The pipeline must also be fitted with a vacuum relief valve and low pressure drain, located between the irrigation water pump and the check valve, to prevent back-siphoning of treated irrigation water into the water source.

Always inject ECHO 720 into irrigation water after it discharges from the irrigation pump and after it passes through the check valve. Never inject pesticides into the intake line on the suction side of the pump.

Pesticide injection equipment must be fitted with a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump. Interlock this valve to the power system, so as to prevent fluid from being withdrawn from the chemical supply tank when the irrigation system is either automatically or manually turned off.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur. Do not apply when wind speed favors drift beyond the area intended for treatment.

ECHO 720 may be used through two basic types of sprinkler irrigation systems as outlined in Sections A and B below. Determine which type of system is in place, then refer to the appropriate directions provided for each type.

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A. Center Pivot, Motorized Lateral Move and Traveling Gun Irrigation Equipment

For injection of pesticides, these continuously moving systems must use a positive displacement injection pump, of either diaphragm or piston type, constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock and capable of injection at pressures approximately 2 - 3 times those encountered within the irrigation water line. Venturi applicator units cannot be used on these systems.

Fill chemical supply tank of injection equipment with water. Operate system for one complete revolution or run across the field, measuring time required, amount of water injected, and acreage covered. Thoroughly mix recommended amount of ECHO 720 for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run. Mixture in the chemical supply tank must be continuously agitated during the injection run. Shut off injection equipment after one revolution or run, but continue to operate irrigation system until ECHO 720 has been cleared from last sprinkler head.

B. Solid Set and Portable (Wheel Move, Side Roll, End Tow, or Hand Move) Irrigation Equipment

With stationary systems, an effectively designed in-line venturi applicator unit is preferred which is constructed of materials that are compatible with pesticides; however, a positive-displacement pump can also be used.

Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of ECHO 720 for acreage

to be covered with water so that the total mixture of ECHO 720 plus water in the injection tank is equal to the quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. No agitation should be required. ECHO 720 can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until ECHO 720 has been cleared from last sprinkler head.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Bean (Snap)	Rust	1 3/8 to 3 pts.	Use in sufficient water to obtain adequate coverage. Begin applications during early bloom stage or when disease first threatens and repeat at weekly intervals or as necessary to maintain control. Do not apply within 7 days of harvest. Do not graze treated areas or feed treated plant parts to livestock.
	Botrytis Blight (gray mold)	3 pts.	
Beans (Dry) Navy, Pinto, Kidney, Lima, Blackeye	Rust	1 3/8 to 2 pts.	Use in sufficient water to obtain adequate coverage. Begin applications during early bloom stage and repeat at 7 to 10 day intervals. For use only on beans to be harvested dry with pods removed. Do not apply within 6 weeks before harvest. Do not allow livestock to graze in treated areas or feed treated plant parts to livestock.
	Anthracnose Downy Mildew, Cercospora Leaf Spot (Blackeye only)		
Cabbage, Chinese Cabbage (tight- headed varieties only) Cauliflower, Broccoli, Chinese Broccoli Brussels Sprouts	Alternaria leaf spot,	1 1/2 pts.	Use in sufficient water to obtain adequate coverage. Begin applications after transplants are set in field, or shortly after emergence of field-seeded crop, or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control. Do not apply within 7 days of harvest to Chinese cabbage or Chinese broccoli.
	Downy Mildew		

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
	Ring Spot (California only)	2 Pts.	For field-seeded brussels sprouts, begin applications at time of early sprout development or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control.
Carrot	Cercospora (Early) Blight, Alternaria (Late) Blight	1 1/2 to 2 pts.	Use in sufficient water to obtain adequate coverage. Start applications when disease threatens and repeat at 7 to 10 day intervals or as necessary to maintain control.  ECHO 720 may be applied through sprinkler irrigation equipment (solid set, portable wheel move or center pivot systems only). See calibration directions preceding this section.
Celery	Cercospora (Early) Blight, Septoria (late) Blight, Basal Stalk Rot (Rhizoctonia Solani)	1 to 1 1/2 pts. or 2 to 3 pts.	Use 1 to 1 1/2 pts. per acre on a 3 to 5 day spray schedule or 2 to 3 pts. per acre on a 7 day schedule. Start applications when transplants are set in the field. Apply in sufficient water to obtain adequate coverage.
	Pink Rot (Suppression 7 day schedule)	3 pts.	ECHO 720 may be applied through sprinkler irrigation equipment (solid set, portable wheel move or center pivot systems only). See calibration directions preceding this section. Do not apply within 7 days of harvest.
	Early Blight Late Blight	1 1/2 to 2 pts. per 100 gal.	For celery seedbeds, apply 125 gallons per acre twice weekly or as needed to maintain control. Start applications shortly after crop emergence. Use the higher rate under severe disease

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CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Corn (Sweet), Corn grown for seed	Helminthosporium Leaf Blights, Rust	3/4 to 2 pts.	conditions. Use in sufficient water to obtain adequate coverage. Begin applications when conditions favor disease development and repeat at 4 to 7 day intervals or as required to maintain control. Under severe disease conditions, use 1 1/2 to 2 pts. per acre. Do not apply within 14 days of harvest. Do not apply to sweet corn to be processed. Do not allow livestock to graze in treated fields. Do not ensile treated corn or use as livestock forage.
Cranberry	Fruit Rots, Lophodermium Leaf/Twig Blight	4 to 7 pts.	Apply at early bloom and repeat at 10 to 14 day intervals. Under severe disease conditions, use the 7 pts./acre rate on a 10 day schedule. Do not apply ECHO 720 more than 3 times per season, or within 50 days before harvest. Do not apply to bogs when flooded or allow release of irrigation water from bogs for at least 3 days following application.  ECHO 720 may be applied through sprinkler irrigation equipment. Use 300 gallons of water per acre through solid set systems only. See calibration directions preceding this section.
Cucurbits: Cucumber, nose Cantaloupe, Muskmelon Honeydew Melon	Anthracnose, Downy Mildew, Target Spot Cercospora Leaf Spot,	1 1/2 to 2 pts. 2 to 3 pts.	Use in sufficient water to obtain adequate coverage. Begin applications when plants are in first true leaf stage or when conditions are favorable for disease development. Repeat applications at 7 day

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CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Water-melon, Squash, Pumpkin	Gummy Stem Blight (Black Rot), Alternaria		intervals. Under sever disease conditions, shorten spray interval.
	Leaf Blight, Scab, Powdery Mildew (Sphaerotheca only)		ECHO 720 May be applied through sprinkler irrigation equipment (solid set, portable wheel move or center pivot systems only). See calibration directions preceding this section.
	Cucumber Belly Rot (Rhizoctonia solani)	8 1/4 pts.	Use ECHO 720 in sufficient water to obtain runoff to soil surface. Make a single application when vines begin to form. ECHO 720 may be applied through sprinkler irrigation equipment as directed above.
Grasses grown for seed	Stem Rust, Leaf Rust, Stripe Rust Septoria Leaf Spot, Glume Blotch, Bipolaris and Drechslera Leaf Spots	1 to 1 1/2 pts.	Use in sufficient water to obtain adequate coverage. Begin applications during stem elongation when conditions favor disease development. Re-apply at flag (top) leaf emergence and repeat applications at 14 day intervals. Do not apply within 14 days of harvest. Do not allow livestock to graze in treated areas or feed treated plant parts to livestock.
	Selenophoma (Eyespot)	1 to 2 pts.	
Mint	Rust, Septoria Leaf Spot	1 3/8 pts.	Use in sufficient water to obtain adequate coverage, normally 20 to 150 gallons per acre for dilute sprays and 5 to 10 gallons per acre for concentrate ground and aircraft applications. Begin applications when emerging plants are 4 - 8 inches high. Repeat applications at 7 to 10 day intervals or as necessary to maintain control. Do not apply more than 3 times per season. Do not apply within

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS			
			80 days of harvest. Do not feed fresh or extracted mint hay from treated fields to livestock. Based on available residue data, use of ECHO 720 on mint is restricted to Indiana, Michigan and Wisconsin.			
Onion (Dry Bulb)	Botrytis Leaf Blight/ Blast, Botrytis Neck Rot (Suppression), Purple Blotch	1 to 2 pts.	Apply in sufficient water to obtain thorough coverage of tops. ECHO 720 is recommended for use with disease monitoring systems which adjust fungicide rates and frequency of application according to disease hazard. Apply as follows:  <table border="0"> <tr> <td>Low Disease Hazard &amp; Prior to infection</td> <td>Low Disease Hazard &amp; Some Disease Present</td> <td>High Disease Hazard</td> </tr> </table>	Low Disease Hazard & Prior to infection	Low Disease Hazard & Some Disease Present	High Disease Hazard
Low Disease Hazard & Prior to infection	Low Disease Hazard & Some Disease Present	High Disease Hazard				
		Rate Per Acre: Frequency:	1 pt. 10 days    1 3/8 pts. 7 to 10 days    2 pts. 7 days			
			For suppression of neck rot (Botrytis spp.) during storage, a minimum of three weekly applications prior to lifting, using 1 3/8 to 2 pints of ECHO 720 per acre, is recommended. Do not apply within 7 days of harvest.			
Onion (green bunching), Leek, Shallot, Garlic, Onion grown for seed	Botrytis Leaf Blight (Blast), Purple Blotch Downy Mildew (Suppression)	1 1/2 to 3 pts.	Use in sufficient water to obtain thorough coverage of tops. Begin applications prior to favorable infection periods, and repeat at 7 to 10 day intervals for as long as conditions favor disease. Use the high rate and a 7 day schedule of applications when heavy dew or rain persist. Do not			

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CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
			apply more than 3 times per season or within 14 days of harvest on green bunching onions, leeks or shallots. If additional disease control is needed before harvest, use another registered fungicide.
Papaya	Alternaria Fruit Spot, Anthracnose, Stem End Rot	2 to 4 pts.	Apply with ground equipment only, in sufficient water to obtain adequate coverage of fruit and leaves. Begin treatment when conditions favor development of disease and continue treatments at 14 day intervals until weather conditions no longer favor disease development. Do not graze livestock in treated area or feed processing by-products to livestock.
Parsnip	Alternaria Leaf Spot, Downy Mildew, Anthracnose, Botrytis Blight (Gray Mold), Bottom Rot (Rhizoctonia)	1 1/2 to 2 pts.	Apply in sufficient water to obtain adequate coverage. Make the first application at the first sign of disease or when conditions are favorable for infection. Continue applications on a 7 to 10 day schedule. Do not apply more than 4 times per season or within 10 days of harvest. Do not feed treated plant parts to livestock.
Passion Fruit (Hawaii only)	Alternaria Fruit and Leaf Spot, (Passion Fruit Brown Spot)	2 pts.	Apply with ground equipment in sufficient water to obtain adequate coverage of fruit and leaves. Begin treatment when fruit spots appear (April to July) and continue treatments at 14 day intervals until weather conditions no longer favor disease development. Do not graze in treated area or feed vines or processing by-products to livestock used for food.

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CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Peanut	Cercospora (early) leafspot Cercosporidium (late) leafspot	1 to 1 1/2 pts.	Apply in sufficient water for coverage when leaf wetness first occurs or 30 to 40 days after planting. Repeat at 10 to 14 day intervals. When conditions favor late leafspot or when rust or web blotch occur, apply 1 1/2 pints per acre at 10 day intervals for the remainder of the season. Do not apply within 14 days of harvest. Do not allow livestock to graze in treated areas. Do not feed hay or threshings from treated fields to livestock.
	Rust, Web Blotch	1 1/2 pts.	ECHO 720 may be applied through sprinkler irrigation equipment. Use 1 1/2 pints per acre in solid set, portable wheel move, center pivot or traveling gun sprinkler irrigation equipment. See calibration directions preceding this section
Potato	Late Blight Early Blight Botrytis Vine Rot	3/4 pt.	Apply as a banded treatment directed over the foliage, beginning when vines are first exposed and leaf wetness occurs. Repeat applications at 7 to 10 day intervals until vines close, then increase rate as described below.
		-then- 1 to 1 1/2 pts.	In addition to the early-season application above, as vines close between rows increase water carrier volume to cover the denser canopy and begin broadcast application patterns. Continue applications at 7 to 10 day intervals. Use the highest registered rate weekly when disease conditions are severe.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
			ECHO 720 may be applied through sprinkler irrigation equipment (solid set, portable wheel move, center pivot or motorized lateral move systems only). Do not exceed a 10 day interval between applications when using this technique. Follow calibration and application directions preceding this section.
Soybean Determi- mate (Southern) Varieties	Anthracnose Diaporthe Pod and Stem Blight Frogeye Leaf Spot (Cercospora Sojina), Purple Seed Stain Cercospora Leaf Blight (Cer- cospora Kikuchii), Septoria Brown Spot		Apply in sufficient water to obtain complete coverage, using at least five gallons of water per acre for aerial application. Use the three application program in areas having a history of moderate to severe disease intensity. ECHO 720 may be applied through sprinkler irrigation equipment. Follow application and calibration directions preceding this section. Do not exceed total of 3 applications per season. Do not apply within 6 weeks of harvest. Do not feed treated parts to livestock or allow grazing in treated fields.
		1 1/2 to 2 1/2 pts.	Two application program - Make the first application at early pod set (R3) stage, when majority of pods are 1/8 to 3/8 inch in length) and the second at beginning of seed formation (R5) which occurs about 14 days later.
		1 to 2 pts.	Three application program - Make the first application at the beginning of flowering (R1), the second at early pod set (R3) and the third at beginning of seed formation (R5).
	Stem Canker (Diaporthe	1 pt.	Apply in 10 to 20 gallons of water per acre, as a band treatment directing spray to

CROP	DISSASES	RATE PER ACRE	APPLICATION DIRECTIONS
	Phaseolorum var. caulivora)		provide coverage of entire plant. Make the first application at time of emergence of the second trifoliolate leaves (V2). If conditions favor stem canker disease make a second and a third application. Make all applications at 10 to 14 day intervals.
Soybeans Indeter- minate (Northern) Varieties	Anthracnose, Diaporthe Pod & Stem Blight, Frogeye Leaf Spot, (Cer- cospora Sojina), Purple Seed Stain, Cercospora Leaf Blight, (Cer- cospora Kikuchii), Septoria Brown Spot	1 1/2 to 2 1/2 pts.	Apply in sufficient water to obtain complete coverage, using at least five gallons of water per acre for aerial application. Use the three application program in areas having a history of moderate to severe disease intensity.  ECHO 720 may be applied through sprinkler irrigation equipment. Follow application and calibration directions preceding this section. Do not exceed total of 3 applications per season. Do not apply within 6 weeks of harvest. Do not feed soybean hay or threshings from treated fields to livestock.  Two application program - Make the first application when largest pods are 1 to 1 1/2 inches in length and make the second application 14 days later. ECHO 720 may be co-applied with Benlate (R) 50WP as a tank mix for disease control in indeterminate (northern) soybeans. Use 1 pt. of ECHO 720 plus 8 ounces of Benlate 50WP per acre. Make the first applications when pods near the top of plants are 1/2 to 1 inch in length and a second application 14 days later.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
		1 to 2 pts.	Three application program - Make the first application one week after first flowering and continue applications at 14 day intervals.
			(R) Benlate is a registered trademark of E.I. DuPont de Nemours and Co., Inc.
Tomato	<b>FOLIAGE</b> (Apply every 7-10 days): Early Blight, Late blight, Gray Leaf Spot, Gray Leaf Mold, Septoria Leaf Spot, Target Spot	1 3/8 to 2 pts.	Apply in sufficient water to obtain adequate coverage. Begin applications when dew or rain occur and disease threatens. Use the highest rate and shortest interval specified when disease conditions are severe.
	<b>FRUIT</b> (Apply every 7-14 days beginning at fruit set): Anthracnose, Alternaria Fruit Rot (Black Mold), Rhizoctonia Fruit Rot, Botrytis Gray Mold, Late Blight Fruit Rot	2 to 3 pts.	ECHO 720 may be combined in the spray tank with EPA-registered pesticide products that claim copper as the active ingredient and are labeled for control of bacterial diseases of tomatoes. Check the copper manufacturer's label for specific instructions, precautions and limitations prior to mixing with ECHO 720. Do not use with Copper-Count*-N in concentrated spray suspensions.
			*Copper-Count is a registered trademark of Mineral Research Development Corporation.

TREE AND ORCHARD CROPS

Apply ECHO 720 in sufficient water and with proper calibration to obtain uniform coverage of tree canopy. Application with ground equipment is preferable to aerial application because ground applications generally give better coverage of the tree canopy. If application with ground equipment is not feasible, ECHO 720 may be applied with aircraft using at least 20 gallons per acre. When concentrate sprays are used or when treating non-bearing or immature trees, the lower rate of ECHO 720 listed may be used. Do not allow livestock to graze in treated areas. The following spray volumes are recommended as gallons of spray per acre:

CROP	SPRAY VOLUME (Gallons Per Acre)
Peach, Nectarine, Apricot, Tart Cherry, Plum, Prune	20 (concentrate) to 300 (full dilute)

Sweet Cherry	20 (concentrate) to 400 (full dilute)
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CONIFERS	DILUTE	CONCENTRATE
Forest stands	Not used	10 to 20 (aircraft)
Christmas trees	100	10 to 50 (aircraft or ground equipment)
Nursery beds	100	5 to 10 (ground equipment only)

CROP	DISEASES	ECHO 720 RATE PER ACRE	RATE PER 100 GAL.*	APPLICATION DIRECTIONS
Peach, Nectarine, Apricot, Cherry, Plum, Prune	Leaf Curl, Coryneum Blight (Shothole)	3 1/8 to 4 1/8 pts.	1 to 1 3/8 pts.	For best control of both diseases apply at leaf fall in late autumn, using sufficient water and proper sprayer calibration to obtain uniform coverage. When conditions favor high disease levels, use the high rate of application and apply once or twice more in mid to late winter before budswell. If the leaf fall

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CROP	DISEASES	ECHO 720 RATE PER ACRE	RATE PER 100 GAL.*	APPLICATION DIRECTIONS
				application is not practical, application of ECHO 720 for control of leaf curl may be made at any time prior to budswell the following spring. Where Coryneum blight (shot-hole) occurs, also apply at bud-break to protect newly emerging leaves and at shuck split to prevent fruit infections.
	Brown Rot Blossom Blight, Lacy (Russet) Scab, (Plum/Prune)	3 1/8 to 5 1/2 pts.	1 to 1 3/8 pts.	Use 4 1/8 to 5 1/2 pints per acre on trees taller than 20 feet and 3 1/8 to 4 1/8 pints per acre on smaller trees. Make one application at popcorn (pink, red or early white bud) and a second application at full bloom. If weather conditions favor disease development, make an additional application at petal fall.
	Cherry Leaf Spot; Peach, Nectarine Apricot Scab	3 1/8 to 4 1/8 pts.	1 to 1 3/8 pts.	In addition to the bloom applications listed above, make one application at shuck split. Do not apply ECHO 720 after shuck split and before harvest. If additional disease control is needed before harvest, use another registered fungicide.  For control of cherry leaf spot after harvest, make one application to foliage within 7 days after fruit is removed. In orchards with a history of high leaf spot incidence, make a second application 10-14 days later.
Conifers	Swiss needlecast	2 3/4 to 5 1/2 pts.	2 3/4 to 5 1/2 pts.	Single application techniques: In Christmas tree plantations or forest stands make one application

CROP	DISEASES	ECHO 720 ACRE	RATE PER 100 GAL.*	APPLICATION DIRECTIONS
				in the spring when new shoot growth is 1/2 to 2 inches in length.
	Sclero- derris Canker (pines), Swiss Needlecast	1 1/2 2 3/4 pts.	1 1/2 to 2 3/4 pts.	Make the first application in spring when new shoot grow this 1/2 to 2 inches in length. Make additional applications at 3 to 4 week intervals until conditions no longer favor disease development. For use in nursery beds, apply the highest rate specified on a 3 week schedule.
	Sirococcus Tip Blight	2 to 3 1/2 pts.	2 to 3 1/2 pts.	
	Rhizos- phaera Needlecast (Spruces), Scirrhia Brown Spot (Pines)	5 1/2 pts.	5 1/2 pts.	
	Cyclaneusma and Lophod- ermium Needlecasts (pines)	2 3/4 to 5 1/2 pts.	2 3/4 pts. to 5 1/2 pts.	Apply in early spring prior to budbreak. Repeat applications at approximately 6 to 8 week intervals, until spore release ceases in late fall. Apply monthly during periods of frequent rainfall, and where Lophodermium infections occur during dormancy (Pacific Northwest). During drought periods, applications may be suspended, then resumed upon next occurrence of needle wetness.
	Rhabdocline needlecast (Douglas-fir)	1 1/2 to 2 3/4 pts.	1 1/2 to 2 3/4 pts.	Apply at budbreak and repeat at 3 to 4 week intervals until needles are fully elongated and conditions no longer favor disease development. In plantations of mixed provenance, or when irregular budbreak occurs, apply weekly until all trees have broken bud, then every 3 to

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CROP	DISEASE	ECHO 720 ACRE	RATE PER 100 GAL.*	APPLICATION DIRECTIONS
				4 weeks as specified above. In nursery beds, use the high rate on a 3 week schedule.
	Botrytis Seedling	1 1/2 to	1 1/2 to	Begin applications in nursery beds when seedlings are 4 inches tall and when cool, moist conditions favor disease development. Make additional applications at 7 to 14 day intervals as long as disease conditions persist.
	Blight, Phoma Twig	2 3/4 pts.	2 3/4 pts.	
	Blight			

\*Volumetric rates to be used only with full dilute spray volume specified on this label for tree and orchard crops.

**STORAGE AND DISPOSAL**

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

**STORAGE:** Store in a cool place. Protect from excessive heat.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray 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:** Do not reuse empty container. 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.

**WARRANTY AND LIMITATION OF DAMAGES**

Seller warrants that this material conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use and Buyer assumes the risk of any use contrary to such directions. Seller makes no other express or implied warranty, including any other express or implied warranty of Fitness or of Merchantability and no agent of Seller is authorized to do so except in writing with a specific reference to this warranty. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material as to which a claim is made.

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## SOSTRAM CORPORATION

ECHO 720

## TECHNICAL BULLETIN

SOSTRAM CORPORATION  
70 Mansell Court, Suite 230  
Roswell, Georgia 30076

EPA REG. NO. 60063-7  
EPA EST. No.

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## DIRECTIONS FOR USE

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

## PLANT DISEASES:

ECHO 720 is an excellent fungicide when used according to label directions for control of a broad spectrum of plant diseases.

ECHO 720 can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control.

Do not use on greenhouse-grown crops.

Do not combine ECHO 720 in the spray tank with pesticides, surfactants or fertilizers, unless your prior use has shown the combination physically compatible, effective and noninjurious under your conditions of use.

Do not combine ECHO 720 with Dipel 4L, Triton AG-98, and Triton B-1956 as phytotoxicity may result from the combination when applied to some crops on this label.

Dipel is a registered trademark of Abbott Laboratories. Triton and Triton B-1956 are trademarks of Rohm and Haas Company.

**NOTE:** Slowly invert container several times to assure uniform mixture.

Dosage rates on this label indicate pints of ECHO 720 acre, unless otherwise stated. Under conditions favoring disease development the high rate specified and shortest application interval should be used.

The required amount of ECHO 720 should be added slowly into the spray tank during filling. With concentrate sprays, pre-mix the required amount of ECHO 720 in a clean container and add to the spray tank as it is being filled. Keep agitator running when filling spray tank and during spray operations.

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**MILDEW CONTROL ON PAINT FILM:**

ECHO 720 is a broad-spectrum fungicide for control of mildew on paint film. This flowable form provides excellent performance characteristics when used as a mildewcide in aqueous paint systems only.

**NOTE TO USER:** Technical chlorothalonil may produce temporary allergic side effects characterized by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas. Persons having allergic reaction should contact a physician.

**NOTE:** Mix contents slowly before using to assure uniform mixture.

ECHO 720 is a 54% active aqueous dispersion. It can be added in the paint formula during the pigment grind operation, during or after letdown, or post-added to a finished product. To assure a uniform mixture of ECHO 720 gentle mixing is recommended before using. Generally, 7.48 to 18.7 pounds of ECHO 720 per 100 gallons of exterior paint are sufficient for effective mildew control in the paint film. Levels of 5.6 to 7.48 pounds have been found effective in interior latex paint.

ECHO 720 is compatible with latex paints containing zinc oxide.

ECHO 720 can be used in acrylic, vinyl-acrylic or polyvinyl acetate latexes.

If an in-can preservative is used in combination with ECHO 720, its compatibility with ECHO 720 should be examined first. The following precautions should be observed in handling and using ECHO 720.

**KEEP OUT OF REACH OF CHILDREN****WARNING****STATEMENT OF PRACTICAL TREATMENT**

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**IF ON SKIN:** Wash with plenty of soap and water. Get medical attention.

**IF IN EYES:** Flush with plenty of water. Call a physician if irritation persists.

**IF SWALLOWED:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

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

May be fatal if inhaled. Harmful if swallowed, absorbed through skin. Causes (moderate) eye injury (irritation). Avoid contact with skin, eyes or clothing. Do not breathe dust (vapor or spray mist). Wear a mask or pesticide respirator jointly approved by the Mine Safety and Health Administration and the National Institute for Occupation Safety and Health. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**NOTE TO USER:** This product may produce temporary allergic side effects characterized by redness of the eyes, mild bronchial irritation and redness or rash on exposed skin areas. Persons having allergic reaction should contact a physician.

**NOTE TO PHYSICIAN:** Persons having allergic reaction respond to treatment with antihistamines or steroid creams and/or systemic steroids.

**ENVIRONMENTAL HAZARDS**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the Environmental Protection Agency.

**STORAGE AND DISPOSAL**

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

**STORAGE:** Store in a cool place. Protect from excessive heat.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide formulation 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:** Do not reuse empty container. 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.

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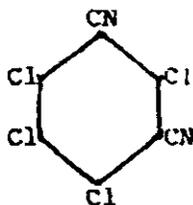
## WARRANTY AND LIMITATION OF DAMAGES

Seller warrants that this material conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use and buyer assumes the risk of any use contrary to such directions. Seller makes no other express or implied warranty, including any other express or implied warranty of fitness or of merchantability, and no agent of Seller is authorized to do so except in writing with a specific reference to this warranty. In no event shall Seller's liability for any breach of warranty exceed the purchase price of the material as to which a claim is made.

## TYPICAL ECHO 720 CHARACTERISTICS

Active ingredient	Tetrachloroisophthalonitrile (Chlorothalonil)
Active content	54.0%
Appearance	Viscous, white liquid
Density	11.15 lb./gal.
Specific gravity (H O+1)	1.34 g/ml. @ 25°C
Freezing point	-5°C
Stability	Thermally stable at normal storage temperatures, chemically stable in alkaline (below pH 9) or acidic conditions. Stable to UV radiation.
Corrosivity to metals	Noncorrosive
Molecular Weight	265.9

## Structural Formula



## PACKAGING, STORAGE AND HANDLING

ECHO 720 is shipped in 5 and 30 gallon polyethylene-lined fiber drums. This product may congeal or stratify when exposed to temperatures below its pour point. Should this occur, allow the container to warm to room temperature and mix well before using.

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## ECHO 720 PRODUCT SPECIFICATIONS

Item	Specification
Chlorothalonil	54% by weight minimum 56% by weight maximum
Density	11.15 lb./gallon minimum 11.5 lb./gallon maximum
Viscosity	15,000 cps minimum 23,000 cps maximum, by Brookfield #2 spindle at 0.5 rpm, 75°C
Particle Size (average)	2.0 microns minimum 3.38 microns maximum
Cellulose Stability	maximum of 7% decrease in stability