

PM 22

60063-5

File 1415



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

MAR 4 1994

Linda C. Watson
Agent for: SOSTRAM CORPORATION
3703 Sedgefield Drive
Valdosta, GA 31602

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

**Subject: Label Amendment Submission of 11/15/93 in Response to PR Notice 93-7
EPA Reg. No. 60063-5
ECHO 500 TURF AND ORNAMENTAL FUNGICIDE**

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**. 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:

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

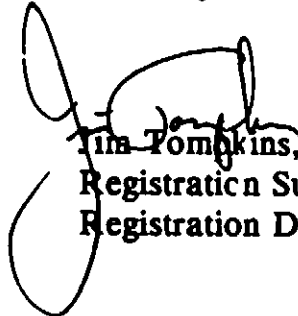
Submit the final printed labeling via the U.S. Postal Service to:

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,



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

Attachment

3 of 15

ACCEPTED
with COMMENTS
in EPA Letter Dated

MAR 4 1981

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
60063-5

ECHO 500

Turf and Ornamental Fungicide

Contains 4.17 Pounds Chlorothalonil
Per Gallon (500 grams per liter)

ACTIVE INGREDIENT:

Chlorothalonil (tetrachloroisophthalonitrile)..... 40.4%

INERT INGREDIENTS:..... 59.6%

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 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.

See side panel for additional precautionary statements.

EPA REG. NO. 60063-5

EPA EST. NO.

MANUFACTURED FOR:

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

NET CONTENTS: 2 Gallons/7.87 Liters

A Broad Spectrum Fungicide for use on Golf Course Tees, Greens and Fairways, Ornamental Turfgrass and Ornamentals.

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). Avoid contact with skin eyes and clothing. Do not breath dust (vapor or spray mist.)

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.

FIRST AID:

NOTE TO PHYSICIAN: Persons having 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, protective eyewear, for exposure in enclosed areas, 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) and for exposure outdoors, 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.

GENERAL INFORMATION

ECHO 500 Turf and Ornamental Fungicide is formulated for use on golf course tees, greens and fairways, ornamental turfgrass and ornamental shrubs and trees. It is highly effective for the control of a broad spectrum of turf and ornamental plant diseases when it is used according to the directions on this product label. Thorough, uniform coverage of plant surfaces is essential for good disease control.

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

Add the required amount of ECHO 500 to the spray tank while filling with water. Keep agitator running when filling spray tank and during spray operations.

Do not combine ECHO 500 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.

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, shoes plus socks, protective eyewear.

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.

APPLICATION AND CALIBRATION TECHNIQUES FOR SPRINKLER IRRIGATION ON SOD FARMS, ORNAMENTAL HERBS, SHRUBS AND TREES.

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. Do not use ECHO 500 Turf and Ornamental Fungicide through sprinkler irrigation equipment on golf courses.

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 500 Turf and Ornamental Fungicide 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 injections 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 500 Turf and Ornamental Fungicide 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.

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 500 Turf and Ornamental Fungicide 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 500 Turf and Ornamental Fungicide 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 500 Turf and Ornamental Fungicide for acreage to be covered with water so that the total mixture of ECHO 500 Turf and Ornamental Fungicide 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 500 Turf and Ornamental Fungicide 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 500 Turf and Ornamental Fungicide has been cleared from last sprinkler head.

TURF: Do not mow or water after treatment until spray deposit on turfgrass is thoroughly dry; ECHO 500 should always be used in conjunction with good turf management practices.

Fig 15

GOLF COURSE FAIRWAYS: Apply ECHO 500 Turf and Ornamental Fungicide in 30 to 40 gallons of water per acre. Begin applications when conditions favor disease development and repeat applications as long as these conditions persist. Under severe disease conditions use the highest rate and shortest interval corresponding with the application schedule selected from the table below.

DISEASE	APPLICATION INTERVAL	APPLICATION RATE PER ACRE
Sclerotinia dollar spot	7 - 10 Days	4 to 8 pts.
	14 - 21 Days	8 to 14 pts.
Helminthosporium leafspot	7 - 10 Days	3 pts.
	14 - 21 Days	8 to 14 pts.
Rhizoctonia brown patch	7 - 14 Days	8 to 10 pts.
Anthracnose	7 - 14 Days	6 to 12 qts.

GOLF COURSE TEES AND GREENS AND ORNAMENTAL TURFGRASS: Apply ECHO 500 Turf and Ornamental Fungicide in an adequate amount of water to provide complete coverage. This amount may vary from 2 to 10 gallons (approximately 8 to 38 liters) per 1,000 square feet. See below for suggested rates and timing. Under severe disease conditions, use the curative rates and spray on a 7 day schedule.

DISEASE	INTERVAL OF APPLICATION	RATE	
		LIQUID OUNCES* PER 1,000 SQ. FT. PREVENTIVE**	CURATIVE***
Anthracnose	7 - 14 Days	5-9	--
Copper spot	7 - 10 Days	6-9	9-11
Curvularia leaf spot	7 - 10 Days	3-6	6-11
Dollar spot	7 - 14 Days	3-6	6-11
Gray leaf spot	7 - 10 Days	3-6	6-11
Helminthosporium leaf spot and melting out	7 - 10 Days	3-6	6-11
Large brown patch	7 - 10 Days	3-6	6-11
Red thread	7 - 10 Days	9	9-11

Stem rust of bluegrass	7 - 14 Days	6-9	9-11
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DICHONDRA

Alternaria leaf spot (California only)	7 - 14 Days	6-9	9-11
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*One liquid ounce is approximately equal to 29 milliliters.

**Recommended rates for preventing disease establishment, use lower rates when disease conditions are light to moderate, higher indicated rates when conditions are severe.

***Rates for use on a 7 day schedule when disease is present. Higher indicated rate should be applied under severe conditions.

TURFGRASSES: Gray Snow Mold caused by Typhula spp. - Apply in sufficient water to obtain adequate coverage (2 to 10 gallons per 1,000 square feet). Apply 8 to 16 fluid ounces of ECHO 500 Turf and Ornamental Fungicide per 1,000 square feet of turf area. Application must be made before snow cover in autumn. Use the higher rate if turf layer remains frozen prior to snow cover. If snow cover is intermittent or lacking during the winter, re-apply ECHO 500 at 8 fluid ounces per 1,000 square feet at monthly intervals until gray snow mold conditions no longer prevail. In areas where pink snow mold (Gerlachia or Fusarium patch) is likely to occur, apply ECHO 500 at 8 fluid ounces per 1,000 square feet in combination with either Tersan* 1991 50WP at 2 ounces per 1,000 square feet or Chipco** 26019 50WP at 4 ounces per 1,000 square feet of turf area.

FUSARIUM (GERLACHIA) PATCH: For control of Fusarium patch only in areas where snow cover is intermittent or lacking during the winter, apply 8 to 14 fluid ounces of ECHO 500 Turf and Ornamental Fungicide per 1,000 sq. ft. of turf area. Begin applications in late autumn and re-apply at 21 to 26 day intervals until conditions favorable for Fusarium patch no longer prevail.

ORNAMENTALS AND CONIFERS: Apply ECHO 500 Turf and Ornamental Fungicide at rate of 2 pints per 100 gallons of water unless other directions are given in the tables below. Begin applications as directed for each species and disease condition cited and repeat on a 7 to 14 day schedule until conditions are no longer favorable for disease development. During periods when conditions favor severe disease incidence, generally cloudy or wet weather, use the higher rate specified and the shortest indicated interval between applications.

ECHO 500 may be used in greenhouses. Do not use mistblowers or high pressure spray equipment when making applications of ECHO

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500 in greenhouses.

Use of ECHO 500 is recommended for disease control on the ornamentals and conifers listed in the tables below. Use of ECHO 500 is not recommended for species that are not listed.

*Tersan is a registered trademark of E.I. Dupont de Nemours & Company, Inc.

**Chipco is a registered trademark of Rhone-Poulenc, Inc.

ORNAMENTALS:

SPECIES	DISEASES CONTROLLED	SUGGESTED FIRST APPLICATION
BROADLEAF SHRUBS AND TREES:		
Ash (Fraxinus)	Cercospora, Cercosporidium, Cylindrosporium leafspots	Spring bud break
Azalea* Rhododendron*	Phytophthora die-back; Ovulinia flower blight	New leaf emergence; Early bloom
Buckeye, Horsechestnut	Leaf blotch, Anthracnose	Spring bud break
Cherry-Laurel	Cercospora leafspot	Petal fall
Crabapple	Scab, Cedar-apple rust, Sphaeropsis leafspot	Spring bud break
Dogwood	Septoria leafspot	Early bloom
Euonymus	Anthracnose	Spring bud break
Firethorn	Scab	Spring bud break
Flowering Almond, Quince, Sand Cherry	Monilinia blossom/ branch blight	Early bloom
Hawthorn	Rust, Fabraea leafspot	Pre-bloom
Holly	Rhizoctonia web blight	Warm, moist conditions
Mountain Laurel	Cercospora leafspot	Spring bud break

Oak (red group Only)	Taphrina blister, Actinopelte leafspot, Anthracnose	Dormant budswell
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SPECIES	DISEASES CONTROLLED	SUGGESTED FIRST APPLICATION
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BROADLEAF SHRUBS AND TREES: (Con't)

Oregon-Grape (Mahonia)	Rust	Spring bud break
Photinia	Fabraea (Entomosporium) leafspot	Spring bud break
Pieris (Andromeda)	Phytophthora Die-back	New leaf emergence
Poplar	Marssonina leafspot	Spring bud break

BULBS AND FLOWERING PLANTS:

Carnation	Alternaria leafspot/ branch rot; Botrytis flower blight	Transplant of cuttings; Cool, moist conditions
Chrysanthemum/ Daisy	Mycosphaerella ray blight, Septoria leafspot; Botrytis flower blight (gray mold)	Transplant of cuttings Pre-bloom
Geranium	Botrytis blight, rust	Cool, moist conditions
Gladiolus	Curvularia leaf/ flower spot, Botrytis leaf/ Flower spot	Early propagation
Hollyhock	Rust	Early seedling stage
Hydrangea* (foliage only)	Cercospora and Septoria leafspots, Rust	Early propagation

Iris	Botrytis blossom blight, Didymellina leafspot	Cool, moist conditions
Lily	Botrytis gray mold	Pre-bloom

SPECIES	DISEASES CONTROLLED	SUGGESTED FIRST APPLICATION
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BULBS AND FLOWERING PLANTS: (Con't.)		
Petunia*	Phytophthora blight (foliar phase), Botrytis blight	Pre-bloom
Rose (Use 1 1/2 pt. per 100 gallons)	Black spot, Botrytis blight	Spring bud break
Statice	Anthracnose, Cercospora, Alternaria, Botrytis leaf blights	Spring bud break
Zinnia	Powdery mildew	First sign of disease

*Discoloration of blooms has been noted on certain varieties when applications are made during flowering.

FOLIAGE PLANTS:

Dracaena	Fusarium leafspot	Pre-transplant
Pacthysandra (Use 4 pt. per 100 gallons)	Volutella leaf blight	Spring bud break
Leatherleaf fern	Asccchyta blight, Cercospora leafspot, Cylindrocladium leafspot, Rhizoctonia blight	Spring bud break
Parlor palm (Chamaedorea)	Bipolaris (Helminthosporium) leafspot	Cool, moist conditions

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Prayer plant (Maranta)	Helminthosporium leafspot	Early propagation
Oyster Plant (Rhoeo)	Tan leafspot	Early propagation
Syngonium	Cephalosporium leafspot	Warm, moist conditions
SPECIES	DISEASES CONTROLLED	SUGGESTED FIRST APPLICATION

FOLIAGE PLANTS: (Con't.)

Philodendron	Phytophthora blight Dactylaria leafspot	Moist conditions
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CONIFERS:

DISEASES CONTROLLED	ECHO 500 TURF & ORNAMENTAL RATE/ACRE	APPLICATION DIRECTIONS
Scleroderris Canker (pines), Swiss Needlecast and Rhabdocline Needlecast (Douglas-fir)	2 to 4 pts.	Make first application in spring when new shoot growth is 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	3 to 5 pts.	
Rhizosphaera Needlecast (spruces), Scirrhia brown spot (pines)	8 pts.	
Lophodermium Needlecast	2 to 4 pts.	North Central and North-eastern States: Begin applications in mid-July to early August before infection occurs. Make additional applications at 3 to 4 week intervals until conditions no longer favor disease development. For use in nursery beds, apply 4 pts. per acre on a 3 week schedule.

Botrytis seedling blight, Phoma twig blight	2 to 4 pts.	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
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DISEASES CONTROLLED	ECHO 500 TURF & ORNAMENTAL RATE/ACRE	APPLICATION DIRECTIONS
Botrytis seedling blight, Phoma twig blight (con.t)		intervals as long as disease favorable conditions persist.

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.