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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

JUN 17 1997

OFFICE OF PREVENTION, PESTICIDES, AND TOXIC SUBSTANCES

Beverly M. Zapel
Regulatory Affairs Department
AmeriBrom, Inc.
52 Vanderbilt Avenue
New York, NY 10017

Subject: Label Amendment
Metapicrin
EPA Reg. No. 8622-43
Your Letter Dated March 26, 1997

Dear Ms. Zapel:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable provided you put the reason the product is classified as a RESTRICTED USE PESTICIDE, e.g. "Due to Acute Toxicity" directly under "RESTRICTED USE PESTICIDE" per 40 CFR §156.10(j)(2)(B).

If this condition is not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. Please submit one (1) copy of your final printed labeling before you release the product for shipment. An EPA stamped copy is enclosed for your records.

If you have any questions, then please contact Terri Stowe of my staff at (703) 305-6117.

Sincerely,

Mary L. Waller

Mary L. Waller
Acting Product Manager (21)
Fungicide Branch
Registration Division (7505C)

Enclosure

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RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

METAPICRIN

FUMIGANT — FOR PREPLANT SOIL FUMIGATION

ACCEPTED
with COMMENTS
In EPA Letter Dated

JUN 17 1997

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

8622-43

ACTIVE INGREDIENTS:	By Wt.
CHLOROPICRIN	<u>100.0%</u>
TOTAL	100%

ACUTELY TOXIC CHEMICAL

13.8 LBS. Active Ingredient Per Gal. (LIQUID IN CYLINDER)

KEEP OUT OF REACH OF CHILDREN



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.)

STATEMENT OF PRACTICAL TREATMENT

In all cases of overexposure, get medical attention immediately. Take person to a doctor or emergency treatment facility.

If inhaled — Get exposed person to fresh air. Keep warm. Make sure person can breathe freely. If breathing has stopped, give artificial respiration, preferably mouth-to-mouth. Do not give anything by mouth to an unconscious person.

If on skin — Immediately remove contaminated clothing, shoes, and other items covering skin. Wash contaminated skin area thoroughly with soap and water.

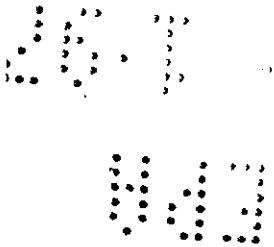
If in eyes — Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes.

See side panels for additional precautionary statements.

EPA REG. NO. 8622-43

- EPA EST. NO. 67545-AZ-01
- EPA EST. NO. 15298-IS-01
- EPA EST. NO. 29516-FL-04
- EPA EST. NO. 29516-NC-01

IN CASE OF EMERGENCY CONTACT:



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

DANGER

Poison liquid and vapor. Inhalation of vapors may be fatal. Contact with liquid may produce burns. Do not get into eyes, on skin, or clothing. Harmful or fatal if swallowed.

This product is chloropicrin, a volatile-liquid tear gas. Chloropicrin vapor is very irritating to the upper respiratory tract, and even at low levels can cause painful irritation to the nose and throat, and to the eyes, producing tearing. If these symptoms occur, leave the fumigation area immediately. Continued exposure after irritation is evident, or higher concentrations, may cause painful irritation to the eyes or temporary blindness, which may cause panic that may in turn lead to further accidents.

NOTE TO PHYSICIAN: Metapicrin is a volatile liquid that is the active ingredient in tear gas. As a gas it is a powerful lachrymator. Early symptoms of overexposure are lachrymation, respiratory distress and vomiting. Pulmonary edema may develop later. Treatment is symptomatic.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to wildlife. 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 EPA.

PHYSICAL OR CHEMICAL HAZARDS: Chloropicrin may be corrosive under certain conditions. DO NOT USE WATER to clean equipment. Flush equipment with kerosene or fuel oil. Do not use handling equipment or containers made from magnesium alloy, aluminum, or alkali metals. Chloropicrin is a non-flammable liquid.

AIR CONCENTRATION LEVEL

The acceptable air concentration level for persons exposed to chloropicrin is 0.1 ppm (0.7 mg/m³). If the air concentration level exceeds 0.1 ppm, an air purifying respirator must be worn. If the air concentration level exceeds 4 ppm, an air supplying respirator must be worn. The air concentration level is measured by a direct reading detection device, such as a Matheson-Kitagawa.

Applicators and Other Handlers Must Wear:

Loose-fitting or well ventilated long-sleeved shirt and long pants.
Shoes and socks.

Full-face shield or safety glasses with brow and temple shields (Do NOT wear goggles.) When the acceptable air concentration level is above 0.1 ppm and a respirator is required, protect the eyes by wearing a full-face respirator.

No respirator is required, if the air concentration level of chloropicrin in the working area is measured to be less than 0.1 ppm.

A respirator is required under the following circumstances:

- if the air concentration level exceeds 0.1 ppm at any time, applicators and other handlers must wear (a) a respirator with an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), OR (b) a respirator with a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- if the air concentration level exceeds 4 ppm at any time, applicators and other handlers must wear (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) OR (b) a self-contained breathing apparatus (SCBA) (MSHA/NIOSH approval number prefix TC-13F).

WORK SAFETY REQUIREMENTS

1. Do not wear jewelry, gloves, goggles, tight clothing, rubber protective clothing, or rubber boots when handling. Chloropicrin is heavier than air and can be trapped inside clothing and cause skin injury.
2. Discard clothing and other absorbent materials that have been drenched or heavily con-

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WORK SAFETY REQUIREMENTS

1. Do not wear jewelry, gloves, goggles, tight clothing, rubber protective clothing, or rubber boots when handling. Chloropicrin is heavier than air and can be trapped inside clothing and cause skin injury.
2. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them.
3. Clean PPE after each day's use. Immediately after contamination remove outer clothing, shoes, and socks and do not reuse until thoroughly aerated or ventilated. Keep such clothing and shoes outdoors until thoroughly aerated. Then follow the PPE manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE and work clothing separately from other laundry.
4. Follow PPE manufacturer's instructions for cleaning/maintaining protective eyewear, face shields and respirators.

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. As soon as possible, wash thoroughly and change into clean clothing.

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.

PLACARDING OF FUMIGATED AREAS

The applicator (or supervisor of the application) must placard all entrances to the fumigated area with signs bearing:

- skull and crossbones symbol
- "DANGER/PELIGRO,"
- "Area under fumigation, DO NOT ENTER/NO ENTRE,"
- "Chloropicrin Fumigant in use,"
- the date and time of fumigation, and
- name, address, and telephone number of the applicator.

Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration level of chloropicrin is measured to be less than 0.1 ppm. Signs must remain legible during the entire posting period.

Only a certified applicator (or someone under his/her supervision) may remove warning signs at entrances to fumigated structures.

If on skin — Immediately remove contaminated clothing, shoes, and other items covering skin. Wash contaminated skin area thoroughly with soap and water.

If in eyes — Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes.

See side panels for additional precautionary statements.

EPA REG. NO. 8622-43

EPA EST. NO. 67545-AZ-01

EPA EST. NO. 15298-IS-01

EPA EST. NO. 29516-FL-04

EPA EST. NO. 29516-NC-01

IN CASE OF EMERGENCY CONTACT:

Chemtrec (800) 424-9300

or

AmeriBrom West

5419 Santa Clara Ave.

Camarillo, CA 93010

Call Collect: (805) 988-9719 (CA)

(212) 286-4000 (NY)

AmeriBrom, Inc.

52 VANDERBILT AVENUE

NEW YORK, NY 10017

TELEPHONE: (212) 286-4000

FAX: (212) 286-4475

AB25/Rev 7

Net contents: _____ LBS./ _____ KGS. 10/96

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR 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 in this labeling about personal protective equipment, restricted-entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

No instructions elsewhere on this labeling relieve users from complying with the requirements of the WPS.

ENTRY RESTRICTIONS:

Greenhouse Soil Fumigation: Entry (including early entry that would otherwise be permitted under the WPS) by any person — other than a correctly trained and equipped handler who is performing a handling task permitted by the WPS — is PROHIBITED in the entire greenhouse (entire enclosed building/structure) from the start of application until 48 hours after application AND until the air concentration level of chloropicrin in the working area is measured to be less than 0.1 ppm. Until the aeration of the soil is complete (usually 10-14 days), non-handlers are permitted in the greenhouse ONLY while the air concentration level of chloropicrin in their working area remains less than 0.1 ppm. If tarps are used for the application, non-handler entry is prohibited during tarp removal and until the air concentration level is measured to be less than 0.1 ppm.

Outdoor Soil Fumigation: Entry (including early entry that would otherwise be permitted under the WPS) by any person — other than a correctly trained and equipped handler who is performing a handling task permitted on this labeling — is PROHIBITED from the start of application until 48 hours after application. In addition, if tarps are used for the application, non-handler entry is prohibited while tarps are being removed.

NOTIFICATION: Notify workers of the application by warning them orally and by posting fumigant warning signs, as described in the "Placarding of Fumigated Areas" section of this labeling. Post the fumigant warning sign instead of the WPS sign for this application, but follow all WPS requirements pertaining to location, legibility, size, and timing of posting and removal.

Greenhouses — Soil Fumigation: Post the fumigant warning signs outside all entrances to the entire greenhouse (entire enclosed building/structure).

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Outdoor Soil Fumigation: Post the fumigant warning signs at entrances to treated areas.

PPE FOR ENTRY DURING THE ENTRY-RESTRICTED PERIOD: PPE for entry that is permitted by this labeling is listed in the "Hazards to Humans and Domestic Animals" section of this labeling.

PESTICIDE STORAGE, HANDLING AND DISPOSAL

PESTICIDE STORAGE AND HANDLING: Store in dry, cool, ventilated area under lock and key. Post as a pesticide storage area.

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE: Store cylinders upright, secured to a rack or wall to prevent tipping. Cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured.

Persons moving or handling containers should wear personal protective equipment (including prescribed respirator) specified in the Hazards to Humans section of this labeling. Open container only in a well-ventilated area.

CONTAINER DISPOSAL: When cylinder is empty close valve by turning clockwise until hand tight, screw cap onto valve outlet, and replace protection bonnet before returning to shipper. Only the registrant is authorized to refill cylinders. Do not use cylinders for any other purpose. Follow registrant's instructions for return of empty or partially empty cylinders.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide 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, or follow registrant's instructions for return of partially empty cylinders.

RETURN OF CYLINDERS:

- (1) Cylinders are the property of the manufacturer or distributor where purchased and should be returned promptly by collect freight.
- (2) Do not ship cylinders without safety caps or valve protection bonnets.
- (3) When a cylinder is partially full and there is no further requirement for the product, contact the manufacturer or distributor for return instruction.
- (4) Containers should never be refilled by the consumer or used for any other product or purpose.

SPECIFIC DIRECTIONS FOR USE

This fumigant is a highly hazardous material and should be used only by individuals trained in its proper use. Before using, read and follow all label precautions and directions.

All persons working with this fumigant must be knowledgeable about the hazards, and trained in the use of required respirator equipment and detector devices, emergency procedures, and proper use of the fumigant.

Do not fumigate with this product when soil temperature is below 50°F. at a depth of 6 inches.

SPILL AND LEAK PROCEDURES

Evacuate everyone from the immediate area of the spill or leak. For entry into affected area to correct problem, wear the personal protective equipment (including prescribed respirator) specified in the Hazards to Humans section of this labeling. Move leaking or damaged containers outdoors or to an isolated location. Observe strict safety precautions. Work upwind, if possible. Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility. Only correctly trained and PPE-equipped handlers are permitted to perform such cleanup. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.1 ppm.

SOIL FUMIGATION

Metapicrin may be used as a preplant soil fumigant for control of many economic soilborne

ed in the use of required respirator equipment and detector devices, emergency procedures, and proper use of the fumigant.

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SPILL AND LEAK PROCEDURES

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SOIL FUMIGATION

Metapicrin may be used as a preplant soil fumigant for control of many economic soilborne pests if present in soil at time of treatment. Soil fumigation with Metapicrin provides control or suppression of plant-parasitic nematodes and disease causing organisms including the bacterial pathogen *Pseudomonas solanacearum*, fungi in the genera *Cylindrocladium*, *Fusarium*, *Pyrenochaeta*, *Pythium*, *Rhizoctonia*, *Scientina*, *Sclerotium*, and *Verticillium*, the clubroot organism *Plasmodiophora*, and the soil pox organism *Actinomyces ipomoea*. Control of certain soil-infesting insects such as cutworms, grubs and wireworms may also be obtained as well as suppression of weeds if used with a tarpaulin.

Keep pets, livestock, and other domestic animals out of the treated area during application, during the exposure period as specified for applications in Directions for Use, and during removal of tarpaulin, if used.

WHEN TO TREAT: Fumigate at least 14 days prior to planting whenever soil conditions are suitable. For best results, soil should be tilled to a fine, loose condition with soil temperature at depth of application between 60°F. and 85°F. Do not fumigate when soil temperature is below 50°F. Soil should contain adequate moisture to support good seed germination. Fall treatment is suggested for fields that will be planted too early to allow for adequate soil temperatures.

SOIL PREPARATION: For best fumigant penetration and soil sealing, plant remains should be worked into the soil long enough before treatment to allow for maximum decomposition. Deep tillage (e.g. 12 to 18 inches) often improves results. Till the soil to a very fine condition, leaving as few clods as possible. Optimum seedbed moisture is an essential factor for effective fumigation. Do not fumigate dry soil.

APPLICATION: For field application as an overall treatment, inject Metapicrin with a chisel type applicator having chisels spaced no more than 12 inches apart and injecting the fumigant 6-8 inches below the soil surface. To seal in fumigant after application, cover treated area with a plastic tarp. Alternate sealing methods include the use of a drag cultipacker, roller or float to firm the soil surface immediately behind chisels, or the application of water to wet the surface of soil 1 inch deep. For application as a row or bed treatment in the field, Metapicrin should be applied using one chisel shank per row to inject fumigant 6-8 inches below the original soil surface and sealed by listing a high, wide bed over the row or firming the bedded area with a bed-shaper. Fumigation of small areas or volumes of soil, potting mix or mushroom casing may be made by applying Metapicrin with a probe type point-injection device to a 6-8 inch depth in a grid pattern with injection points on a 12-inch spacing. For all applications involving the use of a plastic tarpaulin remove the tarp after 24-48 hours of exposure. Refer to Table for dosage rates for specific crops. Do not plant treated soil for 15 days.



WHEN TO PLANT: The soil should not be disturbed for 14 days following treatment. Do not plant seeds or transplants until the fumigant odor has left the soil. Cool or wet weather following treatment will retard diffusion of the fumigant, requiring a longer exposure and aeration period. Should these conditions occur, hasten aeration by working the bed to the depth of injection, taking care to avoid reinfestation of the fumigated zone with contaminated equipment and untreated soil.

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METAPICRIN DOSAGE RATES AND METHOD OF APPLICATION

Crop	Manner of Sealing	Dosage
All crops* (including greenhouse, nursery, and outside beds)	Cultipacking or water seal	485-1076 lbs./A
	Plastic (A)	150-200 lbs./A
Greenhouse beds	Plastic (A)	3-4 cc/sq. ft.
Mushroom casing soil	Water plus plastic or wet newspapers	5-10 cc/cu. ft.
Potting soil	Water or plastic (A)	3-4 cc/sq. ft.
Seedbeds — Celery (Florida)	Water or plastic (A)	1021 lbs./A or 6 cc/sq. ft.
Seedbeds (Other)	Water or plastic (A)	3-4 cc/sq. ft.
Seed flats	Plastic (A)	2-4 cc/sq. ft. 10 cc/cu. ft.

(A) Best results are obtained by covering beds with a tarpaulin or plastic cover for 24 hours after treatment. A water seal maintained for 24 hours in top inch soil may also be used. Keep tarpaulin on potting soil and seed flats for 24 hours.

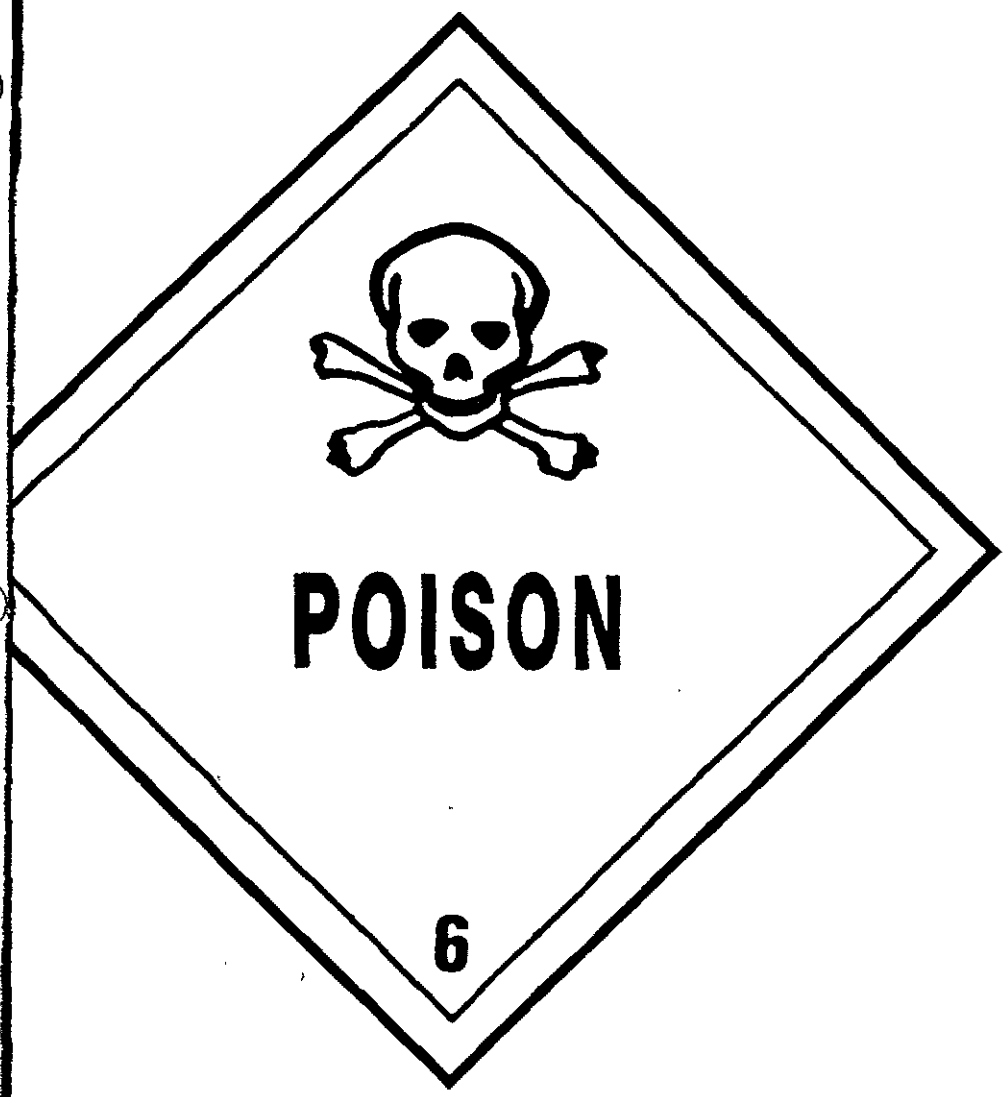
*Suggested broadcast recommended rates for specific crops.

Preplant Soil Rate	Pounds/Acre
Strawberry cropland	320-500
Tomatoes	300-500
Onions	200-400
Eggplants	300-500
Cucumbers	300-500
Melons	300-500
Sweet Potatoes	150-400
Yams	150-400
Tobacco	150-500

Row or bed applications may be made at the broadcast rates but the amount used will be proportionately less per acre depending on the row spacing and width of treatment in the row or bed.

After fumigation, fumigated areas must be aerated until the air concentration level of chloropicrin is measured to be less than 0.1 ppm. Until the acceptable air concentration level is reached, do not allow any person to enter into the fumigated area unless he/she is wearing the specified personal protective equipment (including prescribed respirator) specified in the Hazards to Humans section of this labeling. In greenhouses, additional Worker Protection Standard restrictions apply.

**CHLOROPICRIN
UN 1580
INHALATION HAZARD**



Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herewith.