UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

March 24, 2022

Robert Hamilton
Senior Regulatory Manager
Agent for K-I Chemical U.S.A. Inc.
Valent U.S.A. LLC
1101 14th Street, NW
Washington, DC 20005

Subject: Registration Review Label Mitigation for Thiobencarb
Product Name: BOLERO 8 EC (HERBICIDE)
EPA Registration Number: 63588-6
Application Date: 2/21/2020
Decision Number: 560075

Dear Robert Hamilton:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Thiobencarb Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently

approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Quinn Gavin by phone at 202-566-2284, or via email at gavin.quinn@epa.gov.

Sincerely,

Linda Arrington, Branch Chief
Risk Management and Implementation Branch 4
Pesticide Re-Evaluation Division
Office of Pesticide Programs

Enclosure

K-I CHEMICAL U.S.A. INC.

THIOBENCARB	GROUP	8	HERBICIDE

[Bracketed text is optional]

BOLERO® 8 EC (HERBICIDE)

Active Ingredient	By Wt
*Thiobencarb	84%
Other Ingredients	16%
Total	100%

**S*-[(4-chlorophenyl)methyl] *N*,*N*-diethylcarbamothioate

Bolero® 8 EC Herbicide is an emulsifiable concentrate containing 8 lb thiobencarb per gallon.

Not for Use in California

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS 15 GALLONS

EPA Reg. No. 63588-6

ACCEPTED

Mar 24, 2022

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 63588-6

FIRST AID	
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything to an unconscious person.
If Inhaled:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **800-892-0099** for emergency medical treatment information.	
NOTE TO PHYSICIAN Thiobencarb is a cholinesterase inhibitor. If signs of cholinesterase inhibition appear, atropine is antidotal.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION: Harmful if swallowed or inhaled. Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and Flaggers using enclosed cabs or enclosed cockpits must wear: long-sleeved shirt and long pants, shoes plus socks.

Mixers and Loaders must wear: coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, including Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils or Viton ≥ 14 mils, chemical-resistant apron and shoes plus socks.

For other handling activities and in case of a spill or other emergency exposure, handlers must wear: coveralls over long-sleeved shirt and long pants, chemical-resistant gloves including Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils or Viton ≥ 14 mils, chemical-resistant footwear and chemical-resistant apron when cleaning equipment.

All workers must wear: waterproof boots plus socks when entering flooded fields following treatment.

USER SAFETY REQUIREMENTS
Discard clothing or other absorbent material 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 Control Statements: When making application of Bolero® 8 EC Herbicide using aerial application equipment, mixers and loaders are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4). Applicators and flaggers are required to use enclosed cabs or enclosed cockpits. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(5-6).

USER SAFETY RECOMMENDATIONS

Users should:

- 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 shrimp. For terrestrial uses, do not apply directly to water except as directed on this label, 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.

NON-TARGET ORGANISM ADVISORY STATEMENT
This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

The use of *Bolero* 8 EC Herbicide on rice is restricted to protect the endangered fat pocketbook pearly mussel (*Potamilus capax*) and its habitat.
In Arkansas, the following use prohibitions apply in Cross, Lee, Mississippi, Poinsett and St. Francis Counties:

1. *Bolero* 8 EC Herbicide will not be applied aerially within one mile of the St. Francis Floodway (west branch of the St. Francis River) where the fat pocketbook pearly mussel is known to occur;
2. *Bolero* 8 EC Herbicide will not be ground applied within 1,000 feet of the St. Francis Floodway where the fat pocketbook pearly mussel is known to occur;
3. Rice fields will not be flooded for at least 3 days after application, and water application on the fields is not to be drained for at least 7 days after flooding a treated field in areas where waters drain into the St. Francis Floodway where the fat pocketbook pearly mussel is known to occur; and
4. Should on-going distributional surveys of the fat pocketbook pearly mussel find additional populations in the St. Francis Floodway, or other waters, the same restrictions would apply to these waters.

In Louisiana, do not apply this product south of the Intracoastal Waterway.
In Texas, do not apply this product within two (2) miles from the shorelines of Matagorda Bay or within two (2) miles from the shorelines of Galveston Bay.

PHYSICAL OR CHEMICAL HAZARDS
Combustible. Do not store near heat or open flame.

DIRECTIONS FOR USE

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

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

Do not apply this product in a way that will contact workers or other persons, either directly or indirectly 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) of12 hours.

PPE required for entry within 12 hours after application to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil or water is: coveralls, chemical-resistant gloves made of any waterproof material including Barrier Laminate, Butyl Rubber ≥ 14 mils, Nitrile Rubber ≥ 14 mils or Viton ≥ 14 mils, and waterproof boots plus socks.

DISCLAIMER, RISKS OF USING THIS PRODUCT,
LIMITED WARRANTY
AND LIMITATION OF LIABILITY

IMPORTANT: Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.

RISKS OF USING THIS PRODUCT

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of K-I Chemical. The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND AGREES THAT TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

To the extent consistent with applicable law, K-I Chemical shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. To the extent consistent with applicable law, Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

LIMITED WARRANTY

K-I Chemical warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label and **subject to the Risks of Using This Product as described above. To the extent consistent with applicable law AND EXCEPT AS SET FORTH ABOVE,** K-I Chemical **MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED.** No agent or representative of K-I Chemical or Seller is authorized to make or create any other express or implied warranty.

LIMITATION OF LIABILITY

To the extent consistent with applicable law, K-I Chemical **or Seller is not liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF** K-I CHEMICAL **OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF** K-I CHEMICAL **OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

PROMPT NOTICE OF CLAIM

To the extent consistent with applicable law allowing such requirements K-I Chemical must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

To the extent consistent with applicable law, if Buyer does not notify K-I Chemical of any claims, in such period, it shall be barred from obtaining any remedy.

NO AMENDMENTS

K-I Chemical and Seller offer this product, and Buyer accepts it, subject to the foregoing Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability, which may not be modified by any oral or written agreement.

TANK MIXES

NOTICE: Tank mixing of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor, consistent with applicable law.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Resistance Management

For resistance management, *Bolero* 8EC Herbicide is a Group 8 herbicide. Any weed population may contain or develop plants naturally resistant to *Bolero 8EC Herbicide* and other Group 8 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of *Bolero* 8EC Herbicide or other Group 8 herbicides within a growing season sequence or among growing seasons with different herbicide groups that control the same weeds in a field.

- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.

- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.

- Fields should be scouted prior to application to identify the weed species present and their growth stage to determine if the intended application will be effective. Fields should be scouted after application to verify that the treatment was effective. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.

- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.

- Contact your local extension specialist or certified crop advisors for additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes or to find out if suspected resistant weeds have been found in their region.

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PRODUCT INFORMATION

Bolero 8 EC Herbicide applied pre-plant, late preemergence or postemergence will control many weeds in rice. *Bolero* 8 EC Herbicide will provide residual control of some weeds up to 5 weeks following application. Temporary injury to seedling rice may occur under certain conditions.

Restrictions

1. Do not apply *Bolero* 8 EC Herbicide to fields with exposed seed as exposed seed will be killed.
2. Do not apply to stressed rice.
3. Do not apply *Bolero* 8 EC Herbicide as a preemergence treatment to cracked soil.
4. Do not apply more than 2-1/2 pt (2.5 lb ai/A) of *Bolero* 8 EC Herbicide per acre when using aerial application equipment east of the Rocky Mountains.
5. Do not apply more than 4 lb active ingredient per acre per year. Do not apply more than 1 Bolero 8 EC Herbicide application per acre per year.
6. Do not apply Bolero 8 EC Herbicide through any type of irrigation system.
7. Do not apply to rice paddies where commercial catfish or crayfish farming is practiced.
8. Do not apply this product on rice fields adjacent to catfish or crayfish ponds.
9. Do not permit drift into catfish, crayfish, shrimp or minnow ponds.
10. Do not release permanent flood water within 14 days (19 days east of the Rocky Mountains) of application of this product (where weather permits).
11. Do not apply this product within 24 hours of rainfall, or when heavy rain is expected to occur within 24 hours.
12. Do not mix/load or otherwise handle Bolero 8 EC Herbicide within 100 feet of aquatic habitat.
13. Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops rendered unfit for sale, use or consumption.
14. Do not apply to non-target areas.
15. Do not apply when temperatures exceed 95°F.
16. Do not overlap or double spray ends of field.
17. Do not apply to a second stubble rice crop.
18. Do not use water drained directly from treated fields to irrigate other crops.
19. Do not apply Bolero 8 EC Herbicide in combination with propanil within 14 days before or after organophosphate or carbamate insecticide application.
20. Do not use Bolero 8 EC Herbicide on rice grown in fields which have been land leveled resulting in severe cuts and heavily filled areas (does not apply to normal maintenance leveling) in the past 18 months.
21. Do not use Bolero 8 EC Herbicide on water-seeded rice grown in fields which have received chicken litter or had large amounts of green vegetative residue incorporated in the past 10 months.
22. Do not mix this product with any product containing a label prohibition against such mixing.
23. Do not use this product to impregnate fertilizer.

PRECAUTIONS

- Application to stressed rice can result in stand reductions, chlorosis, growth inhibition, delayed maturity and/or leaf desiccation. Stress factors include, but are not limited to, the following: daily temperatures below 65°F or above 95°F, problem soils (e.g., Zn deficiency, high salt content, high pH), excessive moisture (e.g., above field capacity while rice seed is germinating); drought conditions, poor field drainage; deep water after application, or application of herbicide(s) either before or after *Bolero* 8 EC Herbicide application. Stress management practices include determining rice plant vigor by inspecting both top growth and root growth before applying herbicides.
- The use of liquid nitrogen, zinc, surfactants or other spray additives with Bolero 8 EC Herbicide is done at the sole risk of the user.
- This product cannot be mixed with any product containing a label prohibition against such mixing.

ROTATIONAL RESTRICTIONS

Do not plant subsequent crops in treated fields within 6 months of last application.

Environmental Conditions and Biological Performance

Bolero 8 EC Herbicide is used as an integral part of a weed control program and must be used in conjunction with a resistance management strategy (see "Resistance Management Recommendations" statement in this label). The mode of action is the inhibition of lipid synthesis. *Bolero* 8 EC Herbicide will, in most cases, prevent the emergence of susceptible weeds if application is made to a clean well-prepared seedbed. For optimum results from an application made prior to the emergence of susceptible weeds, rainfall or irrigation is needed to move *Bolero* 8 EC Herbicide into the soil.

Table 1. Soil Characteristics and Application Rates

SOIL TEXTURE	*BOLERO* 8 EC HERBICIDE RATES PER ACRE pt/A
COARSE: sandy loam	2.5 to 3 (2.5 to 3 lb of ai/A)
MEDIUM: loam, silt loam, silt, sandy clay loam	3 to 4 (3 to 4 lb of ai/A)
FINE: clay, clay loam, sandy clay, silty clay, silty clay loam,	3 to 4 (3 to 4 lb of ai/A)

Mixing and Spraying Equipment Preparation

Restriction: Do not use chlorine bleach with ammonia. Remove all traces of liquid fertilizer containing any form of ammonia or ammonium before adding any chlorine source including chlorine bleach.

Prior to using *Bolero* 8 EC Herbicide thoroughly drain, clean and rinse all mixing and spraying equipment that will come in contact with *Bolero* 8 EC Herbicide. Follow the cleanup directions of the manufacturer of the previously sprayed product. Failure to remove all deposits of previously sprayed products may result in collection of *Bolero* 8 EC Herbicide residues and inhibit cleanup of mixing and spraying equipment after *Bolero* 8 EC Herbicide use.

Precaution: Failure to remove all deposits of previously sprayed products may also result in reduced efficacy of *Bolero* 8 EC Herbicide and/or crop injury.

SPRAYER CLEANOUT

Residual amounts of herbicide in/on mixing or spraying equipment may have an adverse effect on subsequently sprayed crops. Thoroughly drain, clean and rinse all mixing and spraying equipment (including tanks, booms, hoses, strainers, screens and nozzles) immediately after use. Use the following procedure:

1. Remove all physical residue.
2. Thoroughly drain and rinse tanks, booms and hoses with clean water.
3. Fill the tank one-half full of clean water and use a spraying/mixing tank cleaner that does not contain chlorine. Let agitate/re-circulate according to the directions of the cleaner manufacturer. Thoroughly flush the boom and hoses before draining.
4. Rinse all hoses, tanks, nozzles, strainers and booms with clean water to remove the tank cleaner. Follow the directions provided by the tank cleaner manufacturer.
5. Remove the strainers, nozzles and screen and clean separately.
6. Replace the strainer(s), nozzles and screens.
7. Thoroughly rinse the tank with clean water and flush the water through the boom, nozzles and hoses.
8. Dispose of the rinsate on site or at an approved waste disposal facility.

Mixing Instructions

1. Fill the tank one-half full of clean water.
2. Begin agitation.
3. If foaming is anticipated, add defoamer prior to the addition of the surfactant. Add the required amount of *Bolero* 8 EC Herbicide.
4. Add tank mix partner (*if any)* in the following order:
    a. Water soluble packets (preferably added before the surfactant)
    b. Water dispersible granules/wettable powder
    c. Soluble powders/UAN
    d. Suspension concentrate
    e. Emulsifiable concentrate
5. Fill the remainder of the tank.
6. Mix only the amount of spray solution that can be applied the day of mixing. *Bolero* 8 EC Herbicide must be applied within 12 hours of mixing.

Application Equipment

Ensure application equipment is clean and in good repair, nozzles are uniformly spaced on the boom and frequently checked for accuracy. Nozzle selection must meet manufacturer's gallonage and pressure guidelines for application.

SPRAY DRIFT

Aerial Applications:

- **DO NOT** release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply within 10 ft of residential areas.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- **DO NOT** apply when wind speeds exceed 10 mph at the application site. The boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- **DO NOT** apply during temperature inversions.

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use a medium or coarser droplet size (ASABE S572.1).
- **DO NOT** apply within 10 ft of residential areas.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT – Aircraft
Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS
Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY
When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS
Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND
Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.
Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.
Sensitive Areas
The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

For additional information on sensitive areas, please see the “ENVIRONMENTAL HAZARDS” section of this label.

USE INSTRUCTIONS
BOLERO 8 EC HERBICIDE APPLICATION RATES AND TIMING TO RICE

Application Rate pt/A	Special Instructions
4 (4.0 lb ai/A)	**Water-Seeded Rice - Red Rice Suppression and Sprangletop Control (Preplant, non-incorporated)** • Apply *Bolero* 8 EC Herbicide to a well prepared seedbed which preferably has been mechanically ridged and has had drains plowed. • Make application immediately after soil preparation (before any weed germination). If rain occurs after soil preparation, *Bolero* 8 EC Herbicide must not be applied until the soil is dry enough to support tillage operations. Red Rice or Sprangletop plants which are not killed by seedbed preparation and Red Rice or Sprangletop seed which have germinated before *Bolero* 8 EC Herbicide application will not be controlled. • Flood the field between 2 and 3 days after the *Bolero* 8 EC Herbicide application. • Do not drag the field or disturb the treated seedbeds after flooding. • Seeding must not occur before 24 hours after the field has been brought to flood level. Refer to and follow State Extension Service recommendations regarding seeding rate, seeding time after flood and drainage of seeding flood. • Supplemental herbicides may be needed for season long weed control. Rice in areas which do not completely drain when the seeding flood is removed may be injured or killed. [Refer to "Restrictions and Limitations section". Begin drainage when the first leaf is about 1/4 to 1/2 inch long. For red rice suppression normal pin-point flood cultural practices (not flush or continuous flood culture) must be followed with the post seeding drainage period not to exceed 3 to 5 days. Preplant nitrogen enhances the program by promoting fast growth. The planting of early season varieties of rice as soon as possible after soil temperatures are favorable; fall preparation of rice land involving deep-plowing and subsequent shallow cultivations; and rotational schemes involving fallow, pasture and/or other non-crops, are essential for long-term integrated management of Red Rice, Sprangletop and other rice weeds. Rice injury and/or stand thinning may be evident, especially when germinating rice is subjected to stress conditions.]
4 (4.0 lb ai/A)	**Drill Seeded Rice Only** **(Delayed Preemergence)[1]** • Apply *Bolero* 8 EC Herbicide to a well-prepared moist seedbed. Seal soil by flushing or rainfall prior to application of *Bolero* 8 EC Herbicide.

USE INSTRUCTIONS
BOLERO 8 EC HERBICIDE APPLICATION RATES AND TIMING TO RICE

Application Rate pt/A	Special Instructions
4 (4.0 lb ai/A)	**Dry Seeded Rice (Postemergence)** • Apply *Bolero* 8 EC Herbicide to moist soil or flooded fields. • Postemergence application to drill seeded rice can be made after emergence. • If tank mixing, follow tank mix partner's timing and adjuvant directions.
4 (4.0 lb ai/A)	**Water-Seeded Rice (Postemergence)** • Apply *Bolero* 8 EC Herbicide to moist soil or flooded fields. • Postemergence application may be made to rice that is in at least the • 2-leaf (second leaf fully expanded) stage of growth.
4 (4.0 lb ai/A)	**Tank Mix Application** • *Bolero* 8 EC Herbicide may be applied in tank mix combination with labeled rates of products listed in Tables 2 and 3. • Always read and follow label instructions for all products. Follow most restrictive labeling.
• Refer to Table 4 for preemergence weeds controlled by *Bolero* 8 EC Herbicide	

[1] Rice seed must germinate (have a primary root at least 1/2 inch long) prior to *Bolero* 8 EC Herbicide application.

Application to stressed rice can result in stand reduction, chlorosis, growth inhibition, delayed maturity and/or leaf desiccation. Stress factors include but are not limited to the following: Daily temperatures below 65°F or above 95°F, problem soils, (*i.e*., Zn deficiency, high salt content, high pH), excessive moisture, (i.e., above field capacity while rice seed is germinating), drought conditions, poor field drainage or deep water after application.

WATER MANAGEMENT
After application, flush the fields as necessary to prevent crusting and drying of the soil. Fields should be flooded as soon as the rice plants will tolerate permanent flooding. Do not release permanent flood water within 14 days (19 days east of the Rocky Mountains) after application.

APPLICATION EQUIPMENT
Aircraft: Apply *Bolero* 8 EC Herbicide in no less than 10 gallons spray mix per acre. See "Engineering Control Statements" when making aerial application of *Bolero* 8 EC Herbicide.

Ground Sprayers: Apply in a minimum of 10 gallons of total spray mix per acre.

The following herbicide products may be tank mixed with *Bolero* 8 EC Herbicide for delayed preemergence use in rice. Always read and follow label instructions for all products tank mixed with *Bolero* 8 EC Herbicide.

Table 2. Preemergence Tank Mix Partners

clomazone (*e.g*. Command®)	imazethapyr (*e.g.* Newpath®)	quinclorac (*e.g*. Facet®)
glyphosate	clomazone + quinclorac (*e.g.* Obey™)	
imazosulfuron (*e.g*. League®)	pendimethalin (*e.g*. Prowl®)	

The following herbicide products may be tank mixed with *Bolero* 8 EC Herbicide for postemergence use in rice.

Table 3. Postemergence Tank Mix Partners

2,4-D	triclopyr (e.g. Grandstand®)	clomazone + quinclorac (e.g. Obey™)
carfentrazone-ethyl (e.g. Aim® EC)	penxsulam (e.g. Grasp® SC)	propanil[1,2]
carfentrazone-ethyl + quinclorac (e.g. Broadhead®)	imazosulfuron (e.g. League®)	bispyribac-sodium (e.g. Regiment®)
quinclorac + imazethapyr (e.g. Clearpath®)	bensulfuron methyl (e.g. Londax®)	propanil + thiobencarb (e.g. RiceBeaux®)
cyhalofop (e.g. Clincher™SF & Clincher™ CA)	imazethapyr (e.g. Newpath®)	fenoxaprop-p-ethyl (e.g. Ricestar® HT)
clomazone (e.g. Command)		

[1] Rice seedlings with succulent growth may exhibit temporary foliar burn which may be greater than conventional propanil application but usually recover after 10 to 14 days.

[2] Do not mix liquid nitrogen or surfactants with *Bolero* 8 EC Herbicide alone or when mixed with propanil.

Table 4. Preemergence Weeds Controlled and Suppressed

Common Name	Scientific Name	Application Rate pt/A
Barnyardgrass	*Echinochloa crus-galli*	4 (4.0 lb ai/A)
Broadleaf Signalgrass	*Urochloa platyphylla*	
Crabgrass, Large	*Digitaria sanguinalis*	
Dayflower	*Commelina communis*	
Ducksalad	*Heteranthera limosa*	
Eclipta	*Eclipta alba*	
Fall Panicum	*Panicum dichotomiflorum*	
False Pimpernel	*Lindernia dubia*	
Flatsedge		
Redroot	*Cyperus erythrorhizos*	
Rice	*Cyperus iria*	
Goosegrass	*Eleusine indica*	
Gooseweed	*Sphenoclea zeylanica*	
Horrahgrass	*Fimbristylis* spp.	
Junglerice	*Echinochloa colona*	
Red Rice[1]	*Oryza sativa*	
Redstem (Purple Ammannia)	*Ammannia coccinea*	
Spikerush		
Amazon	*Leptochloa panicoides*	
Bearded	*Leptochloa fascicularis*	
Waterhyssop	*Bacopa rotundifolia*	

[1] Suppression only – See “APPLICATION RATES AND TIMINGS”

DELAYED PHYTOTOXICITY SYNDROME (DPS)

Bolero 8 EC Herbicide use in rice fields which develop anaerobic (low oxygen content) soil conditions following planting, in the presence of certain fungi that dechlorinate benzene rings (i.e., *Bolero* 8 EC Herbicide, propanil, 2,4-D, etc.), may reduce plant stand and yield. Anaerobic soil conditions are likely to occur when:

1. Green matter and crop residue is plowed down or worked into the soil prior to planting.
2. Internal soil drainage is slow (poor percolation).
3. There is a continuous flood.
4. There are areas in the field which retain water during periods of prescribed flood removal.

Delayed Phytotoxic Syndrome (DPS), which occurs under low oxygen soil conditions, is associated with the following symptoms in rice plants:

1. Dark green foliage and/or
2. Reduced plant height and/or
3. Plant deformation

Be prepared to drain the treated field(s) to allow for soil oxygenation at the first symptoms of DPS.

Management practices which will help to minimize these situations and thereby promote good soil conditions for the production of healthy rice treated with *Bolero* 8 EC Herbicide are:

1. Destruction of previous crop and weed residues by:
    a. Burning where state regulations allow.
    b. Fall and winter plowing.
    c. Use of glyphosate or paraquat as a "burndown" to prevent vegetation buildup after initial ground preparation and prior to final seedbed preparation.
2. Application of fertilizer according to soil test results
    a. Do not apply excess phosphorous.
3. Uniform leveling practices which eliminate low spots in the field and insure that the field is entirely drained for prescribed flood removal periods. This is far more difficult to achieve with the use of contour levees. Fields which have been precision leveled for perimeter ditches or straight levees are more suited to the intense water management practices required for the red rice suppression, pinpoint flood program.
4. Uniform flood depth of 2" to 4".
5. Not exceeding labeled rates of *Bolero* 8 EC Herbicide, accurate calibration of application equipment and eliminating application overlap.

Precaution

Water-seeded rice fields treated with *Bolero* 8 EC Herbicide preplant or post flood should be inspected regularly through the stand establishment and seedling growth stages. If any of the Delayed Phytotoxicity Syndrome symptoms (associated with low oxygen soil conditions) occur (see section on DPS), immediately drain the flood and allow the soil to oxygenate (no standing water for 3 to 5 days) then reflood. Low spots which do not drain completely may continue to display phytotoxic symptoms. [Use of *Bolero* 8 EC Herbicide on rice fields which cannot be drained as necessary may result in phytotoxic symptoms and **is done at the sole risk of the user.**]

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Keep pesticide in original container.
Do not put concentrate or dilute into food or drink containers.
Store in cool, dry place.
Protect from excessive heat.
For help with any spill, leak, fire or exposure involving this material, call day or night **800-892-0099.**

PESTICIDE DISPOSAL

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

CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Manufactured for:
K-I Chemical U.S.A., Inc.
White Plains, New York 10606
Made in U.S.A.

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