

# Product Bulletin



Valent U.S.A. Corporation  
1600 Riviera Ave., #200  
Walnut Creek, CA 94596

FOR DISTRIBUTION AND USE ONLY IN THE STATE OF MISSOURI  
**BOLERO® 8 EC**  
TO CONTROL ANNUAL GRASSES & AQUATIC WEEDS IN RICE  
EPA REG. NO. 59639-79  
EPA SLN NO. MO-030005

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

\*S-(4-chlorophenyl)methyl] diethylcarbamoithioate  
Contains 8 lb. S-(4-chlorophenyl)methyl]  
diethylcarbamoithioate per gallon

## DIRECTIONS FOR USE

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

## GENERAL INFORMATION

**Do not apply this product through any type of irrigation system.**

*Bolero 8 EC* applied in one of the following herbicide programs will control most annual grasses and aquatic weeds in rice:

- ! Late preemergence
  - *Bolero 8 EC* alone
  - Tank mixture with Roundup®
- ! Early postemergence
  - *Bolero 8 EC* alone
  - Tank mixture with propanil
- ! Split applications
  - Late preemergence or preplant tank mixture with Roundup followed by early postemergence tank mixture with propanil
- ! Preemergence or early postemergence followed by:
  - *Bolero 15 G* into flood
  - *Bolero 8 EC* impregnated on dry bulk fertilizer or blank granules into flood
  - *Bolero 8 EC* plus Londax® impregnated on blank granules into flood
  - Preplant red rice suppression in water-seeded rice

*Bolero 8 EC* will provide residual control of some weeds up to 5 weeks following application. Temporary injury to seedling rice may occur under certain conditions. **DO NOT APPLY TO STRESSED RICE.**

**WEEDS CONTROLLED  
BOLERO 8 EC ALONE**

COMMON NAME	SCIENTIFIC NAME	SIZE AT WHICH MOST EFFECTIVE CONTROL
		OCCURS
Barnyardgrass	<i>Echinochloa crusgalli</i>	pre - 2 leaf
Junglerice	<i>Echinochloa colonum</i>	pre - 2 leaf
Sprangletop	<i>Leptochloa Spp.</i>	pre - 1/2"
Crabgrass	<i>Digitaria Spp.</i>	pre - 2 leaf
Fall Panicum	<i>Panicum dichotomiflorum</i>	pre - 2 leaf
Ducksalad	<i>Heteranthera Spp.</i>	pre - 1/2"
Redstem	<i>Ammannia spp.</i>	pre - 1/2"
Waterhyssop	<i>Bacopa rotundifolia</i>	pre - 1/2"
False Pimpernel	<i>Lindernia Spp.</i>	pre - 1/2"
Annual Umbrellaplants	<i>Cyperus erythrorhizes, C. iria</i>	pre - 1/2"
Hoorahgrass	<i>Fimbristylis Spp.</i>	pre - 1/2"
Annual Spikerush	<i>Eleocharis obtusa, E. parvula</i>	pre - 1/2"
Gooseweed	<i>Sphenoclea zeylanica</i>	pre - 1/2"

**BOLERO 8 EC PLUS ROUNDUP  
(IN ADDITION TO WEEDS CONTROLLED BY BOLERO 8 EC ALONE)**

COMMON NAME	SCIENTIFIC NAME	MAXIMUM HEIGHT/LENGTH	RATE OF ROUNDUP D-PAK	RATE OF ROUNDUP
Barnyardgrass	<i>Echinochloa Spp.</i>	4"		
Little Barley	<i>Hordeum pusillum</i>	12"		
Annual Bluegrass	<i>Poa annua</i>	4"		
Downy Brome	<i>Bromus tectorum</i>	6"		
Buttercup	<i>Ranunculus Spp.</i>	12"		
Cheat	<i>Bromus secalinus</i>	6"		
Chickweed	<i>Cerastium Spp.</i>	6"		
Crabgrass	<i>Digitaria Spp.</i>	12"		
Dwarf Dandelion	<i>Krigia cepitosa</i>	12"	10 oz.	16 oz.
Carolina Foxtail	<i>Alopecurus caroliniaus</i>	12"		
Seedling Johnsongrass	<i>Sorghum halepense</i>	12"		
Lambsquarters	<i>Chenopodium album</i>	6"		
Marestail	<i>Conyza canadensis</i>	6"		
Morningglory Species	<i>Ipomoea Spp.</i>	2"		
Mustard Species	<i>Descurainia, Sinapis</i>	6"		
Panicum Species	<i>Panicum Spp.</i>	12"		
Pigweed	<i>Amaranthus Spp.</i>	12"		
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	6"		
Sicklepod	<i>Cassia obtusifolia</i>	2"		
Barnyardgrass	<i>Echinochloa Spp.</i>	6"		
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	4"	15 oz.	24 oz.
Sicklepod	<i>Cassia obtusifolia</i>	3" to 4"		
Teaweed	<i>Sida spinosa</i>	4"		
Sicklepod	<i>Cassia obtusifolia</i>	8"	20 oz.	32 oz.
Red Rice	<i>Oryza sativa</i>	3" to 4"		

**BOLERO 8 EC PLUS PROPANIL****(IN ADDITION TO WEEDS CONTROLLED BY BOLERO 8 EC ALONE)**

COMMON NAME	SCIENTIFIC NAME	SIZE AT WHICH MOST EFFECTIVE CONTROL OCCURS
Dayflower	<i>Commelina communis</i>	1/2" and less
Hemp Sesbania	<i>Sesbania exaltata</i>	2" and less
Northern Jointvetch	<i>Aeschynomene virginica</i>	2" and less
Broadleaf Signalgrass	<i>Brachiaria platyphylla</i>	2" and less
Goosegrass	<i>Eleusine indica</i>	2 leaf and less
Pitted Morningglory	<i>Ipomoea lacunosa</i>	2" and less

**BOLERO 8 EC (PLUS LONDAX IMPREGNATED ON BLANK GRANULES  
IN ADDITION TO WEEDS CONTROLLED BY BOLERO 8 EC ALONE)**

COMMON NAME	SCIENTIFIC NAME	RATE OZ./A	SIZE AT WHICH MOST EFFECTIVE CONTROL OCCURS
Annual Arrowhead	<i>Sagittaria Spp.</i>	1 - 1 2/3	Less than 3 leaves
Blunt Spikerush	<i>Eleocharis obtusa</i>	1 - 1 2/3	Less than 3 leaves
Dayflower	<i>Commelina communis</i>	1 - 1 2/3	Less than 3 leaves
Ducksalad	<i>Heteranthera limosa</i>	1 - 1 2/3	Less than 3 leaves
Eclipta	<i>Eclipta alba</i>	1 - 1 2/3	Less than 3 leaves
Eisen Wassersop	<i>Bacopa eisenii</i>	1 - 1 2/3	Less than 3 leaves
False Pimpernel	<i>Lindernia Spp.</i>	1 - 1 2/3	Less than 3 leaves
Gooseweed	<i>Sphenoclea zeylanica</i>	1 - 1 2/3	Less than 3 leaves
Mexicanweed	<i>Caperonia castanaefolia</i>	1 - 1 2/3	Less than 3 leaves
Mud Plantain	<i>Heteranthera reniformis</i>	1 - 1 2/3	Less than 3 leaves
Pickrelweed	<i>Pontederia cordata</i>	1 - 1 2/3	Less than 3 leaves
Purple Ammannia	<i>Ammannia coccinea</i>	1 - 1 2/3	Less than 3 leaves
Redstem	<i>Ammannia auriculata</i>	1 - 1 2/3	Less than 3 leaves
Rice Flatsedge	<i>Cyperus iria</i>	1 - 1 2/3	Less than 3 leaves
Roughseed Bulrush	<i>Scirpus mucronatus</i>	1 - 1 2/3	Less than 3 leaves
Southern Naiad	<i>Najas guadalupensis</i>	1 - 1 2/3	Less than 3 leaves
Texasweed	<i>Caperonia palustris</i>	1 - 1 2/3	Less than 3 leaves
Water Plantain	<i>Alisma Spp.</i>	1 - 1 2/3	Seedling
Waterwort	<i>Elatine Spp.</i>	1 - 1 2/3	Less than 3 leaves
Yellow Nutsedge	<i>Cyperus esculentus</i>	1 - 1 2/3	Less than 3 leaves
Alligatorweed*	<i>Alternanthera philoxeroides</i>	1 2/3	Runners under 12"

\*Severe reduction in growth.

**IMPORTANT NOTE:**

Read and carefully observe the label claims, cautionary statements, rates and all other information on the labels of all products. Use according to the most restrictive label directions for each product in the mixture. Occasionally registered use rates and other information on product labels are altered to reflect new information. Refer to the most recent labeling of all products.

**BOLERO 8 EC ALONE OR IN COMBINATION WITH PROPANIL****GENERAL USE DIRECTIONS**

*Bolero 8 EC* applied late preemergence or *Bolero 8 EC* alone or as a tank mixture with propanil applied early postemergence will control most annual grasses and aquatic weeds in rice. *Bolero 8 EC* will provide residual control of some weeds up to 5 weeks following application. Temporary injury to seedling rice may occur under certain conditions. DO NOT APPLY TO STRESSED RICE.

## **APPLICATION DIRECTIONS – DRY-SEEDED RICE**

Apply *Bolero* 8 EC alone or as a tank mixture with Propanil to dry seeded rice on a moist soil surface that has no standing water as:

**Late Preemergence** – Apply 4 pt. per acre of *Bolero* 8 EC (prior to rice and weed emergence) 1 to 5 days before rice emerges (usually 5 to 9 days after seeding). Soil surfaces should be sealed by rain or by flushing.

**Early Postemergence** – Apply 4 pt. per acre of *Bolero* 8 EC alone or 3 to 4 pt. of *Bolero* 8 EC per acre plus 3 lb. of active propanil per acre for emerged grasses at the 2-leaf stage of development or less (Sprangletop less than 1/2 inch), aquatics less than 1/2 inch tall and broadleaf weeds less than 2 inches tall. Rice may be emerged at the time of application. Soil should be moist at time of application.

## **APPLICATION TO DRY CLAY OR SILT SOILS AND RICE IN THE 2- TO 3-LEAF STAGE**

Apply 3 to 4 pt. per acre of *Bolero* 8 EC plus 3 lb. of active propanil per acre for emerged grasses at the 2-leaf stage of development or less (Sprangletop less than 1/2 inch), aquatics less than 1/2 inch tall and broadleaf weeds less than 2 inches tall. At the time of application, the soil must have previously been sealed by rain or flushing and should not be cracked. Rice should be in the 2- to 3-leaf stage of development. The soil must be moist by rain or flushing within 3 days after application or a reduction in initial control and residual activity can be expected. **DO NOT APPLY TO STRESSED RICE**, as it may be seriously injured or killed. If a flush is used to moisten the soil or heavy rains move quickly through the flood gates, lack of weed control around the gates may be evident.

## **SPLIT APPLICATION – DRY SEEDED RICE**

### **Preemergence Followed by Postemergence Split-Application Technique**

Apply 2 pt. per acre of *Bolero* 8 EC as a late preemergence application 1 to 5 days before rice emerges (usually 5 to 9 days after seeding) and prior to weed emergence. Soil surfaces should be sealed by rain or flushing and be wet at application. The seedbed should be well prepared and free of large clods. This application should be followed in 10 to 14 days by an early postemergence application of 2 pt. per acre of *Bolero* 8 EC plus 3 lb. of active propanil per acre. Emerged grasses should be in the 1- to 2-leaf stage or less (Sprangletop less than 1/2 inch), aquatics less than 1/2 inch tall and broadleaf weeds less than 2 inches tall. Rice may be emerged at the time of the early postemergence application. Soil should be moist (without standing water) at the time of application.

OR

### **Early Postemergence Followed by Late Postemergence Split-Application Technique**

Apply an early postemergence application of 2 pt. of *Bolero* 8 EC per acre plus 3 lb. of active propanil per acre for control of emerged grasses at the 2-leaf stage of development or less (Sprangletop less than 1/2 inch), aquatics less than 1/2 inch tall and broadleaf weeds less than 2 inches tall. This application should be followed by a late postemergence application of 2 pt. of *Bolero* 8 EC per acre plus 3 lb. of active propanil per acre. At the time of the late postemergence application, grasses must not exceed the 2-leaf stage of development (Sprangletop less than 1/2 inch), aquatics must be less than 1/2 inch tall and broadleaf weeds must be less than 2 inches tall. Both applications should be made when the soil surface is sealed and moist (without standing water).

## **APPLICATION DIRECTIONS FOR WATER-SEEDED RICE**

### **Water-Seeded Rice (Non-Flooded)**

Apply to non-flooded fields only. Application should **not** be made before rice is in the 2-leaf stage of development. Soils should be sealed and moist at the time of application.

### **Early Postemergence**

Apply 3 pt. of *Bolero* 8 EC per acre plus 3 lb. of active propanil per acre for emerged grasses at the 2-leaf stage of development or less (Sprangletop less than 1/2 inch), broadleaf weeds less than 2 inches tall and aquatics less than 1/2 inch tall. Application should not be made before rice is in the 2-leaf stage of development.

## WATER MANAGEMENT

Soil should be kept moist after application and not be allowed to crust and crack. Fields should be flooded as soon as the rice plants will tolerate permanent flooding.

### **BOLERO 8 EC COMBINATION WITH ROUNDUP STALE SEEDBED – DRILL-SEEDED RICE**

#### **GENERAL USE DIRECTIONS**

*Bolero* 8 EC in combination with Roundup applied preplant or late preemergence in a stale seedbed situation will provide control of most winter annual grasses and broadleaf weeds and provide up to 5 weeks residual control of most annual grass and aquatics infesting rice.

#### **APPLICATION DIRECTIONS – STALE SEEDBED-DRILL SEEDED RICE**

##### **Preplant Non-Incorporated Application Stale Seedbed – Soils With More Than 45% Clay**

Apply only in a stale seedbed situation (minimum tillage) when the clay soil has been previously prepared and has had an opportunity to weather into a surface free of large clods. DO NOT apply to a freshly prepared cloddy surface which will prohibit seed placement below the herbicide. Apply a tank mixture of 4 pt. of *Bolero* 8 EC plus 10 to 20 oz. of Roundup D-Pak OR 16 to 32 oz. of Roundup per acre plus 4 qt. of a non-ionic surfactant (80% active) to every 100 gal. of spray solution. Seed must be drilled to a depth of at least 5/8 to 3/4 inch.

NOTE: Some varieties such as Lemont, Gulfmont, Rexmont and Mercury have shown reduced emergence when planted below 1/2 inch. Adjust seeding rate to compensate for possible stand reduction due to seed phytotoxicity and seeding depth. The soil must be wet by rain or flushing within 3 days of application or a reduction in residual activity can be expected. Weeds larger than those specified in the preceding tables will not be controlled. Supplemental herbicides may be needed for season-long weed control.

OR

##### **Late Preemergence Application (Prior to Rice Emergence)**

Apply a tank mixture of 4 pt. of *Bolero* 8 EC plus 10 to 20 oz. of Roundup D-PAK OR 16 to 32 oz. of Roundup per acre plus 4 qt. of a non-ionic surfactant (80% active) to every 100 gal. of spray solution. Application of the tank mixture must be made after the rice has begun the germination process but BEFORE emergence; generally this will be 4 to 8 days after planting. **Emerged rice will be killed.** Apply the *Bolero* 8 EC plus Roundup plus surfactant tank mixture to moist soils which have been sealed by rainfall or flushing. At the time of application, soil should be free of large clods. Weeds larger than those specified in the preceding tables will not be controlled.

OR

#### **SPLIT APPLICATION TECHNIQUE**

##### **First Application – Preplant Non-Incorporated Application – Soils With More Than 45% Clay**

Apply only in a stale seedbed situation (minimum tillage) when the clay soil has been previously prepared and has had an opportunity to weather into a surface free of large clods. DO NOT apply to a freshly prepared cloddy surface which will prohibit seed placement below the herbicide. Apply a tank mixture of 2 pt. of *Bolero* 8 EC plus 10 to 20 oz. of Roundup D-Pak OR 16 to 32 oz. of Roundup per acre plus 4 qt. of a non-ionic surfactant (80% active) to every 100 gal. of spray solution. Seed must be drilled to a depth of at least 5/8 to 3/4 inch.

NOTE: Some varieties such as Lemont, Gulfmont, Rexmont and Mercury have shown reduced emergence when planted below 1/2 inch. Adjust seeding rate to compensate for possible stand reduction due to seed phytotoxicity and seeding depth. The soil must be wet by rain or flushing within 3 days of application or a reduction in residual activity can be expected. Weeds larger than those specified in the preceding tables will not be controlled. This application should be followed by an early postemergence application.

OR

### **First Application – Late Preemergence (Prior to Rice Emergence)**

Apply a tank mixture of 2 pt. of *Bolero* 8 EC plus 10 to 20 oz. of Roundup D-PAK OR 16 to 32 oz. of Roundup per acre plus 4 qt. of a non-ionic surfactant (80% active) to every 100 gal. of spray solution. Application of the tank mixture must be made after the rice has begun the germination process but BEFORE emergence; generally this will be 4 to 8 days after planting. **Emerged rice will be killed.** Apply the *Bolero* 8 EC plus Roundup plus surfactant tank mixture to moist soils which have been sealed by rainfall or flushing. At the time of application, soil should be free of large clods. Weeds larger than those specified in the preceding tables will not be controlled. This application should be followed by an early postemergence application.

### **Second Application – Early Postemergence**

Apply a tank mixture of 2 pt. of *Bolero* 8 EC plus 3 lb. of active propanil per acre. Emerged grasses should be in the 1- to 2-leaf stage or less (Sprangletop less than 1/2 inch), aquatics less than 1/2 inch tall and broadleaf weeds less than 2 inches tall. Soil should be moist at time of application but NOT in a flooded condition.

### **WATER MANAGEMENT**

Soil should be kept moist after application and not be allowed to crust or crack. Fields should be flooded as soon as the rice plants will tolerate permanent flooding.

## **BOLERO 8 EC COMBINATION WITH ROUNDUP WATER-SEEDED RICE**

### **GENERAL USE DIRECTIONS**

*Bolero* 8 EC combination with Roundup applied preplant to NON-FLOODED, previously prepared rice fields will provide control of most winter annual grasses and broadleaf weeds and provide up to 5 weeks residual control of most annual grasses and aquatics infesting rice. The split application technique enables a post-flood application of *Bolero* alone or in combination with Londax to increase the spectrum of aquatic weed control.

### **APPLICATION DIRECTIONS FOR PREPLANT APPLICATION IN WATER-SEEDED (NON- FLOODED) RICE**

#### **Preplant Non-Flooded**

Apply a tank mixture of 4 pt. of *Bolero* 8 EC plus 10 to 20 oz. of Roundup D-PAK OR 16 to 32 oz. of Roundup per acre plus 4 qt. of a non-ionic surfactant (80% active) to every 100 gal. of spray solution. Application of the tank mixture must be made to a non-flooded, previously prepared field which preferably has been mechanically ridged and has had drains plowed. Flood the field within 3 days after the *Bolero* 8 EC plus Roundup application but not sooner than 1 day after application. Do not drag the field in the water after flooding nor disturb the treated seedbed in any way. Do not seed any sooner than 48 hours after the field has been brought to flood level. Follow State Extension Service recommendations for correct seeding rates. After the seeding flood has been removed to allow for stand establishment, follow normal cultural practices. Weeds larger than those specified in the preceding tables will not be controlled.

OR

### **SPLIT-APPLICATION TECHNIQUE**

#### **First Application – Preplant**

Apply a tank mixture of 2 pt. of *Bolero* 8 EC plus 10 to 20 oz. of Roundup D-PAK OR 16 to 32 oz. of Roundup per acre plus 4 qt. of a non-ionic surfactant (80% active) to every 100 gal. of spray solution. Application of the tank mixture must be made to a non-flooded, previously prepared field which preferably has been mechanically ridged and has had drains plowed. Flood the field within 3 days of the *Bolero* 8 EC plus Roundup application but not sooner than 1 day after application. Do not drag the field in the water after flooding nor disturb the treated seedbed in any way. Do not seed any sooner than 48 hours after the field has been brought to flood level. Follow State Extension Service recommendations for proper seeding rates. After the seeding flood has been removed to allow for stand establishment, follow normal cultural practices. This application should be followed either by an early postemergence application OR a post-flood application.

## Second Application Early Postemergence – (Non-Flooded)

Apply to non-flooded fields only. **Application should not be made before rice is in the 2-leaf stage of development.** Soils should be sealed and moist at the time of application. Apply 2 pt. of *Bolero* 8 EC per acre plus 3 lb. of active Propanil per acre for emerged grasses at the 2-leaf stage of development or less (Sprangletop less than 1/2 inch), broadleaf weeds less than 2 inches tall and aquatics less than 1/2 inch tall.

OR

## Second Application – Post-Flood

Apply:

1. 2 pt. of *Bolero* 8 EC per acre impregnated on either dry bulk fertilizer or blank granules

OR

2. 2 pt. of *Bolero* 8 EC plus 1 to 1 2/3 oz. Londax per acre (refer to Londax label for specific use rates) impregnated on blank granules

The post-flood application should be made when rice is in at least the 2-leaf stage of development and grass weeds are 2-leaf or less (Sprangletop less than 1/2 inch) and aquatics 1/2 inch or less (aquatics less than 3 leaf if a tank mixture of *Bolero* 8 EC plus Londax is used). Water movement between checks should be stopped or reduced to a minimum just prior to and for 3 days following application. Water should be held static for 7 days after a *Bolero* 8 EC plus Londax application in order to obtain maximum weed control. **Weeds, larger than those specified in the preceding tables, will not be controlled and rice smaller than the 2-leaf stage will be injured or killed.** Water level should be maintained at 2 to 4 inches with no exposed soil. DO NOT APPLY TO STRESSED RICE.

NOTE: REFER TO *BOLERO* 8 EC IMPREGNATION SECTIONS OF THIS LABEL FOR IMPREGNATION PROCEDURES, INSTRUCTIONS AND RESTRICTIONS.

### PRECAUTIONS FOR THE PREPLANT AND POST-FLOOD WATER-SEEDED USES OF *BOLERO* 8 EC

*Bolero* 8 EC use in rice fields which develop anaerobic (low oxygen content) soil conditions following planting 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 and (4) there are areas in the field which retain water during periods of prescribed flood removal.

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 are:

- ! Destruction of previous crop and weed residues by:
  - burning where state regulations allow
  - fall and winter plowing
  - use of Roundup or Gramoxone® Extra as a "burndown" to prevent vegetation buildup after initial ground preparation and prior to final seedbed preparation.
- ! Application of fertilizer according to soil test results.
  - Do not apply excess phosphorous.
- ! 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, pin-point flood program.
- ! Uniform flood depth of 2 to 4 inches.

- ! Not exceeding labeled rates of *Bolero* 8 EC, accurate calibration of application equipment and eliminating application overlap.
- ! Do NOT use *Bolero* 8 EC on water-seeded 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. To minimize potential injury after 18-month period in the cut and fill acres, use *Bolero* 8 EC at the reduced rate (2 1/2 pt./A) for preplant red rice suppression until the soil returns to uniform structure.
- ! Do NOT use *Bolero* 8 EC 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. To minimize potential injury after the 10-month period, use *Bolero* 8 EC at the reduced rate (2 1/2 pt./A) for preplant red rice suppression.
- ! If a preplant *Bolero* 8 EC herbicide program is adopted for water-seeded rice, **DO NOT PLANT MILLIE OR L-201 rice varieties.**

Water-seeded rice fields treated with *Bolero* 8 EC preplant or post flood should be inspected regularly through the stand establishment and seedling growth stages. If the following phytotoxic symptoms (associated with low oxygen soil conditions) occur:

1. dark green foliage  
and/or
2. reduced plant height  
and/or
3. plant deformation

immediately drain the flood and allow the soil to oxygenate (no standing water for 3 to 5 days), then re-flood. Low spots which do not drain completely may continue to display phytotoxic symptoms.

#### **DIRECTIONS FOR PREPLANT APPLICATION IN WATER-SEEDED RICE RED RICE SUPPRESSION AND SPRANGLETOP CONTROL**

#### **GENERAL USE DIRECTIONS**

##### **Preplant Non-Incorporated**

Apply *Bolero* 8 EC 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 should occur after soil preparation, *Bolero* 8 EC should 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 application will not be controlled. Flood the field between 2 and 3 days after the *Bolero* 8 EC application. Do not drag the field nor disturb the treated seedbeds after flooding. Seeding should **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. Rice in areas which do not completely drain when the seeding flood is removed may be injured or killed. **Refer to PRECAUTIONS FOR THE PREPLANT AND POST-FLOOD WATER-SEEDED USES OF BOLERO 8 EC.** 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) should be followed with the post-seeding drainage period not to exceed 3 to 5 days. Supplemental herbicides may be needed for season-long weed control. 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.

#### **DIRECTIONS FOR PREPLANT APPLICATION FOR PARTIAL RED RICE CONTROL IN WATER-SEEDED PIN-POINT FLOOD RICE**

##### **Preplant Non-Incorporated:**

For Partial Control of Red Rice: Apply 4 pt. of *Bolero* 8 EC per acre. A reduced rate of *Bolero* 8 EC should be used under certain conditions. Refer to precautions concerning cut ground and organic matter. The reduced rate will not provide the same degree of red rice suppression and will require the use of postemergence herbicides and increased water management to achieve weed control and red rice suppression. Normal pin-point flood culture (not flush or continuous flood culture) should be

followed. THIS IS AN INTENSE MANAGEMENT PROGRAM IN WHICH SUPPRESSION OF RED RICE IS A RESULT OF *BOLERO 8 EC* AND WATER MANAGEMENT.

## **SPLIT-APPLICATION TECHNIQUE FOR RICE WITH SEVERE AQUATIC INFESTATION EARLY POSTEMERGENCE FOLLOWED BY POST FLOOD**

### **GENERAL USE DIRECTIONS FOR RICE WITH SEVERE AQUATIC WEED INFESTATION**

When aquatic weeds are a severe problem, use a tank mixture of *Bolero 8 EC* plus propanil as an early postemergence treatment to non-flooded rice followed by an early post-flood application of:

1. *Bolero 8 EC* plus Londax impregnated on blank granules  
OR
2. *Bolero 8 EC* impregnated on dry bulk fertilizer or blank granules

### **SPLIT-APPLICATION TECHNIQUE**

#### **Water-Seeded Rice (Non-Flooded) Early Postemergence Application**

##### **First Application**

For control of emerged grasses at the 2-leaf stage of development or less (Sprangletop less than 1/2 inch), aquatics less than 1/2 inch and broadleaf weeds less than 2 inches: Apply a tank mixture of 2 pt. of *Bolero 8 EC* plus 3 lb. of active propanil per acre to non-flooded fields. Application should NOT be made before rice is in the 2-leaf stage of development. Soils should be sealed and moist at the time of application. This application should be followed by a post-flood application, as described below in the Post-Flood Use Directions.

#### **Dry-Seeded Rice – Early Postemergence Application**

##### **First Application**

For control of emerged grasses at the 2-leaf stage of development or less (Sprangletop less than 1/2 inch), aquatics less than 1/2 inch and broadleaves less than 2 inches: Apply a tank mixture of 2 pt. of *Bolero 8 EC* plus 3 lb. of active Propanil per acre. Soils should be sealed and moist at time of application. This application should be followed by a post-flood application, as described below in the Post-Flood Use Directions.

### **WATER MANAGEMENT**

Soil should be kept moist after application and not be allowed to crust or crack. Fields should be flooded as soon as the rice plants will tolerate permanent flooding.

### **POST-FLOOD USE DIRECTIONS**

#### **Dry-Seeded and Water-Seeded Rice**

##### **Second Application – Post-Flood**

For control of grasses in the 2-leaf stage of development or less (Sprangletop less than 1/2 inch) and aquatics less than 1/2 inch. Apply a post-flood application of:

1. 2 pt. of *Bolero 8 EC* per acre impregnated on either dry bulk fertilizer or blank granules  
OR
2. If larger aquatics are present (up to 3 leaves), 2 pt. of *Bolero 8 EC* plus 1 to 1 2/3 oz. Londax per acre impregnated on blank granules (refer to Londax label for specific use rates)

Water movement between checks should be stopped or at least reduced to a minimum just prior to and for 3 days following application. Water should be held static for 7 days after a *Bolero 8 EC* plus Londax application in order to obtain maximum weed control. **Weeds larger than those specified in the preceding tables will not be controlled, and rice smaller than the 2-leaf stage will be injured or killed.** Water level should be maintained at 2 to 4 inches with no exposed soil. DO NOT APPLY TO STRESSED RICE.

NOTE: REFER TO *BOLERO 8 EC* IMPREGNATION SECTIONS OF THIS LABEL FOR IMPREGNATION PROCEDURES, INSTRUCTIONS AND RESTRICTIONS.

**POST-FLOOD APPLICATION OF DRY BULK FERTILIZER OR BLANK GRANULES  
WITH EITHER *BOLERO 8 EC* OR *BOLERO 8 EC PLUS LONDAX***

**APPLICATION DIRECTIONS**

**Post-Flood Application**

Apply 3 to 4 pt. of *Bolero 8 EC* impregnated on dry bulk fertilizer or blank granules or 3 to 4 pt. of *Bolero 8 EC* plus 1 to 1 2/3 oz. of Londax impregnated on blank granules. Rice should be in at least the 2-leaf stage of development. Water movement between checks should be stopped or reduced to a minimum just prior to and for 3 days following an application for *Bolero 8 EC* alone and held static for 7 days following an application of *Bolero 8 EC* plus Londax. Grass weeds should be in the 2-leaf stage of development or less (Sprangletop less than 1/2 inch) and aquatics less than 1/2 inch when *Bolero 8 EC* alone is used or aquatics and broadleaf weeds less than 3 leaves when *Bolero 8 EC* plus Londax is used. **Weeds larger than those specified in the preceding tables will not be controlled and rice smaller than the 2-leaf stage may be injured or killed.** Water level should be maintained at 2 to 4 inches with no exposed soil. DO NOT APPLY TO STRESSED RICE.

NOTE: REFER TO THE *BOLERO 8 EC* IMPREGNATION SECTIONS OF THIS LABEL FOR IMPREGNATION PROCEDURES, INSTRUCTIONS AND RESTRICTIONS. READ AND CAREFULLY OBSERVE THE LABEL CLAIMS, CAUTIONARY STATEMENTS, RATES AND ALL OTHER INFORMATION ON THE LABELS OF ALL PRODUCTS.

**IMPREGNATION OF DRY BULK FERTILIZER WITH *BOLERO 8 EC***

**DRY BULK FERTILIZER IMPREGNATION**

The impregnation or coating of dry bulk fertilizer with *Bolero 8 EC* can only be done by commercial fertilizer or agricultural chemical suppliers equipped for this procedure. Dry bulk fertilizer impregnated with *Bolero 8 EC* is to be used immediately (delays due to short periods of inclement weather affecting field application are acceptable) and is not to be stored or placed into small package containers. It is the responsibility of the company selling dry bulk fertilizer impregnated with *Bolero 8 EC* to follow state regulations regarding bulk dry fertilizer blending, registration, labeling and application.

Preparation of the *Bolero 8 EC* impregnated dry bulk fertilizer can be done with any type of commonly used dry bulk fertilizer blending equipment. Nozzles used to spray *Bolero 8 EC* onto the fertilizer must be placed to provide uniform coverage. Allow sufficient time in the blending equipment to insure product uniformity and flowability. Use a minimum of 600 lb. of blended fertilizer per gallon of *Bolero 8 EC*. Do not use additional absorbent material when impregnating dry bulk fertilizer with *Bolero 8 EC*.

Calculation of the proper amount of *Bolero 8 EC* to be blended with fertilizer can be accomplished using the following formula:

$$\frac{\text{Intended } \textit{Bolero 8 EC} \text{ Use Rate}}{\text{Pounds Fertilizer/Acre}} = \frac{\text{Pints } \textit{Bolero 8 EC}}{\text{Per Ton of Dry Bulk Fertilizer}}$$

**DO NOT impregnate *Bolero 8 EC* mixtures on ammonium nitrate, potassium nitrate or sodium nitrate either alone or in blends with other fertilizers.**

**APPLICATION**

In order to obtain maximum weed control, uniformity of *Bolero 8 EC* on the dry bulk fertilizer particles and uniformly consistent distribution in the field are essential. The amount of *Bolero 8 EC* used in the dry bulk fertilizer blending procedure must be carefully calculated for each intended use in order to ensure the correct use rate of *Bolero 8 EC* is being applied. Follow all use directions and label precautions, as specified in the *Bolero 8 EC* impregnation sections of this label regarding the use of dry bulk fertilizer impregnated with *Bolero 8 EC*.

## IMPREGNATION OF BLANK GRANULES WITH *BOLERO* 8 EC

### IMPREGNATION ON GRANULE BLANKS

The impregnation or coating of granule blanks with *Bolero* 8 EC alone or specified *Bolero* 8 EC tank mixtures can be done only by commercial fertilizer or agricultural chemical suppliers equipped for this procedure. Blank granules impregnated with *Bolero* 8 EC or specified *Bolero* 8 EC tank mixtures must be used immediately (delays due to short periods of inclement weather affecting field application are acceptable) and are not to be stored or placed into small package containers. It is the responsibility of the company selling blank granules impregnated with *Bolero* 8 EC or *Bolero* 8 EC tank mixtures to follow state regulations regarding impregnation of blank granules, registration, labeling and application.

Preparation of the *Bolero* 8 EC alone or specified *Bolero* 8 EC tank mixtures can be done with any type of commonly used dry bulk fertilizer blending equipment. Nozzles used to spray *Bolero* 8 EC or specified *Bolero* 8 EC tank mixtures must be placed to provide uniform coverage. Allow sufficient time in the blending equipment to ensure product uniformity and flowability. Use a minimum of 80 lb. of granule blanks per gallon of *Bolero* 8 EC alone or specified *Bolero* 8 EC tank mixtures. Do not use additional absorbent material when impregnating granule blanks with *Bolero* 8 EC alone or specified *Bolero* 8 EC tank mixtures. Calculation of the proper amount of *Bolero* 8 EC to be blended with blank granules can be accomplished using the following formula.

$$\frac{\text{Intended } \textit{Bolero} \text{ 8 EC Use Rate}}{\text{Pounds/Acre X 1000}} = \frac{\text{Pints } \textit{Bolero} \text{ 8 EC}}{\text{Per 1000 Pounds of Blank Granules}}$$

Calculation of the proper amount of dry formulated herbicide to be blended with blank granules can be accomplished using the following formula.

$$\frac{\text{Intended Use Rate}}{\text{Ounces/A X 1000}} = \frac{\text{Ounces Dry Formulated Herbicide}}{\text{Per 1000 Pounds of Blank Granules/A}}$$

### FURTHER INSTRUCTIONS REGARDING MIXING *BOLERO* 8 EC AND DRY FORMULATED HERBICIDES, E.G., LONDAX

Clay granules are exceptionally absorptive. Ensure spraying and mixing times are adequate to provide uniformity. Uniform particle coverage during impregnation is essential in order to provide even distribution of *Bolero* 8 EC alone or *Bolero* 8 EC in combination with Londax during field application.

### APPROVED BLANK GRANULE SPECIFICATIONS:

Two absorptive granular clays are appropriate for impregnation with *Bolero* 8 EC – attapulgitic or montmorillonite clay, RVM or LVM grades. The granular clays can be obtained in various particle sizes, as defined by the mesh size. Typical agricultural chemical granular particle size ranges include 15/30, 20/40 or 24/48 mesh. These ranges, or similar ranges, are recommended for use with *Bolero* 8 EC and for the intended applications.

### APPLICATION:

In order to obtain maximum weed control, uniformity of *Bolero* 8 EC alone or specified *Bolero* 8 EC tank mixtures on the approved blank granule particles and uniformly consistent distribution in the field are essential. The amount of *Bolero* 8 EC or specified *Bolero* 8 EC tank mixtures used in the blank granule impregnation procedure must be carefully calculated for each intended use in order to ensure the correct use rate is being applied. Follow all use directions and label precautions, as specified in the *Bolero* 8 EC label(s) regarding the use of blank granules impregnated with *Bolero* 8 EC. When using a specified tank mixture, read and follow all precautionary, worker safety, warning, mixing and cleanup procedure statements on the label of the specified tank mixture. Conform to the most restrictive labeling when using a specified tank mixture.

### METHOD OF APPLICATION

Uniformly apply *Bolero* 8 EC OR *Bolero* 8 EC plus propanil or *Bolero* 8 EC plus Roundup by aircraft in no less than 10 gal. per acre of total spray mixture or by ground equipment in 10 to 20 gal. per acre of total spray mixture. Uniformly apply *Bolero* 8 EC impregnated on dry bulk fertilizer or blank granules, or *Bolero* 8 EC plus Londax impregnated on blank granules or *Bolero* 15 G by aircraft. Do not overlap or double-treat ends of fields. Do not permit drift onto catfish, crayfish, shrimp or minnow ponds. DO NOT APPLY TO STRESSED RICE. DO NOT apply to exposed seed.

NOTE: The propanil or Roundup component in the *Bolero* 8 EC tank mixtures increases the postemergence activity for control of weeds listed. The tank mixture, *Bolero* 8 EC plus propanil or *Bolero* 8 EC plus Roundup plus surfactant, will not prevent reinfestation of Hemp Sesbania, Northern or Indian Jointvetch, Broadleaf Signalgrass, Annual Morningglory, Annual Bluegrass, Little Barley, Downy Brome, Buttercup, Cheat, Chickweed, Dwarf Dandelion, Carolina Foxtail, Johnsongrass, Lambsquarters, Marestalk, Mustard, Panicum species other than Fall Panicum, Pigweed, Red Rice, Shepherd's-purse, Sicklepod, Teaweed, Goosegrass, Gulf Cockspur, Paragrass, Redroot Pigweed, Redweed, Texas Weed and Pitted Morningglory.

## PRECAUTIONS

Read and carefully observe the label claims, cautionary statements, rates and all other information on the labels of all products. Use according to the most restrictive label directions of each product in the mixture. **REFER TO STATE PRECAUTIONARY STATEMENTS ON RICE VARIETAL HERBICIDE SENSITIVITY.**

Do not apply to stressed rice or second crop (stubble crop) rice. For additional water-seeded precautions, refer to **PRECAUTIONS FOR THE PREPLANT AND POST-FLOOD WATER-SEEDED USES OF *BOLERO* 8 EC.** Do not use *Bolero* 8 EC or *Bolero* 8 EC tank mixtures on the rice variety L201. Do not plant subsequent crops in *Bolero* 8 EC treated fields within 6 months of last application. Follow the most restrictive label directions concerning rotational cropping and crop failure. Do not permit drift into catfish, crayfish, shrimp or minnow ponds. Water drained directly from treated fields must not be used to irrigate other crops. Do not apply more than 4 lb. *Bolero* 8 EC active ingredient per acre per year. Do not apply *Bolero* 8 EC tank mixtures within 14 days before or after organophosphate or carbamate insecticide application. Do not apply when temperatures exceed 95°F. Do not apply *Bolero* 8 EC postemergence tank mixtures when rain is expected within 6 hours. Rice seedlings with succulent growth may exhibit temporary foliar burn which may be greater than conventional propanil application but usually recovers after 10 to 14 days. Do not add liquid nitrogen or zinc with *Bolero* 8 EC alone or when tank mixed with propanil or Arrosolo 3-3 or Facet 75 DF for postemergence applications. The use of surfactants or other spray additives with *Bolero* 8 EC alone or in tank mix combinations with Arrosolo 3-3 E or propanil or Facet 75 DF is done at the sole risk of the user.

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 application. Stress management practices include determining rice plant vigor by inspecting both top growth and root growth before applying herbicides.

**Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption.**

\* \* \* \* \*

Follow all applicable directions, restrictions and precautions on the EPA-registered label.

This labeling must be in the possession of the user at the time of pesticide application.

FIFRA § 24(c) Registrant: VALENT U.S.A. Corporation  
P. O. Box 8025  
Walnut Creek, CA 94596-8025

Arrosolo – Reg. TM of Syngenta  
*Bolero* – Reg. TM of Kumiai Chemical Industry Co., Ltd.  
Facet – Reg. TM of BASF Ag  
Gramoxone – Reg. TM of Syngenta  
Roundup – Reg. TM of Monsanto Co.  
Londax – Reg. TM of DuPont.