Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD 2015-2017 LIC. NO.

9794.20

Prefar® 4-E

Selective Herbicide

Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD 2012-2014 LIC. NO.

Emulsifiable liquid for control of annual grasses and broadleaf weeds

ACTIVE INGREDIENT: Bensulide	**% By Wt.**
S-(O,O-diisopropyl phosphorodithioate) ester of N-(2-mercaptoethyl) benzenesulfonamide	46.0%
OTHER INGREDIENTS	54.0%
TOTAL	100.0%

Contains 4 pounds of active ingredient per gallon
Contains petroleum distillates

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID Organophosphate Pesticide	
If swallowed	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give ANY liquid to the person. • Do not give anything by mouth 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 by mouth-to-mouth, if possible. • Call a poison control center or doctor for further 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.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • 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 **1-888-478-0798** for emergency medical treatment information.	
NOTE TO PHYSICIAN	
This product is an organophosphate herbicide. If symptoms of cholinesterase inhibition are present, atropine by injection is antidotal. 2-PAM is also antidotal and may be administered, but only in conjunction with atropine. Contains petroleum distillates – vomiting may cause aspiration pneumonia.	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed, inhaled, or absorbed through the skin. Avoid contact with eyes, skin or clothing. Causes moderate eye irritation.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category ***G*** on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves such as barrier laminate or Viton > 14 mils
- Shoes plus socks
- In addition, a NIOSH-approved dust-mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE filter must be worn by: 1) mixers, loaders, 2) persons participating in chemigation, and 3) commercial or for-hire applicators (due to risk from repeated exposures)

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.

NET CONTENTS _____ GALLONS

EPA Reg. No. 10163-200
EPA Est. No. 054675-MEX-001

Gowan®
The Go To Company

Produced For:
Gowan Company
P.O. Box 5569
Yuma, AZ 85366-5569

ENGINEERING CONTROL

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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 chemical is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from the treated area.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Do not apply directly to water, or to area where water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

This product may impair reproduction in birds if used during the breeding season.

PHYSICAL OR CHEMICAL HAZARDS

Combustible. Do not use, store, pour, or spill near heat or open flame. Keep container closed when not in use.

DIRECTIONS FOR USE
USE RESTRICTIONS

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.

- READ ALL DIRECTIONS BEFORE USING.
- MIX PREFAR 4-E WELL BEFORE DILUTING WITH WATER.
- Prefar 4-E must be used only for purposes listed on the label. Do not exceed the rates specified on the label. (DO NOT OVERDOSE.)
- USE ON MINERAL SOILS ONLY.
- Application of Prefar 4-E to soil that is cold and/or wet for an extended period of time due to rains or poorly drained soil during the germination period may result in reduction of crop stand or yields.
- Combining Prefar 4-E with fertilizers or other agricultural chemicals could result in incompatibility, reduced efficacy, or reduced crop safety. It is recommended that the user test the response of combination treatments with other products on a small scale prior to commercial scale use.
- Vary the rate of Prefar 4-E you apply depending on the soil texture. Apply the higher specified label rates to heavier, fine textured soils. Apply lower rates to lighter, coarse textured soils with lower organic matter.
- This product may not be applied by aircraft.
- Do not allow this product to drift.

WEEDS CONTROLLED

ANNUAL GRASSES

Crabgrass	*(Digitaria spp.)*
Fall Panicum	*(Panicum dichotomiflorum)*
Foxtail	*(Setaria spp.)*
Goosegrass	*(Eleusine indica)*
Jungle Rice	*(Echinochloa colonum)*
Sprangletop	*(Leptochloa spp.)*
Barnyardgrass (Watergrass)	*(Echinochloa crusgalli)*

ANNUAL BROADLEAF WEEDS
(AZ, NM, TX and CA only)

Lambsquarters	*(Chenopodium album)*
Purslane	*(Portulaca oleracea)*
Redroot Pigweed	*(Amaranthus retroflexus)*

(AZ and CA only)

Burning Nettle	*(Urtica urens)*
Nettleleaf Goosefoot	*(Chenopodium murale)*

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. Exception: If the product is soil-injected or soil-incorporated the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves such as barrier laminate or Viton > 14 mil.
- Shoes plus socks

PRODUCT INFORMATION

Prefar 4-E is a selective preemergent herbicide that controls weeds by interfering with their normal germination and seedling development. Tests deemed reliable demonstrate that when Prefar is applied to labeled crops according to label directions under normal growing conditions, it is safe to the crop. Normal crop conditions include soil with good water drainage, acceptable soil fertility, and soil temperatures conducive to timely seed germination and plant emergence. Any deviation from normal growing conditions resulting from adverse environmental conditions or changes in production practices may alter a crop's response to Prefar.

The user should strictly comply with the soil preparation and application instructions on this label. Questions concerning the use of the product should be directed to Gowan Company or local extension agents or university specialists.

SOIL PREPARATION: Prepare the soil according to good agricultural practice. Prefar 4-E does not control emerged weeds. All weed growth and crop stubble must be thoroughly worked into the soil prior to application.

APPLICATION INSTRUCTIONS: Spray equipment should be carefully calibrated before use and checked frequently during application to be sure nozzles are free from clogging and are delivering a uniform spray pattern. Apply uniformly the directed rate of Prefar 4-E in 10 to 50 gallons of water per acre. See comments for specific crop use directions.

PREPLANT INCORPORATION: Apply to well-worked soil that is dry enough to permit thorough incorporation. Incorporate to a depth of 1-2 inches before planting. One-inch incorporation is optimum, while incorporating deeper than 2 inches will result in reduced weed control or crop injury.

PREEMERGENCE APPLICATION: Apply Prefar 4-E preemergence only on crops where the application is followed by immediate irrigation. Delaying irrigation more than 36 hours may result in poor weed control**.** For sprinkler irrigation wet the soil at least 2 to 4 inches deep. For furrow irrigation thoroughly wet the entire bed top (completely black out bed top).

ROTATIONAL CROP INSTRUCTIONS: Carrots and other crops on this label (or crops from labeled crop groupings) may be replanted following applications of Prefar 4-E without restriction. All other crops should not be planted for 120 days and the soil must be tilled to a minimum depth of 4 inches prior to replanting.

Prefar 4-E may be used on labeled crops grown through or under plastic.

CHEMIGATION USE INSTRUCTIONS

CHEMIGATION PROHIBITION – This product may only be applied by chemigation in Arizona and California.

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move; or drip (trickle), including surface and subsurface drip irrigation systems. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

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

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

For chemigation systems connected to public water systems:

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

In addition, all directions and requirements specified for Sprinkler and Drip (trickle) Chemigation must be followed.

Sprinkler and Drip (Trickle) Chemigation:

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

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

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

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

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
Do not apply when wind speed favors drift beyond the area intended for treatment.
For best results, application should be made at the beginning of the irrigation cycle, injecting over a 60 to 90 minute period after all lines and sprinklers have been cleared and are operating with correct pressure. Shut off injection equipment at the end of the application and continue to irrigate until soil is wetted to a depth of 2 to 4 inches.

CROP USE DIRECTIONS

All Prefar 4-E rates are given on a broadcast rate per acre basis. For banded applications reduce proportionately the amount of Prefar 4-E applied according to the area to be treated. Do not make applications to any crop not on this label unless the supplemental labeling for Prefar 4-E supplied by Gowan Company is followed.

CROP	BROADCAST RATE Quarts/Acre	COMMENTS
CUCURBIT VEGETABLE GROUP, including but not limited to: Chinese Waxgourd (Chinese Preserving Melon), Cucumbers, Gherkin, Edible Gourd (Chinese Okra), Muskmelons (including Cantaloupe, Honeydew Melon), Summer Squash, Winter Squash, Watermelons	5 - 6	Apply preplant or preemergence to flat-planted or bedded crops. Follow application instructions given on this label.
BRASSICA (COLE) LEAFY VEGETABLE GROUP, including but not limited to: Broccoli, Broccolini, Broccoflower, Chinese Broccoli, Broccoli Raab (Rapini), Brussels Sprouts, Cabbage, Chinese Cabbage (Bok Choy, Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Cavalo Broccolo, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens	5 - 6	Do not apply more than 6 lbs. a.i. per acre per season. Apply preplant or preemergence. Follow application instructions given on this label.
FRUITING VEGETABLES Eggplant, Pepinos, Peppers (Bell Peppers, Chili Peppers, Cooking Peppers, Pimentos, Sweet Peppers), Tomatillo	5 - 6	Apply preplant or preemergence. Follow application instructions given on this label.
LEAFY VEGETABLES (EXCEPT BRASSICA VEGETABLE) GROUP, including but not limited to: Arugula (Roquette), Cardoon, Celery, Chinese Celery, Chervil, Cress (Garden, Upland), Dock (Sorrel), Endive (Escarole), Florence Fennel, Lettuce (Head or Leaf), Parsley, Radicchio (Red Chicory)	5 - 6	Do not apply more than 6 lbs. a.i. per acre per season. Apply preplant or preemergence. Follow application instructions given on this label. Do not use Prefar 4-E on spinach or Swiss Chard as severe phytotoxicity will occur.
CARROTS (Texas Only)	5	Do not apply more than 5 lbs. a.i. per acre per season. Apply preplant or preemergence. Follow application instructions given on this label. Do not feed treated carrots to livestock.
DRY BULB VEGETABLES: Garlic, Bulb Onions, Shallots (Do not use in the Willamette Valley of Oregon)	5 - 6	Do not apply more than 6 lbs. a.i. per acre per season. Apply preplant or preemergence. Follow application instructions given on this label. Onions germinate and grow best when planted in fine-textured soil with good water drainage where the soil salinity value is less than 4 ECe* and soil temperature is between 55º and 75º. Use of Prefar on onions under less favorable soil and environmental conditions may reduce stand and vigor resulting in lower yield. To avoid injury, do not incorporate by mechanical methods in California or Arizona. Consult your local extension agent or university specialist for further information. (*ECe is the electrical conductivity extract.)

CROP	BROADCAST RATE Quarts/Acre	COMMENTS
DRY BULB VEGETABLES: Garlic, Bulb Onions, Shallots (Idaho and Oregon only) (Do not use in the Willamette Valley of Oregon)	5 - 6	Do not apply more than 6 lbs. a.i. per acre per season. For control of redroot pigweed and common lambsquarters, prepare a good, flat seed bed by standard cultural practices. Apply Prefar 4-E in the fall in 10 - 50 gals. of water in a 10 - 12 inch band and bed-up, throwing soil from the furrows over the sprayed band of Prefar 4-E. Allow to remain undisturbed until spring. Prior to planting in spring, drag-off the bed tops being careful not to drag off soil below the level of Prefar 4-E application. Plant in the center of the beds.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Protect from temperatures below 42° F. At temperatures below 42° F product may crystallize. Dissolve crystals with quiet storage at warm temperatures (75° F). Redissolution rate: 40 - 48°F (40-60 days); 60° F (1-3 weeks); 70 - 80° F (1-3 days). Roll container and agitate contents to provide a uniform product prior to use.

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

CONTAINER DISPOSAL: For Non-Bulk Plastic Containers: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. After cleaning, if recycling is not available, puncture and dispose of in a sanitary landfill or by incineration or if allowed by State and local authorities by burning. If burned, stay out of smoke.

CONTAINER DISPOSAL:

For Nonrefillable Bulk Plastic Containers: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later disposal. Repeat this procedure two more times.

For Refillable Bulk Containers: Refillable container. Refill this container with pesticide only. Do not reuse this contain for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Container Precautions: Before refilling, inspect thoroughly for damage such as cracks, punctures, bulges, dents, abrasions, and damaged or worn threads on closure devices.

REFILL ONLY WITH PREFAR 4-E. The contents of this container cannot be completely removed by cleaning. Refilling with materials other than Prefar 4-E will result in contamination and may weaken container.

After refilling and before transporting, check for leaks. Do not refill or transport damaged or leaking container.

SPILL OR LEAK: Small spills can be handled routinely. Use adequate ventilation and wear an air-supplied respirator to prevent inhalation. Wear suitable protective clothing to prevent
skin and eye contact. Use the following procedures:

1. Spread a suitable absorbent such as clay, sawdust or kitty litter on the spilled material.
2. Place sweepings in an appropriate chemical waste container.
3. Generously cover the contaminated areas with a common household detergent. Using a stiff brush and small amounts of water, work the detergent into the spill material forming a slurry. Do not splatter on yourself or bystanders and completely avoid skin or eye contact with this material. Brush the slurry into cracks and crevices and allow to stand for 2-3 minutes.
4. Spread absorbents on the slurried liquid and shovel the absorbed material into the container.
5. Repeat if necessary.
6. Flush the area with water while observing proper environmental considerations.
7. Seal container and dispose of in approved pesticide landfill.

Large spills should be handled according to a predetermined plan. For assistance in developing a plan, contact Gowan Company.

FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK OR FIRE), CALL CHEMTREC® (800) 424-9300.
For other product information, contact Gowan Company or see Material Safety Data Sheet.

NOTICE OF CONDITIONS OF SALE AND WARRANTY AND LIABILITY LIMITATIONS

Important: Read the entire Directions for Use and Notice of Conditions of Sale and Warranty and Liability Limitations before using this product. If terms are not acceptable return the unopened container for a full refund.

Our directions for use of this product are based on tests believed to be reliable. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, inadequate performance, or other unintended consequences may result due to soil or weather conditions, off target movement, presence of other materials, method of use or application, and other factors, all of which are beyond the control of Gowan Company. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer and User.

Gowan Company warrants that this product conforms to the specifications on the label when used in strict conformance with Direction for Use, subject to the above stated risk limitations. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, GOWAN COMPANY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, GOWAN COMPANY'S EXCLUSIVE LIABILITY FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, OR ANY OTHER LEGAL THEORY IS STRICTLY LIMITED TO THE PURCHASE PRICE PAID OR REPLACEMENT OF PRODUCT, AT GOWAN COMPANY'S SOLE DISCRETION.

Prefar® 4-E is a registered trademark of Gowan Company, L.L.C.
Chemtrec® is a registered trademark of American Chemistry Council, Inc.