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A selective herbicide for preemergence control of annual grasses and broadleaf weeds

Active Ingredient:

Keep Out of Reach of Children

CAUTION

Refer to inside of label booklet for additional precautionary information and Directions for Use including STORAGE AND DISPOSAL.

Notice: Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.

In case of an emergency endangering life or property involving this product, call collect 517-636-4400.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-129

(ADE)





Superscripts correspond to first letters of lot number 20108 900-000353

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DowElanco • Indianapolis, IN 46268, U.S.A.

EPA Est. 1471-IN-5: 37429-GA-01; 464-MI-1

Herbicide

Net Weight 12.5 lb

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Precautionary Statements

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

CAUTION PRECAUCION:

Precaucion al usuario: Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente

Harmful II Swallowed, inhaled Or Absorbed Through The Skin

Avoid breething dust or spray mist. Avoid contact with skin, eyes or clothing. Wash thoroughly with

soap and water after handling. Remove contarr insted ciothing and wesh before reuse,

First Aid

If in eyes: Flush with plenty of water. Get medical attention if irritation develops. If wallowed: Do not Induce vomitting. Call a physician or Polson Control Center. If available, administer

activated charcosi (6-8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops. If inheled: Remove individual to fresh air. If breathing difficulty occurs, get medical attention.

Environmental Hazards

This pesticide is toxic to fish. Do not apply directly to water or wetlands (swamps, bogs, or marshes). Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply when conditions favor runoff or drift from the target area too contaminate water when disposing of equipment washwaters.

Directions for Use

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

Read all Directions for Use carefully before applying

STORAGE AND DISPOSAL

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

Storage: Store in original container only. Do not store in direct sunlight. Do not store at temperatures above 120°F. If stored above 120°F, Balan Dry Flowable herbicide could lose some of its dispersing properties, resulting in difficult application, poor weed control or crop injury. In case of leak or split, contain material and dispose as waste.

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

waste disposel facility.
Plestic Container Disposel: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke

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General information

Balan Dry Flowable (DF) herbicide is a preemergence herbicide for control of annual grasses and broadeaf weeks. Incorporation of Balan DF is required to assume effective assess long weed control. Balan DF may be applied in liquid agrays of water or liquid fertilizer. Balan DF controls weeds as they garminets. Balan DF does not control setablished weeds.

General Use Precautions
When applied according to use directions and under normal growing conditions, Baten OF will not have the maked crop. Over-application can result in crop injury, delayed emergence or soil residue. Uneven application or improper soil incorporation of Baten OF can result in emits west control or crop injury. Seeding disease, cold weather, deep planting, accessive molesure, high self concentration or drough may weather crop seedings and increase the possibility of damage from Bean DF. Under these conditions, delayed crop development or reduced yields may result.

in arid, irrigated areas of the Western United States - Artorne, California, Idaho, Montana, Hewada, Oregon, Ulan, Westington and Wyoming - certain cropts are exacquible to injury when planted in east previously treated with Balan DF. To avoid such tribury, do not plant wheel, barley, rye, other granger, or ordions within 10 months following an application of Balan DF. Do not plant mile (grain sorghum), com, cets, achech, rad barlu, sugar beets, or other mot crops for 12 months fractions an application of Balan DF.

Elaien DF should not be applied to solle that are wet or subject to prolonged periods of flooding as poor weed control may result.

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Chemigetion: Do not apply Balen DF through any type of irrigation system.

Soll Texture Guide for

5 13887

Application Rates
Application Rates
Application rates for Balan DF are based on sol texture.
A fine textured day soil will require a higher application rate than a coarse textured early soil. Belan DF application rates are determined by "soil texture gro yings" (coarse, medium or fine) which correspond to the vertice field soil textures to be treated. Using the table balow, determine if the field soil to be treated is coarse, medium or fine and use the applicar on rate recommended for that soil texture grouping.

Fine (heavy) soits	Medium solis	Comme (light) solls	Sall Terture Class
Clay, clay loam, sitry clay loam t, sitry clay, sandy clay, sandy clay loam t	Loam, sifty clay toam?, sift toam, alt, sandy clay toam?	Sand, loamy sand, sandy loam	Sali Classification

†8thy clay been and sandy citry beam sole are framilional acts and may be classified as either framilional office leadured soles. If ally clay learn or sandy only been sole are predominantly sand or all, they are usurely classified as medium technical sole. If they are predominantly clay, they are usually classified so line technical sole.

Soil Preparation
Destry existing weeds before application of Balan DF.
Chap and thoroughly mix surface residues into the
soil to a depth of 4 to 6 inches by plowing or
discing. Use stillage equipment to break up large
clode before application.

Mixing Directions
Balan Dry Firwable - Alone
Balan Dr may be upplied in water and issued
ferificar materials. Prior to mixing Balan Dr in issued
ferificar, refer to the label section entitled Treating for
Compatibility in "Joud Ferificars" for test procedures
to determine or impatibility with the fertilizer product to
be used.

Equipment Requirements: Vigorous continuous agitation is required for Balan OF. Agitation should be sufficient to create a ripping or rolling action at the Rould balance. Centrifugal pumps are preferred and should have sufficient capacity to provide good bypass volume at all times. Screens pieced on the suction side of the pump should be at least 16 mesh or coarser. Use 50 mesh or coarser excess between the pump and boom and when required at 81- nozzies. Before mixing, be sure equipment is clean and does not contain only residues from emulatifiable concentrates.

Start with a clean agray tank. Fill the sprayer to 'k of the required apray volume. Start agliation. Add the required amount of Balan DF in a controlled fashion to allow gradual wetting of the product and prevent clogging of acreens and outlet ports. Continue aglistion

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and fill spray tank to required spray volume. Meintain continuous agit on from mixing through application.

Precaution: Do not allow the mixture to back eighon into the water source.

Balan Dry Flowable in Tank Mix Combinations
Balan DF may be tank mixed with other products when applied with water or liquid fertilizer mathries. Prior to mixing Balan DF and another product in liquid fertilizer is refer to the tank mix product manufacturer's label to determine if application in liquid fertilizer is recommended. Also refer to the section in this label antitled "Teeting for Compatibility in Liquid Fertilizers" for teeting procedures to determine tank mix compatibility with the liquid fertilizer product to be used. Reed and follow all label instructions for each material to be added to the apray tank.

Vigorous continuous agitation is required for all tank mixes. Sparger pipe agitators generally provide the best agitation in spray tanks. To prevent fearning in the square tank uning filling, keep the end of the fill pipe below the surface of the water. This prevents air from being stirred or splashed into the mixture.

Mixing Order: Add Balan DF to spray tank according to mixing directions for "Balan DX" - Alone", on page 2. Fill the spray tank to 90% of the final spray volume. Add different tank mix formulation types in the following order: dry flowables (DF); weltable powders (WP); aqueous suspensions (AS), flowables (F), fliquids (L), solutions (S), and emulatiable concentrates (EC, LC). Allow time for complete mixing and dispersion after addition of each product. Allowable products. Continue agitation and fill tank to final apray volume.

Maintain continuous agitation during mixing, final filling and throughout application. If apraying and agitation must be stopped before the apray tank is empty, the materials may settle to the bottom. Bettled materials must be resuspended before apraying is resumed. A sparger agitator is particularly useful for this purpose. Settled materials may be more difficult to resuspend than when originally mixed.

Premixing: When tank mixing, initial mixing and dispersion of certain dry flowable or wettable powder products may be improved by premixing with water (slurrying). Where recommended, follow product label instructions for each material. Adding the slurred material to the spray tank through a 20 to 35 meeh wetting screen will help assure good initial dispersion.

Line screens in the tank should be no liner than 50 mesh (100 mesh is liner than 50 mesh).

Testing for Compatibility in Liquid Fertilizers

Balan DF alone or in combination with other products may be mixed with liquid fertilizer. Vigorous continuous tion is always required when Balan DF is applied in ficuld fertilizer. In some cases, Balan DF or tank mixes containing Balan Dr. may not combine properly with some liquid fertilizer materials. Small quantities of such mixtures should always be tested before full-scale mining. Use the procedure provided below to determine If a compatibility agent is needed or which available agent performs best with the mixture being applied. The compatibility agents listed at the end of this section have been thoroughly tested. Other surfactant materials available may not be suitable for use with liquid fertilizers. Individual state regulations relating to liquid fertitizer mixing, registration, labeling and application are the responsibility of the individual and/or company offering the fertilizer and chemical mixture for sale. The combination of Balan DF with solution and suspensiontype fertilizers provides annual weed control equal to Balan DF applied in water.

Testing Procedure

Add 1 pint of liquid fertilizer to a 1 quart glass jar.

- Add equal amounts (1 to 4 teaspoonfuls depending on application rate) of Balan DF and other products to be tank mixed in the liquid fertilizer. Add meterals in the order recommended in the "Mixing Directions" section of this label. Mix until evenly dispersed after addition of each formulation. If dry flowable or wettable powder formulations do not disperse well, it may be necessary to surry the materials in a small amount of water before addition to the liquid fertilizer.
- 3. Observe the jer for about 10 minutes. If materials rise to the surface and io, in a thick layer (oil curds) which will not disperse again when agitated, a compatibility agent is needed. If the mixture is easily dispersed to its original state with slight agitation, no compatibility agent is needed; however, good agitation must be provided to maintain dispersion in the agray 15nk from mixing through application.
- 4. If the need for a competibility agent is demonstrated in step 3, it may be tested as follows: Using a clean, clear pleatic or gless container, start at step 1, above. Add ½ tesepoonful of the competibility agent to the liquid fertilizer, mix well, and then repeat steps 2 and 3.

An effective compatibility agent will cause the mixture to remain uniformly mixed with fittle or no separation or oil rising to the surface for ½ hour or longer. If slig. 1

separation occurs, 2 to 3 inversions of container should provide a uniform mixture. If oily curds form which do not disperse, try adding additional competibility agent or test the effectiveness of an alternative compatibility agent using the procedure above. A clean jer should be used for each test.

Competibility Agents

The phosphale ester-type surfactants listed below are designed for use with liquid fertilizers and can be mixed at rates as low as 1½ to 2 pints per ton of liquid fertilizer. They usually do not work well as compatibility agents for tank mixes in plain water. Add the compatibility agent just before adding herbicides. Read and follow label directions for the compatibility agent.

- 1. Sporto 166D (Witco Chemicals Co., Chicago, IL)
- Compet (Farm Chemicals, Inc., Aberdeen, NC)
 Not for use in California.
- 3. Unite (Hopkins Ag Chemical, Madison, WI)
- T-Mutz 734-2 (Thompson-Hayward Chemical Co., Kenses City, KS)
 Not for use in California.
- Amoco Spray Mate (Amoco Oit Co., Chicago, IL) Not for use in California.

Application and Incorporation Directions

Application

Apply Balen DF anytime after January 1 when soit can be worked. Apply in 5 to 40 gallons of water or itquid fertilizer per acre (broadcast basis). For band application, apply proportionately less. Use any properly calibrated low pressure spray that will apply the apray uniformly. As the amount of spray volume decreases, the importance of accurate calibration and uniform application increases. Avoid boom overlaps that will it-mease rates above those recommended. Check the apray delly to insure proper calibration and uniform application.

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Before planting, Balan DF must be incorporated one time within 4 to 8 hours after application. A second incorporation is required with most equipment (see "Incorporation Equipment", below, for specific instructions). If Belan DF is applied to a wet, warm soil surface, or if the wind velocity is consistently greater than 10 mph, variable weed control may result. Variable red control may also result if incorporation is delayed in the time in the eastern United States or 4 hours in the western United States. Operate equipment to mix Palan DF into the top 2 to 3 inches of the final seedbed. Generally, incorporation equipment will mix

Balan UF approximately helf as deep as equipment is operated. For example, operating equipment 4 inches deep will mix Balan DF into approximately the upper 2 inches of the seedbed.

Special Note: In the western United States, extremely high temperatures and intense sunlight may be present at the time of application. Under such conditions, Balan DF must be incorporated within 4 hours after application to prevent lose of herbicidal activity.

Incorporation Equipment

Use equipment that thoroughly mixes Balan DF into the soil. Shallow incorporation less than 2 inches deep in the final seedbad may result in erratic weed control. Use of equipment not listed below may result in poor or erratic weed control and/or crop injury. The following types of equipment are recommended:

- Tandem clec: Set equipment to cut 4 to 6 inches and operate at 4 to 6 mph. Two incorporation passes in different directions are required. A single incorporation pass with a tandem or double disc does not provide adequate soil mixing.
- P.T.O. driven equipment (tillers, cultivators, hoes):
 Set equipment to operate 4 to 6 inches deep and operate no more than 4 mph. Only one incorporation pass is necessary with this type of equipment.

Precaution: Use of P.T.O. equipment alone for incorporation in coarse (sandy) solts may result in an uneven distribution of Balan DF. This occurs when solt containing Balan DF is deposited into wheel tracks that are deeper then the operating depth of the titler. This results in an excessive amount of Balan DF in tractor wheel depressions and poor weed control in inservening areas containing less than the intended rate of Balan DF.

Cultivation after Plenting

Soil :rested with Beian DF may be shallowly cultivated or role y hoed without loss of weed control activity. Do not cultivate deeper than the Beian DF treated layer or untreated soil may be exposed resulting in loss of weed control. In bedded culture, if weeds germinate in the bottom of the furnow due to the removal of treated soil, these weeds should be controlled by cultivation.

Annual Grasses and Broadleaf **Weeds Controlled by Balan Dry Flowable**

Annual Graces Common Name annual bluegrass berny's agrees (we argrace)

achinochios crus-gelli

Brachierie platyphytis

Sorghum hatepense

Lollum multiflorum

<u>Scientific Name</u>

Stellarle media

Alchardia acabra

Polygonum aviculare

Chanopodium album

Multi-go verticillete

briscies signals _s (apreading panicgmas, on pages 5 and 6) craborass

See apocial use instruction Dicitaria acc.

earge crabgrass) emporn craperass)

foxtalla

Dectyloctenium aggyptium crowlootorass Setarie acc.

(bottlegrass) **Corlette Grace** iolent tuxtell torsen foxtalli (placonarace) frobust white foxfails évellow foxtails

Johneongrass (seeding only)

lungierice Echinochica colonum Panicum dichotomiflorum penicum, fall (See special use instruction on pages 5 and 6) panicum, Texas Panicum teranum

(buffalograss) (Coloradograss)

ryegrass, annual

sendbur, field Conchrus incertus

Armuel Broadlest Weeds Common Name complyweed

chickwood Floride pusley Floride pursienei Mexican clover)

(valey) knotweed lembequerters. common

pigweeds. Amerenthus soo.

redroot pigweed (carelessweed) (rough pigweed) prostrate ploweed spiny amerinth purelene, common

redmeide

Portuince oleracee Calandrinia cauleacens

Approved Crops

Alfalfa, Birdsfoot Trefoil, Clover (Alsike, Ladino and Red) Apply and incorporate Balan DF before seeding.

Broadcast Application Rates per Acre

Soll Texture	Batan Dry Flowable (Founds/Acre)
Coerse	2
Medium	3
Fine	21/2

Lettuce (Direct Seeded) Apply and incorporate before seeding.

Broadcast Application Rates per Acre

Soli Texture	Balan Dry Flowable (Founds/Acre)	
Coarse	2	
Medium	} 2	
Fine	21/4	

Pagnut - Balan Dry Flowable Aloge Apply and incorporate before sending. Ston Rates per

Soll Talare	Balan Day Pyrirabie (Pounts/Acre)		
Medun Fine	2		
			

Special Use Instructions: Use the higher indicated application rate on coarse and medium sole where dail personn or broadlest algorithms is present, or where heavy weed populations are present.

Poenus - Balan Dry Flowable Due lo Tank Mix Apply and unconjugate the tank mix containing Apply and unconjugate the tank mix containing Balan DF/Duel up to 14 days before playting. Use a total apmy volunte of 10 to 40 gatons play acre. The tank mix containing Balan DF/Duel/controls weeds susceptible to Blyan DF plus those weeds failed on the Duel label.

Aerial Application: applyand incorporate the task mix containing Balan DF/Dual up to 14 days before planting. Jule a minimum spray feature of 5 gallons per acre.

Condes	LA	plication	HOS POT A	cre
			4	3% O.MZ
248 70-200	8.	on Dry Flowering Pounds/Acrys	7% O.M	er Greeker (PintajAcre)
Coarse Medium		2 - 2 1	2 - 25	P-24
Fine	Ļ	2/	2 - 2	1/2×·5

Fall Panicum and proadlest Signature & Control: Apply the 2½ push per acre rate of Ballot NF where fall panicum is present or where weed populations

Precautions Awar to the Duel label for additional use directions, precautions and limitations before use. Reenut /- Balan Dry Flowable/Vernam in

Tarak Milk
Apply and incorporate the tank mix containing
Belot DF/verneth up to 10 days before glenting.
Use a total apre-volume of 10 to 40 gallons per acre.
Incorporate immediately to prevent loss of the Verparm.
The tarak mix containing salan DF/vernern controls
nutsedge in addition to weeds succeptible to Balan DF.

Broadcas Application Rates per Acre

Sol Texture	(Pounds/Acre)	Vernam 7E (Pints/Acre)
Course /	2 - 21/2	235
Fine	2%	3

Fall Panisum Centur. \pply the 2½ pound per acre rate of Batan DF in com-nation with 2½ pints of Vernam on coarse soils and 3 pints of Vernam or medium soils where fall pericum is present or where weed ations are fleavy. pogul

Proceutio - Refer to the Vertiam label for additional lise prections, precaltions and limitations before use.

Warranty Disclaimer

DowElanco warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below DOWELANCO MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PAHTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

ir herent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.). abnormal conditions (such as excessive rainfall, drought, tornedoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of DowElanco or the seller. All such risks shall be assumed by Buyer.

Limitation of Remedies

The exclusive remedy for losses or demages resulting from this product fincluding claims based on contract, negligence, strict liability, or other legal theories). shall be limited to, at DowElenco's election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

DowElanco shall not be liable for losses or damages resulting from handling or use of this product unless. DowElanco is promptly notified of such loss or damage in writing. In no case shall DowFlanco be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written Or verbal statements or agreements. No employee or sales agent of DowElanco or the seller is authorized to very or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner,

Amendments:

Use on peanuts deleted.

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A selective herbicide for preemergence control of annual grasses and broadleaf weeds

Precautionary Statements

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children

CAUTION

Harmful if Swallowed, Inhaled Or Absorbed Through The Skin

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First Aid

If in eyes: Flush with plenty of water.
Get medical attention if irritation develops.
If swallowed: Do not induce vomiting.
Cell a physician or Poison Control Center.
If available, administer activated chercoal
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Herbicide

Net Weight 12.5 lb

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