US ENVIRONMENTAL PROTECTION AGENCY 3375-40 OFFICE OF PESTICIDES PROGRAMS TERM OF ISSUANCE **REGISTRATION DIVISION (TS-767)** WASHINGTON, DC 20460 Chconditional NAME OF PESTICIDE PRODUCT NOTICE OF PESTICIDE: REGISTRATION REREGISTRATION (Under the Federal Insecticide, Fungicide, Stient's What Why Cranitarus and Rodenticide Act, as amended) Control lesign Course NAME AND ADDRESS OF REGISTRANT (Include ZIP code) 1 Knox restilizes to. 2.0. DOM 245 KNEX, ITELLEDO - 40634 NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number. On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act. A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith. Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others. If is product to registered in descreams, with Elfer Decision 5(c)(5) provided that you: 1. Add to page 5 of the enclosed star, at 18501 the same tap that we accepted on January 10, 1955 for this jesticiae product religitation. .. Who are an additional page to the enclosed storped rack, t reflect the same "minitation or Warranty and Minitatics of Marility" statements as were accepted January 10, 1995 for this justiciae product registration. 5. Lubmit one (1) copy of the final printed labeling before you release the product for shipment. If these conditions are not condited with, the registration will be Subject to cancellation in accordance with Fifter section of (e). From release for suspects of the product constitutes accepts we on these conditions. a stanged copy of the label is enclosed for your records. Scanner I. Californ Mariated Balance Cartie manga kermerah di di kecah dala Secretaria () vision () com) 1.10 ATTACHMENT IS APPLICABLE SIGNATURE OF APPROVING OFFICIAL MAR 0 6 1996 EPA Form 8570-6 (Rev. 5-76) BE USED UNTIL SUPPLY IS EXHAUST

SHAW'S TURF FOOD/CRABGRASS CONTROL BARRICADE 38

Prodiamine: (I	oromethyl)- <u>m</u> - 0.38%		
INERT INGRE	<u>99,62%</u>		
TOTAL:			100.0%
Guaranteed Fo	ACCEPTED with COMMENTS In EPA Letter Dated		
Nitrogen Phosphorus	32 % 4 %	(N) (P ₂ O ₅)	MAR 0 6 1996

For selective preemergence control of grass and broadleaf weeds in:

 (K_2O)

Nitrogen from: Urea formaldehyde, Urea, Ammonia

- established turf grasses (excluding golf course putting greens) and lawns
- landscape ornamentals (including established perennials & wildflower plantings)

KEEP OUT OF REACH OF CHILDREN

CAUTION

See the following section, <u>Precautionary Statements, Hazards To Humans and Domestic</u>
<u>Animals</u>, for additional information.

Net Weight:

Potassium

EPA Reg. No. 8378-40 EPA Est. No.

ACTIVE INGREDIENT:

Knox Fertilizer Co. P.O. Box 248 Knox, IN 46634

BARRICADE® is a Registered Trademark of Sandoz, Ltd.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Causes moderate eye injury (irritation). Harmful if inhaled or absorbed through the skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact while handling the material may cause allergic reactions in some individuals.

Statements of Practical Treatment

If in eyes: Flush thoroughly with water for several minutes. Get medical attention if irritation persists.

If on skin: Wash with soap and water. Rinse thoroughly. Get medical attention if irritation persists.

If inhaled: Remove victim to fresh air.

Environmental Hazards

This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of water solubility, it may be toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when disposing of equipment washwaters.

STORAGE AND DISPOSAL

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

STORAGE

Store in original container away from other fertilizer, feed, or food stuffs and separated from other pesticides.

PESTICIDE DISPOSAL

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

CONTAINER DISPOSAL

<u>Paper containers</u>: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or at an incineration facility, or; if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

DIRECTIONS FOR USE

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

This product is a selective preemergence herbicide that provides residual control of many grass and broadleaf weeds in

- established turf grasses (excluding golf course putting greens) and lawns
- landscape ornamentals
- established perennials & wildflower plantings

This product controls susceptible weeds by inhibiting weed seeds germination and root development. Most effective weed control will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application.

Not for use on plants being grown (1) for sale or other commercial use, (2) for commercial seed production, or (3) for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in ornamental gardens or parks, or on golf courses or lawns and grounds.

Do not graze or feed livestock forage cut from areas treated with this product.

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

Do not apply aerially.

Do not apply to golf course putting greens.

Application Directions

Apply uniformly through suitable, calibrated commercial application equipment.

ESTABLISHED TURF

This product is a selective preemergence herbicide that, when properly applied, will control certain grass and broadleaf weeds in established turf grasses and lawns. The maximum amount of this product that may be applied per year is given for each turf grass species in the **Maximum Annual Rates** section of this label.

Most effective weed control in turf grasses will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation prior to weed seed germination and within 14 days following application. See the map below for approximate crabgrass seed germination dates.

CRABGRASS SEED GERMINATION DATES

Approximate Date

Use Precautions

The following precautions apply to the use of this product in turf grasses and lawns:

Application of this product may thin emerged annual bluegrass and newly overseeded grasses.

Do not apply to ove seeded turf within 60 days after seeding or until after the second mowing, whichever is longer. Injury to desirable seedlings is likely if this product is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.

Do not cut treated sod before 120 days after application. Do not apply to newly set sod until the following year.

Application of this product to turf stressed by drought, low fertility, or pest damage may result in turf injury.

Disturbing the herbicide barrier with cultural practices such as disking may result in reduced weed control.

Do not apply this product to putting greens or areas where dichondra, colonial bentgrass, velvet bentgrass or annual bluegrass (*Poa annua*) are desirable species.

Rates of Application

This product may be applied as a single application or in sequential applications to control weeds germinating throughout the year. All applications must be made prior to germination of the target weeds. This product will not control established weeds.

Maximum use rate selection should be based on turf species. The length of time of residual weed control provided by this product is related to the rate applied.

Maximum Annual Rates

This product is recommended for use on the turf grass species listed in the following table.

Do not exceed the maximum yearly rate as given in the following table:

MAXIMUM APPLICATION RATE/CALENDAR YEAR of SHAW'S TURF FOOD/CRABGRASS CONTROL BARRICADE 38 by Turf Grass Species 1					
Turf Species:	: Ib SHAW'S TURF FOOD 38/A Ib ai/A				
Bermudagrass ² Bahiagrass Centipedegrass Seashore Paspalum St. Augustinegrass ³ Tall Fescue (including turf-type) Zoysia	395	1.5			
Buffalograss Kentucky Bluegrass Perennial Ryegrass	265	1.0			
Creeping Red Fescue	195	0.75			
Creeping Bentgrass	170	0.65			

These are the maximum rates per calendar year by species limitations.

- May be used on newly sprigged or plugged Bermudagrass at rates not to exceed 137 lb/A.

 Newly sprigged or plugged Bermudagrass stolon rooting may be temporarily retarded.

 Suppression only of Foxtail, Goosegrass and Rescuegrass due to reduced product rates used in sprigging situations.
- ³ Use at an initial rate of 195 to 265 lb/A per application followed by sequential applications at doses that would not exceed the maximum annual application rate of 395 lb/A/yr.
- Do not apply more than 395 lb of this product per calendar year.
- Use higher rates of this product to achieve higher levels of fertility and weed control for each turf type.

Weeds Controlled

When used in accordance with this label this product will provide control of the following weeds:

Barnyardgrass
Bluegrass, Annual (*Poa annua*)
Crabgrass (Large, Smooth)
Crowfootgrass
Cupgrass, Woolly
Foxtails, Annual

Goosegrass 1
Itchgrass
Johnsongrass (from soci

Johnsongrass (from seed)

Junglerice Lovegrass

Panicum (Texas, Fall, Browntop)

Rescuegrass³

Signalgrass, Broadleaf

Sprangletop Witchgrass Carpetweed

Chickweed, Common

Chickweed, Mouseear (from seed)

Henbit Knotweed Kochia

Lambsquarter, Common

Pigweed

Purslane, Common Pusley, Florida Shepherd's Purse² Speedwell, Persian Spurge, Prostrate

Woodsorrel, Yellow (from seed)

- In many areas a single application of 170 to 395 lb/A of this product will control goosegrass. However, under heavy goosegrass pressure and/or an extended growing season, most effective weed control may be obtained by making an initial application of 170 to 265 lb/A followed after 60 to 90 days by a second application at doses that would not exceed those given in the Maximum Annual Rate Table. Do not exceed the maximum rate for turf grass species listed in the Maximum Annual Rate Table above.
- Applications for this weed should be made in late summer, fall or winter prior to germination.
- 3 Suppression only.

Sequential applications may be made so long as the total amount of product applied does not exceed the maximum annual application rates recommended for each turf species. All applications must be made prior to germination of the weed seeds.

WHEN TO APPLY AFTER OVERSEEDING TURF

Do not apply to overseeded turf within 60 days after seeding or until after the second mowing, whichever is longer. Injury to desirable seedlings is likely if BARRICADE is applied before seedling secondary roots are in the second inch of soil, not thatch plus soil.

WHEN TO OVERSEED AFTER APPLICATION

BARRICADE will inhibit the germination of turf species if overseeded too soon after application. Follow rates and intervals in the table below for best overseeding/reseeding results.

SHAW'S TURF FOOD 38 Rate (lb/A)		Interval Before Overseeding		
Product	ai	North	Transition	South
132	.50	4 mo	4 mo	4 mo
170	.66	5 mo	4 mo	4 mo
195	.74	6 mo	5 mo	5 mo
210	.80		6 mo	6 mo
265	1.00		7 mo	7 mo
300	1.14			9 mo
342	1.30			10 mo

LANDSCAPE ORNAMENTALS (including Established Perennials and Wildflower Plantings)

This product may be applied for residual preemergence-weed control in ornamentals.

Use Rates

Apply this product at 170 to 395 lb/A in fall and/or spring. Use higher rates of application for longer control periods. Sequential or single applications are allowed so long as the total amount of product applied does not exceed the maximum annual application rate of 395 lb/A/yr.

Application Timing and Information

This product may be applied to newly transplanted and established ornamentals as a broadcast, over the top or directed application. Irrigation or rainfall soon after application will wash residues off plant foliage and activate this product in the soil.

This product may be applied at any time to established plants. Delay application to allow soil to settle around new transplants and water thoroughly before applying this product. Apply this product after cuttings form roots and become established. Apply before budding/grafting or after buds/grafts have taken to avoid any inhibition of the tissue union.

This product is a preemergence herbicide and will not control emerged weeds. Most effective weed control in ornamentals will be obtained when this product is activated by at least 0.5 inch of rainfall or irrigation, or with shallow (1 to 2 inch) mechanical incorporation, prior to weed seed germination and within 14 days following application.

Best weed control is obtained when this product is applied to soil free of clods, weeds, and debris such as leaves. Prior to application of this product, control existing vegetation by hand weeding, cultivation or the use of an appropriate postemergence herbicide.

Tolerant Ornamental Species

This product will not harm most ornamental trees, shrubs and flowers. The species listed below are tolerant to this product. Best results will be obtained when this product is uniformly applied to the soil surface; avoid applying to ornamental shoots which may defeat the effort to get uniform distribution on the soil surface. This product may be applied over the top of these species without injury.

Scientific name

Abies spp.

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Acer palmatum
A. platanoides
Actinidia chinensis
Agapanthus africanus
Arctostaphylos densiflora
Arctotheca calendula
Aucuba japonica
Barberis gladwynensis

Barberis gladwynensis
B. julianae
B. mentorensis
B. thunbergii
B. verruculosa
Buxus microphylla
Callistemon viminalis
Calluna vulgaris
Carpobrotus edulis
Cassia artemisoides
Ceanothus rigidus
Chamaecyparis pisifera

Cleyera japonica Citrus spp. Cornus florida C. stolonifera Cortaderia selloana Cotoneaster apiculatus

C. buxifolius
C. dammeri
C. microphyllus
Cretaegus spp.
Cupressus sempervirens

Delasperma alba

Common name

Fir species **

(Balsam, Fraser, Noble, etc.)

Japanese Maple Norway Maple

Kiwi*

Lily-of-the-Nile (African Lily)

Vine Hill Manzanita

Cape Weed

Japanese Aucuba

Barberry

Wintergreen Barberry

Mentor Barberry
Japanese Barberry
Warty Barberry
Japanese Boxwood
Weeping Bottlebrush

Scouch Heather

Hottentot Fig (Ice Plant)

Feathery Cassia

Wild Lilac
False Cypress

Cleyera

Citrus species*
Flowering Dogwood
American Dogwood

Pampas Grass

Cranberry Cotoneaster

Cotoneaster

Bearberry Cotoneaster Rockscray Cotoneaster

Hawthorne Italian Cypress

White Trailing Ice Plant

^{*}Ornamental species only. Do not use on food producing trees or vines.

^{**}For use on landscape ornamental sites.

Scientific name

Dodonea viscosa Elaeagnus pungens Euonymus fortunei

E. japonica E. kiautschovica Fatsia japonica Forsythia intermedia

F. viridissima

Gardenia jasminoides

Gladiolus spp. Hedera helix Hibiscus

Hibiscus rosa-sinensis

Ilex cornuta
I. crenata
I. opaca
I. pernyi
I. vomitoria
Iris spp.

Jasminium nudiflorum Juniperus chinensis

J. conferta J. horizontalis Juglans sp.

Justicia brandegeana Lagerstromia indica Ligustrum amurense

L. japonicum
Liriope muscari
Lonicera japonica
Latarica

L. tatarica Magnolia spp. Maleophora luteola Malus sp.

Nandina domestica Narcissus spp.

Nerium spp.

Common name

Hop Bush Silverberry Wintercreeper

Japanese Spindle Tree (Evergreen Euonymus)

Spreading Euonymus
Japanese Aralia
Border Forsythia
Greenstem Forsythia
Gardenia, Cape-Jasmine
Gladiolus species**

English Ivy

Rose of Sharon**
Chinese Hibiscus
Chinese Holly
Japanese Holly
American Holly

Holly
Yaupon
Iris species**
Winter Jasmine
Chinese Juniper
Shore Juniper

Creeping Juniper Walnut* Shrimp Plant Crepe Myrtle Amur Privet Japanese Privet

Glossy Privet (Waxleaf)

Big Blue Lily Turf

Japanese Honeysuckle Tatarian Honeysuckle Magnolia species * *

Ice Plant Crabapple*

Heavenly Bamboo Narcissus species * *

Oleander

^{*}Ornamental species only. Do not use on food producing trees or vines.

^{**}For use on landscape ornamental sites.

Scientific name

Olea europa

Ophiopogon japonicus Osteospermum fruticosum Oxydendrum arboreum

Persea americana

Photinia fraseri Picea spp. Pieris japonica Pinus brutia P. canariensis

P. canariensis
P. elliottii
P. halepensis

P. nigra
P. palustrus
P. radiata
P. strobus
P. sylvestris
P. taeda

P. thunbergiana P. virginiana Pistachio sp.

Pittosporum rhombifolium

P. tobira

Podocarpus macrophyllus Prunus laurocerasus

Prunus sp.

Pseudotsuga menziesii Pyracantha coccinea

P. fortuneana
P. koidzumii
Pyrus sp.
Quercus spp.
Raphiolepis indica

Common name

Olive*

Mondo Grass

Trailing African Daisy

Sourwood Avocado*

Frasier's Photinia (Redtip)

Spruce species** (Colorado Blue, Norway, etc.)

Lily-of-the-Valley Shrub

Calabrian Pine
Canary Island Pine

Slash Pine Aleppo Pine

Austrian Black Pine Longleaf Pine Monterey Pine Eastern White Pine

Scotch Pine Loblolly Pine

Japanese Black Pine

Virginia Pine Pistachio*

Queensland Pittosporum Japanese Pittosporum

Japanese Yew English Laurel

Almond, Apricot, Nectarine, Peach, Plum and Prune*

Douglas Fir**
Firethorn (Scarlet)

Firethorn Firethorn

Bradford Pear sp. Oak species Indian Hawthorne

^{*}Ornamental species only. Do not use on food producing trees or vines.

^{**}For use on landscape ornamental sites.

Scientific name	Common name		
Rhododendron	'Coral Bells'		
(including Azalea)	'Formosa'		
	'Hino-crimson'		
	'MLA'		
	'Roseum Elegans'		
Rosa banksiae	Lady Bank's Rose		
Rosmarinus officinalis	Rosemary		
Santolina virens			
Sedum album	Stonecrop		
Syzygium paniculatum	Japanese Boxcherry		
Taxus cuspidata	Japanese Yew		
T. media	Yew		
Thuja occidentalis	American Arborvitae		
Trachelospermum asiatum	Star Jasmine		
Tsuga canadensis	Canada Hemlock		
Tulip spp.	Tulip species		
Viburnum japonicum	Japanese Viburnum		
V. odoratissimum	Sweet Viburnum		
V. plicatum	Japanese Snowball		
V. rigidum	Canary Island Viburnum		
V. tinus	Laurustinus		
V. trilobium	Cranberry Bush		
V. wrightii	Leatherleaf Viburnum		
Vir la major	Vinca		
Vinca minor	Dwarf Periwinkle		
Vitis sp.	Grape *		
Weigela florida	Old Fashioned Weigela		
Yucca aloifolia	Spanish Bayonet		
Y. filamentosa	Yucca, Adam's Needle		

^{*}Ornamental species only. Do not use on food producing trees or vines.