

1018
P. 1018

LEAFLET

ARSENAL herbicide
RAILROAD APPLICATORS CONCENTRATE

ACTIVE INGREDIENT:

Isopropylamine salt of Imazapyr(2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid*) 53.1%
INERT INGREDIENT 46.9%
TOTAL. 100.0%

*EQUIVALENT TO 43.3% 2-[4,5-dihydro-4-methyl-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid or 4 pounds acid per gallon.

EPA Reg.No.241-

EPA Est.No.

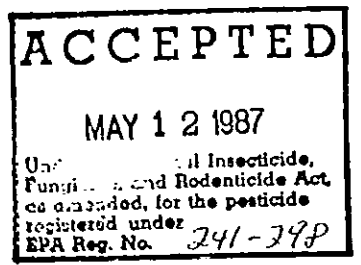
KEEP OUT OF REACH OF CHILDREN

CAUTION!

FIRST AID

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.



PRECAUCION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

In case of an emergency endangering life or property involving this product, call collect, day or night, Area Code 201-835-3100.

AMERICAN CYANAMID COMPANY
AGRICULTURAL DIVISION
VPC VENTURES
WAYNE, NJ 07470

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D40
(10/6/86)

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS

CAUTION!

Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of ARSENAL® should be mixed, stored and applied only in stainless steel, fiberglass, plastic and plastic-lined steel containers.

DO NOT mix, store or apply ARSENAL® or spray solutions of ARSENAL® in unlined steel (except stainless steel) containers or spray tanks.

ENVIRONMENTAL HAZARDS

DO NOT apply directly to any body of water. DO NOT contaminate water by cleaning of equipment or disposal of waste.

IMPORTANT

DO NOT use on food or feed crops. DO NOT apply to ditches used to transport irrigation water. DO NOT apply where runoff water may flow onto agricultural land as injury to crops may result. Keep from contact with fertilizers, insecticides, fungicides and seeds. DO NOT apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Prevent drift of spray to desirable plants. DO NOT side trim trees. DO NOT use in California.

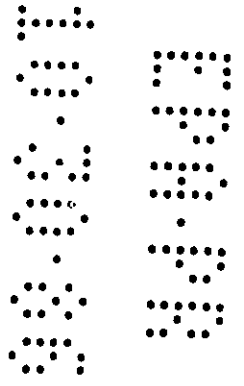
Thoroughly clean all traces of ARSENAL® from application equipment immediately after use. Flush tank, pump, hoses and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).

GENERAL INFORMATION

ARSENAL® herbicide RAILROAD APPLICATORS CONCENTRATE is an aqueous solution to be mixed in water and applied as a spray for control of most annual and perennial grasses broadleaf weeds on noncrop areas.

ARSENAL® may be applied either preemergence or postemergence to the weeds; however, postemergence application is the method of choice in most situations, particularly for control of perennials. For maximum activity, weeds should be growing vigorously at the time of postemergence applications. The preemergence activity of ARSENAL will provide residual control of most weed species following a postemergence application.

ARSENAL® is readily absorbed through foliage and roots and is translocated rapidly throughout the plant, with accumulation in the meristematic regions. Treated plants stop growing soon after spray application. Chlorosis appears first in the newest leaves, and necrosis spreads from this point. In perennials, the herbicide is translocated into and kills underground storage organs, thus preventing regrowth. Chlorosis and tissue necrosis may not be apparent in some plant species until two weeks after application. Complete kill of plant may not occur for several weeks.



DISCLAIMER

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The label instructions for the use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the use or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user.

American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions of use, subject to the risks referred to above.

Any damages arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or values of any other special or indirect damages.

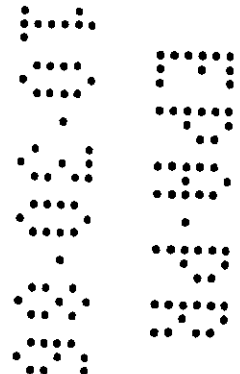
American Cyanamid Company makes no other express or implied warranty, including other express or implied warranty of FITNESS or of MERCHANTABILITY.

DIRECTIONS FOR USE

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

ARSENAL® herbicide RAILROAD APPLICATORS CONCENTRATE should be used only in accordance with recommendations in this leaflet. Keep containers closed to avoid spills and contamination.

A postemergence application of ARSENAL® is recommended for control of most annual and perennial grasses and broadleaf weeds on railroads and other noncropland areas.



STORAGE AND DISPOSAL

- PROHIBITIONS: DO NOT store below 10^oF. DO NOT contaminate water, food or feed by storage or disposal.
- 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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in an approved sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

MIXING INSTRUCTIONS

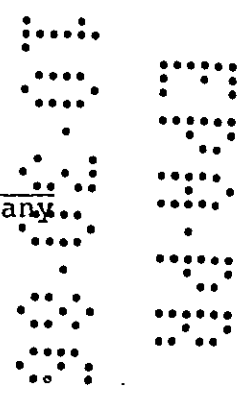
Mix the proper amount of ARSENAL in water in the spray tank with the agitator running. Increased control of herbaceous and hardwood weeds can be obtained by adding a nonionic surfactant such as SURFACTANT WK** or Ortho *** X-77 at the rate of 1 quart per 100 gallons of spray. This provides optimum wetting and/or contact activity. To minimize drift, a drift control agent may be added at the recommended label rate. A foam reducing agent may be added at the recommended label rate, if needed.

SPRAYING INSTRUCTIONS

Uniformly apply with properly calibrated aerial or ground equipment in 5 to 60 gallons of water per acre with a spray pressure of 20 to 50 psi.

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***Registered trademark of Chevron Chemical Company



ARSENAL herbicide will provide preemergence control with residual control of the following target vegetation species at 1.0 lb ae/A.

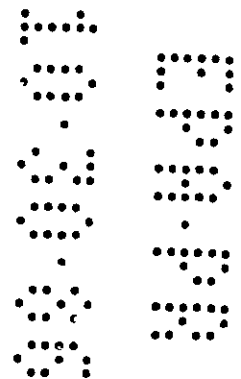
GRASSES

Annual bluegrass (<u>Poa annua</u>)	Lovegrass (<u>Eragrostis</u> spp.)
Broadleaf signalgrass (<u>Brachiaria platphylla</u>)	Orchardgrass (<u>Cactylis glomerata</u>)
Canada bluegrass (<u>Poa compressa</u>)	Paragrass (<u>Brachiaria mutica</u>)
Downy brome (<u>Bromus tectorum</u>)	Quackgrass (<u>Agropyron repens</u>)
Fescue (<u>Festuca</u> spp.)	Sandbur (<u>Cenchrus</u> spp.)
Foxtail (<u>Setaria</u> spp.)	Smooth brome (<u>Bromus inermis</u>)
Italian ryegrass (<u>Lolium multiflorum</u>)	Vaseygrass (<u>Paspalum urvillei</u>)
Johnsongrass (<u>Sorghum halepense</u>)	Wild oats (<u>Avena fatua</u>)
Kentucky bluegrass (<u>Poa pratensis</u>)	Witchgrass (<u>Panicum capillare</u>)
Beardgrass (<u>Andropogon</u> spp.)	Goosegrass (<u>Eleusine indica</u>)
Cheat (<u>Bromus secalinus</u>)	Prairie threeawn (<u>Aristida oligantha</u>)
Crabgrass (<u>Digitaria</u> spp.)	Torpedograss (<u>Panicum repens</u>)
Fall panicum (<u>Panicum dichotomiflorum</u>)	Wild barley (<u>Hordeum</u> spp.)
Bahiagrass (<u>Paspalum notatum</u>)	Guineagrass (<u>Panicum maximum</u>)
Bermudagrass (<u>Cynodon dactylon</u>)	Prairie cordgrass (<u>Spartina pectinata</u>)
Big bluestem (<u>Andropogon gerardi</u>)	Sand dropseed (<u>Sporobolus cyptandrus</u>)
Cattail (<u>Typha</u> spp.)	Timothy (<u>Phleum pratense</u>)
Dallisgrass (<u>Paspalum dilatatum</u>)	Wireterm muhly (<u>Muhlenbergia frondosa</u>)

BROADLEAF WEEDS

- | | |
|--|---|
| Burdock (<u>Arctium</u> spp.) | Mullein (<u>Verbascum</u> spp.) |
| Camphorweed (<u>Heterotheca subaxillaris</u>) | Nettleleaf goosefoot (<u>Chenopodium murale</u>) |
| Carpetweed (<u>Mullugo verticillata</u>) | Oxeye daisy (<u>Chrysanthemum leucanthemum</u>) |
| Carolina geranium (<u>Geranium carolinianum</u>) | Pepperweed (<u>Lepidium</u> spp.) |
| Clover (<u>Trifolium</u> spp.) | Pigweed (<u>Amaranthus</u> spp.) |
| Common chickweed (<u>Stellaria media</u>) | Plantain (<u>Plantago</u> spp.) |
| Common ragweed (<u>Ambrosia artemisiifolia</u>) | Smartweed (<u>Polygonum</u> spp.) |
| Dandelion (<u>Taraxacum officinale</u>) | Sorrel (<u>Rumex</u> spp.) |
| Dogfennel (<u>Eupatorium capillifolium</u>) | Sunflower (<u>Helianthus</u> spp.) |
| Filaree (<u>Erodium</u> spp.) | Sweet clover (<u>Melilotus</u> spp.) |
| Fleabane (<u>Erigeron</u> spp.) | Tansymustard (<u>Descurainia pinnata</u>) |
| Hoary vervain (<u>Verbena stricta</u>) | Western ragweed (<u>Ambrosia psilostachya</u>) |
| Horseweed (<u>Conyza canadensis</u>) | Wild carrot (<u>Caucus carota</u>) |
| Indian mustard (<u>Brassica juncea</u>) | Wild lettuce (<u>Lactuca</u> spp.) |
| Kochia (<u>Kochia scoparia</u>) | Wild parsnip (<u>Pastinaca sativa</u>) |
| Lambsquarters (<u>Chenopodium album</u>) | Wild turnip (<u>Brassica campestris</u>) |
| Lespedeza (<u>Lespedeza</u> spp.) | Wolflyleaf bursage (<u>Ambrosia grayi</u>) |
| Miners lettuce (<u>Montia perfoliata</u>) | Yellow woodsorrel (<u>Oxalis stricta</u>) |
| Bull thistle (<u>Cirsium vulgare</u>) | Pokeweed (<u>Phytolacca americana</u>) |
| Cocklebur (<u>Xanthium strumarium</u>) | Purslane (<u>Portulaca</u> spp.) |
| Dock (<u>Rumex</u> spp.) | Yellow starthistle (<u>Centaurea solstitialis</u>) |
| Canada thistle (<u>Cirsium arvense</u>) | Primrose (<u>Oenothera Kunthiana</u>) |
| Giant ragweed (<u>Ambrosia trifida</u>) | Silverleaf nightshade (<u>Solanum elaeagnifolium</u>) |
| Little mallow (<u>Malva parviflora</u>) | Sowthistle (<u>Sonchus</u> spp.) |
| Milkweed (<u>Asclepias</u> spp.) | Texas thistle (<u>Cirsium texanum</u>) |

BEST AVAILABLE COPY



VINES AND BRAMBLES

Apply 1-1.5 pints per acre

Field bindweed (Convolvulus arvensis)

Wild buckweat (Polygonum convolvulus)

Apply 1.5-2 pints per acre

Greenbriar (Smilax spp.)

Poison ivy (Rhus radicans)

Honeysuckle (Lonicera spp.)

Redvine (Brunnichia cirrhosa)

Morningglory (Ipomoea spp.)

Wildrose (Rosa spp.)

Apply 2-3 pints per acre

Blackberry (Rubus spp.)*

Trumpetcreeper (Campsis radicans)

Dewberry (Rubus spp.)*

Virginia creeper

Kudzu (Pueraria lobata)

(Pathenocissus quinquefolia)

Hedge bindweed (Calystegia sepium)

Wildgrape (Vitis spp.)

BRUSH SPECIES

Apply 2-3 pints per acre

Ash (Fraxinus spp.)

Poplar (Populus spp.)

Cherry (Prunus spp.)

Privet (Ligustrum vulgare)

Dogwood (Cornus spp.)

Red Maple (Acer rubrum)

Hawthorn (Crataegus spp.)

Sassafras (Sassafras albidum)

Hiclory (Carya spp.)

Sumac (Rhus spp.)

Maple (Acer spp.)

Sweetgum

Mulberry (Morus spp.)

(Liquidambar styraciflua)

Oak (Quercus spp.)

Willow (Salix spp.)

The higher rates should be used where heavy or well established infestations occur. *The degree of control is species dependent. Some Rubus species may not be controlled at this rate.

