

Leaflet

CHOPPER® herbicide

ACTIVE INGREDIENT:

Isopropylamine salt of Imazapyr (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid)*27.6%

INERT INGREDIENTS.....72.4%

TOTAL.....100.0%

*Equivalent to 22.6% (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid) or 2 pounds acid per gallon.

EPA Reg. No. 241-296

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

STATEMENT OF PRACTICAL TREATMENT

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

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

See Next Page for Additional Precautions

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 PRODUCTS DIVISION
SPECIALTY PRODUCTS DEPARTMENT
WAYNE, NJ 07470 ©1994**

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ACCEPTED
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EPA LABEL

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Mr. [unclear]
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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS

CAUTION!

May be a skin sensitizer. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist.

Personal Protective Equipment (PPE):

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

1. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

PHYSICAL AND CHEMICAL HAZARDS

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

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

ENVIRONMENTAL HAZARDS

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 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 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.

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.

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
- waterproof gloves
- shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Noncrop weed control is not within the scope of the Worker Protection Standard. See the GENERAL INFORMATION section of this label for a description of noncrop sites.

CHOPPER herbicide should be used only in accordance with recommendations in this leaflet label. Keep containers closed to avoid spills and contamination.

STORAGE AND DISPOSAL

- PROHIBITIONS:** DO NOT store below 10°F. 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 by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

IMPORTANT

DO NOT use on food or feed crops. **DO NOT** apply to the inside of 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 **DO NOT** use in California.

Thoroughly clean application equipment 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

CHOPPER herbicide is an emulsifiable concentrate mixable with water and/or diesel fuel and penetrating oils. CHOPPER is to be mixed with water or a penetrating oil and applied as a spray to cut stumps and frilling cuts for the control of brush. CHOPPER should be mixed with a penetrating oil for application to the basal area of brush and trees. Prior to actual tank mixing with other products, compatibility testing in small containers is recommended.

CHOPPER herbicide is also recommended for use with asphalt and asphalt slurries to control weeds on road shoulders, under pavement, in roadside cracks and crevices, and to prevent weed encroachment on highways and paved surfaces.

CHOPPER herbicide is readily absorbed through bark and is translocated rapidly throughout the plants. In dormant plants, leaf-out is prevented and dieback occurs as the plant depletes its energy stores.

An application of CHOPPER is recommended for control of brush in noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, utility plant sites, petroleum tank farms, pumping installations, fence rows, storage areas, non-irrigation ditchbanks and other similar areas. CHOPPER is also recommended for woody vegetation control and site preparation in forestry sites and wildlife habitats.

SITE PREPARATION TREATMENTS

CHOPPER herbicide may be used for initial brownout and control of woody brush, perennial grasses and broadleaves when applied as a site preparation treatment prior to planting of the following species:

Loblolly Pine	(<u>Pinus taeda</u>)
Longleaf Pine	(<u>Pinus palustris</u>)
Shortleaf Pine	(<u>Pinus echinata</u>)
Slash Pine	(<u>Pinus elliottii</u>)

MIXING AND APPLICATION INSTRUCTIONS FOR SITE PREPARATION.

CHOPPER WITH OIL EMULSION AS A CARRIER:

CHOPPER herbicide may be applied aerially using helicopters, by ground operated sprayers, or hand-operated sprayers such as back-pack or pump-up sprayers. Thoroughly mix 48 to 80 ounces per acre of CHOPPER herbicide with 25, 50, 75, or 100% (v/v) oil:water emulsion. Oils to be used for this mixture include Sun-It II¹, CWC Hygrade², or Thin-Vert³. The total volume of application should be between 3 and 10 gallons per acre. Make applications in the spring of the year after full leaf expansion of the target weed or brush has occurred and before formation of fall colors. Spring applications provide optimum brownout for site preparation burning. Do not plant species, other than those recommended above, into areas treated for site preparation with CHOPPER herbicide.

CHOPPER WITH WATER AS A CARRIER:

CHOPPER herbicide may be applied aerially using helicopters, by ground operated sprayers, or hand-operated sprayers such as back-pack or pump-up sprayers. Thoroughly mix 48 to 80 ounces per acre of CHOPPER herbicide with water. The total volume of application should be between 5 and 25 gallons per acre. Make applications after full leaf expansion of the target weed or brush has occurred and before formation of fall colors. Do not plant species, other than those recommended above, into areas treated for site preparation with CHOPPER herbicide.

HELICOPTER SPRAY EQUIPMENT:

Thoroughly mix the recommended rates of CHOPPER herbicide with water, oil, or emulsions and uniformly apply with properly calibrated aerial equipment. All precautions should be taken to minimize or eliminate spray drift. Applications should not be made under gusty conditions or when wind velocity exceeds 5 mph.

IMPORTANT. DO NOT make applications by fixed wing aircraft. Maintain adequate buffer zones to insure that drift does not occur off the target area. Thoroughly clean application and mixing equipment, including landing gear, immediately after use. Prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may result in corrosion and failure of the exposed part.

CUT STUMP TREATMENTS

Mix 8.0-12.0 fluid ounces of CHOPPER in one gallon of water*, diesel oil, or a penetrating oil.

Spray or brush the CHOPPER solution onto the cambium area of the freshly cut stump surface. Insure that the CHOPPER solution thoroughly wets the cambium area (the wood next to the bark) of the stump.

DO NOT over apply causing puddling.

*Note: Use water as a diluent only when temperatures are sufficient to prevent freezing or add antifreeze (ethylene glycol) according to label directions to prevent freezing.

TREE INJECTION TREATMENTS

No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.

Mix 8.0-12.0 fluid ounces of CHOPPER in one gallon of water*, diesel oil, or a penetrating oil.

Using standard injection equipment, apply 1 ml. of CHOPPER solution at each injection site around the tree with no more than 1 inch intervals between cut edges. Insure that the injector completely penetrates the bark at each site.

*Note: Use water as a diluent only when temperatures are sufficient to prevent freezing or add antifreeze (ethylene glycol) according to label directions to prevent freezing.

FRILL OR GIRDLE TREATMENTS

Mix 8.0-12.0 fluid ounces of CHOPPER in one gallon of water*, diesel oil, or a penetrating oil

Using a hatchet or machete, make cuts through the bark and completely around the tree with no more than 2 inch intervals between cut edges. Spray or brush the CHOPPER solution into each cut until thoroughly wet.

*Note: Use water as a diluent only when temperatures are sufficient to prevent freezing or add antifreeze (ethylene glycol) according to label directions to prevent freezing.

CUT STUBBLE

CHOPPER herbicide can be applied within 2 weeks after mechanical mowing or cutting of brush. Best results are obtained when some regrowth of brush has occurred. To suppress or control resprouting, uniformly apply a spray solution of CHOPPER herbicide containing 1 to 2 pints of CHOPPER plus 2.5 gallons (5% v/v) of ANDROC DILUENT⁴ plus enough water to make 50 gallons of spray solution to treat one acre. CHOPPER herbicide may be tank-mixed with 1 to 2 quarts of Garlon 4⁵ or Tordon K⁵ to aid in control or suppression of brush. When tank-mixing follow all precautions on the tank-mix product label and always follow the most restrictive label. Tank-mixes should include at least 5% (v/v) or more of a penetrating agent (such as ANDROC DILUENT).

USE WITH ASPHALT AND PAVED SURFACES

CHOPPER herbicide may be applied at 3 quarts per acre in combination with MC 30, MC 70, RC 70, and SC 70 asphalts to control weeds which encroach on road shoulders under guardrails, or in cracks and cervices of paved surfaces. The addition of an emulsifier may be needed to allow proper mixing of CHOPPER with other asphalts. Add CHOPPER to the distribution tank just before application, allowing sufficient time for it to mix uniformly with the asphalt. Mixtures should not be heated above 150° F. Do not allow mixture to stand; apply as soon as thoroughly mixed.

THINLINE APPLICATIONS

CHOPPER herbicide may be applied as a thinline application to big leaf maple (Acer macrophyllum) and willow (Salix spp.) with a ground line diameter (GLD) of 3 inches or less. Mix 8 - 12 ounces of CHOPPER in one gallon of diesel oil or penetrating oil. Direct a thin line of the spray solution beginning a few feet from the ground and descending toward the base of the tree making a zig-zag motion. Do not over apply causing puddling.

LOW VOLUME BASAL BARK TREATMENTS

Mix 8.0-12.0 fluid ounces of CHOPPER in one gallon of diesel oil or a penetrating oil. To control mixed brush species up to 4 inches DBH (tree diameter at breast height) spray to wet the lower 12-18 inches of the plant stem with the CHOPPER oil mixture (include the root collar area) **DO NOT** over apply causing dripping or puddling. CHOPPER may be tank-mixed with Garlon 4 and other basal products to broaden the spectrum of control. Consult the herbicide labels as to rates and susceptible brush species. When tank-mixing, follow all precautions on the tank-mix product label and always follow the most restrictive label.

INVERT EMULSIONS

CHOPPER herbicide can be applied as an invert emulsion. The spray solution results in a thick invert water-in-oil spray emulsion designed to minimize spray drift and spray run-off, resulting in more herbicide on the target foliage. The spray emulsion may be formed in a single tank (batch mixing) or injected (in-line mixing). Consult the invert chemical label for proper mixing directions. Do not exceed 3 quarts /Acre of CHOPPER herbicide.

WEEDS CONTROLLED

CHOPPER herbicide will control the following species:

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| Ash (<u>Fraxinus</u> spp.) | Oak (<u>Quercus</u> spp.) |
| Beech (<u>Fagus</u> spp.) | Persimmon (<u>Diospyros</u> spp.) |
| Bigleaf maple (<u>Acer macrophyllum</u>) | Poplar (Aspen) (<u>Populus</u> spp.) |
| Blackgum (<u>Nyssa sylvatica</u>) | Prickly wild rose (<u>Rosa arkansana</u>) |
| Boxelder (<u>Acer negundo</u>) | Privet (<u>Ligustrum vulgare</u>) |
| Cherry (<u>Prunus</u> spp.) | Red alder (<u>Alnus rubra</u>) |
| Chinaberry (<u>Melia azedarach</u>) | Red Maple (<u>Acer rubrum</u>) |
| Chinese tallow (<u>Sapium sebiferum</u>) | Russian olive (<u>Elcagnus angustifolia</u>) |
| Dogwood (<u>Cornus</u> spp.) | Sassafras (<u>Sassafras albidum</u>) |
| Hawthorn (<u>Crataegus</u> spp.) | Sourwood (<u>Oxydendrum arboreum</u>) |
| Hickory (<u>Carya</u> spp.) | Sumac (<u>Rhus</u> spp.) |
| Madrone (<u>Arbutus menziesii</u>) | Sweetgum (<u>Liquidambar styraciflua</u>) |
| Maple (<u>Acer</u> spp.) | Willow (<u>Salix</u> spp.) |
| Mulberry (<u>Morus</u> spp.) | Yellow-poplar (<u>Liriodendron tulipifera</u>) |
| Multiflora rose (<u>Rosa multiflora</u>) | |

DISCLAIMER

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.

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