

STATEMENT OF PRACTICAL TREATMENT: In case of ckin contact, flush skin with plenty of water. Get medical attention if irritation persists. If swallowed, do not induce vomiting. Call a physician.

#### Physical or Chemical Hazards

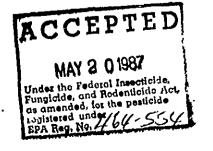
COMBUSTIBLE . Do Not Use or Store Near Heat or Open Flame. • Do Not Cut or Weld Container.

product, call collect 517-636-4400

#### AGRICULTURAL CHEMICAL

Do Not Ship or Store with Food, Feeds, Drugs, or Clothing

See Back Panel for important Use Precautions.



GARLON 4 Herbicide is recommended for the control of unwanted woody plants and annual and perennial broadleaf weeds indorests, and on non-crop areas including industrial manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides and railroads, fence rows, non-irrigation ditch banks and around farm buildings.

Among the woody plant species controlled are:

Aider Dogwood Arrowwood Douglas Fir Ash Elderberry Aspen Elm Beech Hazal Birch Hickory Blackberry Hornbeam Blackgum Locust Cascara Medrone Ceanothus Maples Cherry Mulberry Chinquepin Oaks Choke Persimmon Cherry Pine Polson Oak Cottonwood Crataegus Poplar (Hawthorn) Salmonberry

Sassafras Scotch Broom Sumac Sweetbey Megnolla Sweetgum Sycamore Tanoak Thimbleberry Tulip Poplar Wild Rose Willow Winged Elm

Among the annual and perennial broadleaf weeds controlled AIA'

Field

Black Medic **Bull Thistle** Burdock Canada Thistle Chicory Clover Creeping Beggarweed Curly Dock Dandelion

Smartweed Bindweed Sweet Clover Goldenroù Vetch Wild Carrot Ground Ivy (Queen Annes Lambsquarters Lespedeza Lace) Wild Lettuce Matchweed Wild Violet Mustard Oxalis Yarrow Plantain Ragweed

# DIRECTIONS FOR USE

Do not use for manufacturing or formulating.

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

# FOLIAR APPLICATIONS

Use GARLON 4 Herbicide at rates of 1 to 8 quarts per acre to control broadleal weeds and woody plants. In all cases use the amount specified in anough water to give uniform and complete coverage of the plants to be controlled. The recommended order of addition to the spray tank is water, NALCO-TROL (if used), surfactant (if used), additional herbicide (if used), GARLON 4 Herbicide. If surfactant is used, and 1 to 2 quarts per acre of a standard agricultural surfactant such as Tronic, Sponto 712 or Ortho X-77. Use continuous adequate agitation.

Before using any recommended tank mixtures, read the directions and all precautions on both labels.

For best results applications should be made when woody plants and weeds a a actively growing. When hard-to-control species such as ash, blackgum, choke cherry, elm, maples (other than vine or big leaf), oaks, pines, or winged elm are plevalent and during applications made during late summer When the plants are mature, or during drought conditions, use the higher rates of GARLON 4 Herbicide alone or in combination with TORDON\* 101 Mixture Herbicide.

When using GARLON 4 in combination with 3.8 lb/gal 2.4-D low volatile ester herbicide generally the higher rates should be used for satisfactory brush control.

Use the higher dosage rates when brush approaches an average of 15 leet in height or when the brush covers more than 60% of the area to be treated. If lower rates are used on nard-to-control species, resprouting may occur the year fol-/awing treatment.

On sites where easy to control brush species dominate, rates less than those recommended may be effective. Consult State or Local Extension personnel for such information.

# **HIGH-VOLUME LEAF-STEM** TREATMENT WITH GROUND EQUIPMENT

FOLIAGE TREATMENT: For control of woody plants, us GARLON 4 Herbicide at the rate of 1 to 3 quarts in water to make 100 gallons of spray mixture, or GARLON 4 Herbicide at 1 1/2 to 3 pints may be tank mixed with 1/4 to 1/2 gallon of 3.8 Ib/gal 2,4-D low volatile ester herbicide or TORDON 101 Mixture Herbicides and diluted to make 100 gallons of spray. Apoly at a volume of 100 to 400 gallons of total spray per acre depending on size and density of woody plants. Coverage should be thorough to wet all leaves, stems, and root collars.

# BROADCAST APPLICATIONS WITH GROUND EQUIPMENT

Make application using equipment that will assure uniform coverage of spray volumes applied.

### Woody Plant Control

FULIAGE TREATMENT: Use 4 to 8 quarts of GARLON 4 Herbicide in enough water to make 20 to 100 gallons of total spray per acre, or GARLON 4 Herbicide at 3 pints to 3 quarts may be combined with 1 to 2 gallons of 3.8 lb/gal 2,4-D low volatile ester herbicide or TORDON 101 Mixture in sufficient water to make 20 to 100 galions of total spray per acre.

#### Broadleaf Weed Control

Use GARLON 4 Herbicide at rates of 1 to 4 quarts in a total volume of 20 to 100 gallons per acre as a water spray mixture. Apply at any time weeds are actively growing. GARLON 4 Herbicide at 1/2 to 6 pints may be tank mixed with 1 to 2 quarts of 3.8 lb/gal 2.4-D amine or low-volatile ester, TORDON\* K, or TORDON\* 101 Mixture Herbicides to improve the spectrum of activity.

# AERIAL APPLICATION (Helicopter Only

Aerial sprays should be applied using suitable drift control. (See Use Precautions.)

FOLIAGE TREATMENT: (Utility and Pipeline Rights-of-Way) Use 4 to 8 quarts of GARLON 4 Herbicide alone, or 3 to 4 quarts GARLON 4 Herbicide in a tank mix combination with 1 to 2 gallons of 3.8 lb/gal 2,4-D low volatile ester herbicide or TORDON 101 Mixture and apply in a total spray volume of 10 to 30 gallons per acre. Use the higher rates and volumes when plants are dense or under drought conditions.

# BASAL BARK AND DORMANT BRUSH TREATMENTS

OIL MIXTURE SPRAYS: Use as a diluent diesel oil, No. 1 or No. 2 fuel oil or kerosene. Substitute other diluents or oils only In accordance with the manufacturer's recommendations. Add GARLON 4 Herbicide to the required amount of oil in the spray tank or mixing tank and mix thoroughly. If the mixture stands over 4 hours, reagitation is required.

**OIL-WATER MIXTURE SPRAYS: First, premix the GARLON** 4 Herbicide, oil and surfactant in a separate container. Do not allow any water or mixtures containing water to get into the GARLON 4 Herbicide or the premix. Fill the spray tank about half full with water, then slowly add the premix with continuous agilation and complete filling the tank with water. Continue moderate agitation.

NOTE: If the premix is put in the tank without any water, the first water added may form a thick "invert" (water in oil) emulsion which will be hard to break.

BASAL BARK TREATMENT: In right-of-way, other non-crop areas and forests, use 1 to 3 gallons of GARLON 4 Herbicide in enough diesel oil, No. 1 or No. 2 fuel oil or kerosene to make 100 gallons of spray mixture. Use other oils or diluents only as recommended by their manufacturer. Apply with knapsack sprayer or power spraying equipment using low pressure (20-40 psi). Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground. Thorough wetting of the indicated area is necessary for good control. Spray until run-off at the ground line is noticeable. Old or rough bark requires more spray than smooth young bark. Apply at any time, including the winter months, except when snow or water

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Proposed Label Revision GARLON 4 Herbicide EPA Registration Number 464-554 February 27, 1987

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Range and Permanent Grass Pasture Improvement Applications

All application methods may be used to treat susceptible weeds on range and permanent pasture land provided that no more than 1 1/2 quarts of GARLON 4 Herbicide are applied per acre. For control of sensitive woody species, use 1 1/2 quarts of GARLON 4 in combination with a 2,4-D product or other products approved for brush control on range and permanent pasture. Large plants or species requiring higher rates of GARLON 4 may not be completely controlled.

Restrictions: Withdraw livestock from treated forage at least 3 days before slaughter during the year of treatment. Do not graze lactating dairy animals on treated areas for one year following treatment. Do not harvest grass for hay from treated areas for one year following treatment.

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NOTE: All basal bark and dormant brush treatment methods may be used to treat susceptible woody species on range and permanent pasture land provided that no more than 1.5 quarts of GARLON 4 Herbicide are applied per acre. Large plants or species requiring higher rates of GARLON 4 may not be completely controlled.

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Do not graze areas treated with more than 1.5 quarts GARLON 4 per acre or harvest hay from treated areas for one year following treatment. prevent spraying to the ground line. For oil-water mixture application, mix 2 gallo, 3 GARLON 4 Herbicide, 25 gallons of oil and one half gallon of Sponto 712, and add to 72.5 gallons water as indicated under directions for use. Treat as above. For best results with oil/water mixtures, treat only stems 2 inches or less in diameter.

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THINLINE BASAL BARK TREA'I MENT: To control susceptible woody plants with stems less than 6 inches in diameter, apply undituted GARLON 4 in a thin stream to all sides of the stems about 6 inches above the base of the plants. The stream should be directed horizontally to apply a narrow band of GARLON 4 around each stem or clump. From 2 to 15 ml. of chemical will be required for treatment of single stems and from 25 to 100 ml. to treat clumps of stems. Use an applicator metered or calibrated to deliver the small amounts required.

DORMANT STEM TREATMENT: Mix 3 to 6 quarts of GARLON 4 Herbicide in enough oil to make 100 gallons of spray. Apply with knapsack or power spraying equipment, using low pressure (20-40 psi). Treat any time when brush is dormant and most of the foliage has dropped. Thoroughly wet the upper parts of the stems and use the remainder needed to wet the lower 12 to 15 inches above the ground to the point of run-off. For root suckering species such as sumac, persimmon, sassafras and locust, also spray the ground under the plants to cover small root suckers which may not be visible above the soil surface. Brush of average density and 4 to 6 feet high may take up to 150 gallions of spray mixture per acre. For oil-water mixture application mix 6 quarts GARLON 4 Herbicide, 25 gallons of oil and one halt gallon of Sponto 712 and 73 gallons water as indicated under directions for use. Treat as above,

FOREST MANAGEMENT APPL!CATIONS

For broadcast applications of GARLON 4 Herbicide, use volume rates needed to provide adequate coverage of brush for good control, usually 5 to 25 gpa by air or 10 to 100 gpa by ground. Application systems should be used to prevent hazandous drift to off-target sites. Nozzles or additives that produce larger droplets of spray may require higher spray volumes to maintain brush control.

#### Forest Site Preparation

FOREST SITE PREPARATION (not for conifer release): Use 4 to 8 quarts of GARLON 4 Herbicide and apply in a total spray volume of 5 to 25 galions per acre, or GARLON 4 Herbicide at 2 to 4 quarts may be used with 1 to 2 galions of 3.8 lo/gal 2,4-D low volatile ester herbicide or TORDON\* 101 Mixture in a tank mix combination in a total spray volume of 5 to 25 galions per acre.

NOTE: Coniters planted sooner than one month citer treatment with GARLON 4 at less than 1 gallon per acre or sooner than two months after treatment at 1 to 2 gallons per acre may be injured. When tank mixtures of herbicides are used for forest site preparation, labels for all products in the mixture should be consulted and the longest recommended waiting period observed.

# Control of Brush on Conifer Plantations in the Pacific Northwest and California

BROADCAST APPLICATIONS ON DORMANT CONIFERS BEFORE BUD SWELL (EXCLUDING PINES): To control or suppress deciduous hardwoods such as vine maple, bigleaf maple, alder or willow before leaf-out or evergreen hardwoods such as madrone, chinquapin, and Ceanothus spp., use GARLON 4 Herbicide at 1 to 2 qts. per acre. Diesel or fuel oil carrier may be used especially on deciduous hardwood species. On evergreen hardwoods, water carrier with 1 to 2 galions of diesel oil per acre or a suitable surfactant or oil substitute at manufacturer's recommended rates are equally effective.



ON CONIFER PLANTATIONS (EXCLUDING PINES) AFTER HARDWOODS BEGIN GROW/TH AND BEFORE CONIFER BUD BREAK ("Early Foliar" hardwood stage), use GARLON 4 Herbicide at 1 to 1.5 qts. alone or with 3.6 tb/gal 2,4-D low volatile ester herbicide in water carrier to provide no more than 3 lbs. acid equivalent per acre from both products. After con-

ifer bud break, these sprays may cause more serious injury to the crop trees. Added surfactant may cause unacceptable injury to conifers especially after bud break.

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ON CONIFER PLANTATIONS (EXCLUDING PINES) AFTER CONIFERS HARDEN OFF IN LATE SUMMER AND WHILE HARDWOODS ARE STILL GROWING ACTIVELY, use GARLON 4 Herbicide at rates of 1 to 1.5 qts. per acre alone or plus 3.8 lb/gal 2,4-D low volatile ester herbicide to provide no more than 3 lbs. acid equivalent per acre from both products. Treat as soon after conifer bud 'combining as possible so that hardwoods are actively grow' dded oil, oil substitute or surfactant may cause unaco dele injury to the conifers.

DIRECTTD SPRAY AT # 4Y TIME, INCLUDING PINES: When brush is susceptible, GARLON 4 at 1 to 3 qts. per acre alone with 3.8 lb/gal 2,4-D low volatile ester herbicide may be used at rates not to exceed 4 lbs. acid equivalent rer acre from both products. Apply in water carrier as a directed spray between the conifers or over covered conifers; a suitable surfactant or additive such as diesel oil and 1/4 to 1 gallon per acre may be added to improve brush kill.

NOTE: Sprays may cause discolored needles and temporary growth suppression of some conifers, but they should recover and grow normally.

# Control of Brush on Conifer Plantations in the Eastern United States

BROADCAST APPLICATIONS FOR CONIFER RELEASE: To release spruce, fir, red pine and white pine from competing hardwoods such as red maple, sugar maple, striped maple, alder, birch (white, yellow, and grey), aspen, ash, pin cherry, and rubus spp. and perennial and annual broadleaf weeds, use GARLON 4 Herbicide at rates of 1.5 to 3 quarts per acre alone or plus 3.8 lb/gal 2,4-D amine or low-volatile ester herbicides to provide no more than 4 pounds acid equivalent per acre from both products. Applications should be made in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

NOTE: Sprays may cause discolored need:as and temporary growth suppression of some conifers, but they should recover and grow normally.

#### Control of Brush on Conifer Plantations in the Lake States Region

BROADCAST APPLICATIONS FOR CONIFER RELEASE: To release spruce, fir, red pine and jack pine from competing hardwoods such as aspen, birch, maple, cherry, willow, oak, hazel, and rubus spp. and perennial and annual broadleaf weeds, use GARLOW 4 Herbicide at rates of 1.5 to 3 quarts per acre. Applications should be made in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

NOTE: Sprays may cause discolored needles and temporary growth suppression in jack pine. Rates exceeding 1.5 quarts/A may result in more severe damage especially to young jack pine 18 inches or less in height.

# Spot Treatment to Control Clumps of Resprouting Hardwoods Such As Big Leaf Maple Using a Hovering Helicopter in Forests

STEM TREATMENT BEFORE LEAF-OUT: Mix 1 to 2 gallons of GARLON 4 Herbicide with about 20 gallons diesel oil and enough water to make 100 gallons of solution. Apply as an invert emulsion by means of a hovering helicopter equipped with a nozzle system to direct sufficient spray to cover the stems to the ground line of the sprouted trees, usually 3/4 to 1 1/2 gallon per clump.

NOTE: Conifers contacted by this spray may be seriously injured; in existing plantations, drift control systems, such as invert emulsions, should be used to minimize injury to adjacent conifers. A dye or other marking system to designate treated trees may be used.

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# **USE PRECAUTIONS**

Apply this product only as specified on this label.

Before using any recommended tank mixtures, read the directions and all use precautions on both labels.

Do not apply GARLON 4 Herbicide directly to, or otherwise permit it to come into direct contact with grapes, tobacco, vegetable crops, flowers or other desirable broadleat plants and do not permit spray mists containing it to drift onto them.

AVOID INJURIOUS SPRAY DRIFT: Applications should be made only when there is little or no hazard from spray drift. Very small quantities of spray, which may not be visible may seriously injure susceptible plants. Do not spray when wind is blowing toward susceptible crops or ormamental plants near enough to be injured. It is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movement, lapse conditions, or temperature inversions (stable air). If the smoke layers or indicates a potential of hazardous spray drift, do not spray.

Aerial Application: For aerial application on rights-of-way or other areas near susceptible crops, use NALCO-TROL drill control additive as recommended by the manufacturer or apply through the MICROFOIL boom, THRUVALVE boom, or equivalent drift control system. Thickened sprays prepared by using high viscosity invert systems or other drift reducing systems may be utilized if they are made as drift-free as are mixtures containing NALCO-TROL or applications made with the MICROFOIL boom or THRUVALVE boom. If a spray thickening agent is used, follow all use recommendations and precautions on the product label. Do not use a thickening agent with the MICROFOIL boom, THRUVALVE boom, or other systems that cannot accommodate thick sprays.

With aircraft, drift can be lessened by applying a coarse spray; by using no more than 30 pounds spray pressure at the nozzles; by using a spray boom no longer than 3/4 the rotor length; by spraying only when wind velocities are low; or by using approved drift control system.

Ground Equipment: To aid in reducing spray drift GARLON 4 should be used in thickened (high viscosity) spray mixtures using NALCO-TROL drift control additive, high viscosity invert systems, or equivalent as directed by the manufacturer. With ground equipment, spray drift can be reduced by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; by using no more than 30 pounds spraying pressure with large droplet producing nozzle tips; and by spraying when wind velocity is low. Do not apply with nozzles that produce a fine droplet spray.

HIGH VOLUME LEAF-STEM TREATMENT: To minimize spray drift, do not use pressure exceeding 50 psi at the spray nozzle aj' keep sprays no higher than brush tops. NALCO-TROL thickening agent or equivalent may be used to reduce spray drift.

Do not apply on ditches used to transport irrigation water. Do not apply where runoff or irrigation water may flow onto agricultural land as injury to crops may result.

#### De net greze treated areas er feed treated forege for one year following application.

# STORAGE AND DISPOSAL

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

- \* STORAGE: Store above 28" F or agitate before use.
- DISPOSAL:

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Prohibitions - Oper: Jumping is prohibited.

., SPECIMEN LABEL 86-1471 DATE CODE - ., 'D1086

..., REPLACES 86-1471 DATE CODE C586 DISCARD PREVIOUS SPECIMEN LABELS Pesticide Disposal - Pesticide, apray mixture, or rinss water that cannot be used according to label instructions must be disposed of according to applicable federal, state, or local procedures.

Container Disposal - Triple rinse (or equivalent). Then other for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved state and local procedures.



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General - Consult federal, state, or local disposal authorities for approved alternative procedures.

Be sure that use of this product conforms to all applicable regulations.

# WARRANTY LIMITATIONS AND DISCLAIMER

The Dow Chemical Company warrants that this product conforms to the chemical description on the Jabel and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions therein under normal conditions of use. THIS IS THE ONLY WARRANTY MADE ON THIS PRODUCT. NO OTHER EXPRESS AND NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE OUTSIDE OF THIS LABEL. Therefore, neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), under abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes, etc.) or under conditions not reasonably foreseeable to or beyond the control of seller.

When buyer or user suffers losses or damages resulting from the use or handling of this product (including claims based on contract, negligence, strict liability, or other legal theories), buyer or user must promptly notify in writing a Dow Chemical Company of any claims to be eligible to receive either remedy given below. The EXCLUSIVE REMEDY OF THE BUYER OR USER and the LIMIT OF LIABILITY of The Dow Chemical Company or any other seller will be one of the following, at the election of The Dow Chemical Company:

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

The selier will not be liable for consequential or incidental damages or losses.

The terms of this Warranty Limitations And Disclaimer cannot be varied by any written or verbal statements or agreements. Any employee or sales agent of the seller is not authorized to vary or exceed the terms of this Warranty Limitations And Disclaimer in any manner.

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D1086



#### THE DOW CHEMICAL COMPANY Midland, Michigan 48674 U.S.A.

\*Trademark of THE DOW CHEMICAL COMPANY

**REVISIONS INCLUDE:** 

- 1) ADDITION OF WILD VIOLET UNDER WEEDS
- 2) ADDITIONS TO ACCEPTABLE DILUENTS
- 3) BRUSH CONTROL TERRITORY CHANGE

Specimen Label

# Garlon<sup>•</sup> 4 Herbicide

For the control of Woody Plants and Broadleaf Weeds on Rights-of-Way, Industrial Sites and Non-crop Areas, and for Use in Forests

Active Ingredient(s):

Contains petroleum distillates E.P.A. Registration No. 464-554 E.P.A. Est. 464-MI-1

**KEEP OUT OF REACH OF CHILDREN** 

# CAUTION AVISO: PRECAUCION AL USUARIO:

Si usted no lee inglés, no use este producto hasta que la ctiqueta le haya sido explicada ampliamente.

# PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN

Avoid Contact With Eyes, Skin, Or Clothing • Avoid Breathing Mists or Vapors • Avoid Contamination Of Food • Wash Thoroughly After Handling • Remove And Wash Contaminated Clothing Before Reuse

STATEMENT OF PRACTICAL TREATMENT: In case of skin contast, flush skin with plenty of water. Get medical attention if irritation persists. If swallowed, do not induce vomiting. Call a physician.

#### Physical or Chemical Hazards

COMBUSTIBLE • Do Not Use or Store Near Heat or Open Flame. • Do Not Cut or Weld Container.

### **Environmental Hazards**

This pesticide is toxic to fish. Keep out of lakes, ponds or streams. Do not contaminate water by cleaning of equipment or disposal of wastes.

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#### NOTICE

Read the entire label. Use only according to label directions. Before buying or using this product, read "WARRANTY LIM-ITATIONS AND DISCLAIMER" elsewhere on Inis label. If terms are not acceptable, return uncpened package at once to seller for full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under "WARRANTY LIMITATIONS AND DIS-CLAIMER."

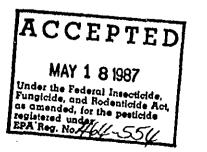
# IN CASE OF AN EMERGENCY

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

See Back Panel for Important Use Precautions.





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GARLON 4 Herbicide is recommended for the control of unwanted woody plants and annual and perennial broadleaf weeds in forests and on non-crop areas including industrial manufacturing and storage sites, rights-of-way such as electrical power lines, communication lines, pipelines, roadsides and railroads, lence rows, non-irrigation ditch banks and around farm buildings.

Among the woody plant species controlled are:

Alder	Dogwood	Sascafras
Arrowwood	Dougins Fir	Scotch
ksh	Elderberry	Broom
Азреп	Elm	Sumac
Beech	Hazel	Sw Jetbay
Birch	Hickory	Mr.gnolia
Blackberry	Hombeam	Swcetgum
Blackgum	Locust	Sycamore
Cascara	Madrone	Tanoak
Ceanothus	Maples	Thimbleberry
Cherry	Mulberry	Tulio
Chinquapin	Oaks	Poplar
Choke	Persimmon	Wild Rose
Cherry	Pine	Willow
Cottonwood	Polson Oak	Winged Eim
Crataegus	Poplar	
(Hawthorn)	Salmonberry	

Among the annual and perennial broadleaf weeds controlled are:

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Black Medic	
Bull Thistie	
Burdock	
Canada	
Thistie	
Chicory	
Clover	
Creeping	
Beggarweed	
Curly Dock	
Dandelion	
Denechori	

Field Bindweed Goldenrod Ground Ivy Lamosquarters Lespedeza Matchweed Mustard Oxalis Plantain Ragweed

Smartweed

Wild Carrot

Lace)

Wild Lettuce

Wild Violet

Yarrow

(Queen Annes

Vetch

Sweet Clover

# DIRECTIONS FOR USE

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# FOLIAR APPLICATIONS

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TROL (if used), surfactant (if used), additional herbicide (if used), GARLON 4 Herbicide. If surfactant is used, add 1 to 2 quarts par acre of a standard agricultural surfactant such as Tronic, Sponto 712 or Ortho X-77. Use continuous adequate agitation.

Before using any recommended tank mixtures, read the directions and all precautions on both labels.

For best results applications should be made when woody plants and weeds are actively growing. When hard-to-control species such as ash, blackgum, choke cherry, elm, maples (other than vine or big leal), oaks, pines, or winged elm are •prevalent and during applications made during late summer

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  - On sites where easy to control brush species dominate, rates less than those recommended may be effective. Consult State or Local Extension personnel for such information.

# HIGH-VOLUME LEAF-STEM TREATMENT WITH GROUND EQUIPMENT

FOLIAGE TREATMENT: For control of woody plants, use GARLON 4 Herbicide at the rate of 1 to 3 quarts in water to make 100 gallons of spray mixture, or GARLON 4 Herbicide at 1 1/2 to 3 pints may be tank mixed with 1/4 to 1/2 gallon of 3.8 Ib/gal 2,4-D low volatile ester herbicide or TORDON 101 Mixture Herbicides and diluted to make 100 gallons of spray. Apply at a volume of 100 to 400 gallons of total spray per acre depending on size and density of woody plants. Coverage should be thorough to wet all leaves, stems, and root collars.

# BROADCAST APPLICATIONS WITH GROUND EQUIPMENT

Make application using equipment that will assure uniform coverage of spray volumes applied.

Woody Plant Control FOLIAGE TREATMENT: Use 4 to 8 quarts of GARLON 4 Herbicide in enough water to make 20 to 100 gallons of total spray per acre, or GARLON 4 Herbicide at 3 pints to 3 guarts may be combined with 1 to 2 gallons of 3.8 lb/gal 2,4-D low volatile ester herbicide or TORDON 101 Mixture in sufficient water to make 20 to 100 gallons of total spray per acre.

#### Broadleaf Weed Control

Use GARLON 4 Herbiride at rates of 1 to 4 quarts in a total volume of 20 to 100 gallons per acre as a water spray mixture. Apply at any time weeds are actively growing. GARLON 4 Herbicide at 1/2 to 6 pints may be tank mixed with 1 to 2 guarts of 3.3 lb/gal 2,4-D amine or low-volatile ester, TORDON\* K, or TORDON\* 101 Mixture Herbicides to improve the spectrum of activity.

# AERIAL APPLICATION (Helicopter Only)

Aerial sprays should be applied using suitable drift control. (See Use Precautions.)

FOLIAGE TREATMENT: (Utility and Pipeline Rights-of-Way) Use 4 to 8 quarts of GARLON 4 Herbicide alone, or 3 to 4 quarts GARI.ON 4 Herbicide in a tank mix combination with 1 to 2 gallons of 3.8 lb/gal 2.4-D low volatile ester herbicide or TORDON 101 Mixture and apply in a total spray volume of 10 to 30 gallons per acre. Use the higher rates and volumes when plants are dense or under drought conditions.

# **BASAL BARK AND DORMANT** BRUSH TREATMENTS

OIL-MIXTURE SPRAYS: Use as a diluent diesel oil, No. 1 er No. 2 fuel of or kerosene. Substitute other diluents of oils only in accordance with the manufacturer's recommendations. Add GARLON 4 Herbicide to the required amount of oil in the spray tank or mixing tank and mix thoroughly. If the mixture stands over 4 hours, reagitation is required.

OIL-WATER MIXTURE SPRAYS: First, premix the GARLON 4 Herbicide, oil and surfactant in a separate container. Do not allow any water or mixtures containing water to get into the GARLON 4 Herbicide or the premix. Fill the spray tank about half full with water, then slowly add the premix with continuous agitation and complete filling the tank with water. Continue moderate agitation.

NOTE: If the premix is put in the tank without any water, the first water added may form a thick "invert" (water in oil) emulsion which will be hard to break,

DAGAL BARK TREATMENT: In right-of-way, other non-crop areas and forests, use 1 to 3 gallons of GARLON 4 Herbicide in enough diesel oil, No. 1 or No. 2 fuel oil or kerosene to make 100 gallons of spray mixture. Use other oils or diluents only as recommended by their manufacturer. Apply with knapsack sprayer or power spraying equipment using low pressure (20-40 psi). Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground. Thorough wetting of the indicated area is necessary for good control. Spray until run-off at the ground line is noticeable. Old or rough bark requiros more spray than smooth young bark. Apply at any time, including the winter months, except when snow or water



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prevent spraying to the ground line. For oil-water mixture application, mix 2 galions GARLON 4 Herbicide, 25 galions of oil and one half galion of Sponto 712, and add to 72.5 galions water as indicated under directions for use. Treat as above. For best results with oil/water mixtures, treat only stems 2 ginches or less in diameter.

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THINLINE BASAL BARK TREATMENT: To control susceptible woody plants with stems less than 6 inches in diameter, apply undiluted GARLON 4 in a thin stream to all sides of the lower stems, about 6 inches above the base of the plants. The stream should be directed horizontally to apply a narrow band of GARLON 4 around each stem or clump. From 2 to 15 ml. of

of GARLON 4 around each stem or clump. From 2 to 15 ml. of chemical will be required for treatment of single stems and from 25 to 100 ml. to treat clumps of stems. Use an applicator metered or calibrated to deliver the small amounts required.

DORMANT STEM TREATMENT: Mix 3 to 6 quarts of GARLON 4 Herbicide in enough oil to make 100 gallons of spray. Apply with knapsack or power spraying equipment, using low pressure (20-40 psi). Treat any time when brush is dormant and most of the foliage has dropped. Thoroughly wet the upper parts of the stems and use the remainder needed to wet the lower 12 to 15 inches above the ground to the point of run-off. For root suckering species such as sumac, persimmon, sassafras and locust, also spray the ground under the plants to cover small root suckers which may not be visible above the soil surface. Brush of average density and 4 to 6 feet high may take up to 150 gallons of spray mixture per acre. For oil-water mixture application mix 6 quarts GARLON 4 Herbicide, 25 gallons of oil and one half gallon of Sponto 712 and 73 gallons water as indicated under directions for use. Treat as above.

# FOREST MANAGEMENT APPLICATIONS

For broadcast applications of GARLON 4 Herbicide, use volume rates needed to provide adequate coverage of brush for good control, usually 5 to 25 gpa by air or 10 to 100 gpa by ground. Application systems should be used to prevent hazandous drift to off-target sites. Nozzles or additives that produce larger droplets of spray may require higher spray volumes to maintain brush control.

#### Forest Site Preparation

FOREST SITE PREPARATION (not for conifer release): Use 4 to 8 quarts of GARLON 4 Herbicide and apply in a total spray volume of 5 to 25 galions per acre, or GARLON 4 Herbicide at 2 to 4 quarts may be used with 1 to 2 galions of 3.8 lb/gal 2,4-D low volatile ester herbicide or TORDON\* 101 Mixture in a tank mix combination in a total spray volume of 5 to 25 galions per acre.

NOTE: Conifers planted sconer than one month after treatment with GARLON 4 at less than 1 gallon per acre or sconer than two months after treatment at 1 to 2 gallons per acre may be injured. When tank mixtures of herbicides are used for forest site preparation, labels for all products in the mixture should be consulted and the longest recommended waiting period observed.

#### Broadcast Applications for Conifer Release in the Pacific Northwest and California

BROADCAST APPLICATIONS ON DORMANT CONIFERS BEFORE BUD SWELL (EXCLUDING PINES): To control or suppress deciduous hardwoods such as vine maple, bigleat maple, alder or willow before leaf-out or evergreen hardwoods such as madrona, chinquapin, and Ceanothus spp., use GARLON 4 Herbicide at 1 to 2 qts. per acre. Diesel or tuel oil carrier may be used especially on deciduous hardwood species. On evergreen hardwoods, water carrier with 1 to 2 gallons of diesel oil per acre or a suitable surfactant or oil substitute at manufacturer's recommended rates are equally effective.

ON CONIFER PLANTATIONS (EXCLUDING PINES) AFTER HARDWOODS BEGIN GROWTH AND BEFORE CONIFER BUD BREAK ("Early Foliar" hardwood stage), use GARLON 4 Herbicide at 1 to 1.5 qts. alone or with 3.8 lb/gal 2,4-D low volatile ester herbicide in water carrier to provide no more than 3 lbs. acid equivalent per acre from both products. After con-

ifer bud break, these sprays may cause more serious injury to the crop trees. Added surfactant may cause unacceptable injury to conifers especially after bud break.

ON CONIFER PLANTATIONS (EXCLUDING PINES) AFTER CONIFER: HARDEN OFF IN LATE SUMMER AND WHILE HARDWOODS ARE STILL GROWING ACTIVELY, use GARLON 4 Herbicide at rates of 1 to 1.5 qts. per acre alone or plus 3.8 lb/gal 2,4-D low volatile ester herbicide to provide no more than 3 lbs. acid equivalent per acre from both products. Treat as soon after conifer bud hardening as possible so that hardwoods are actively growing. Added oil, oil substitute or surfactant may cause unacceptable injury to the conifers.

DIRECTED SPRAY AT ANY TIME, INCLUDING PINES: When brush is susceptible, GARLON 4 at 1 to 3 do Per acre alone with 3.8 longel 2.4-D low volatile esternethicide may be used at rates not to exceed 4 liber acid equivalent per acre from both products. Apply in valer carrier as a directed spray between the copiers or over covered conifers; a suitable surfactant or additive such as dieset oil and 1/4 to 1 gallon per accernary be added to improve brush kill.

NOTE: Sprays may cause discolored needles and temporary growth suppression of some conifers, but they should recover and grow normally.

#### Broadcast Applications for Conifer Release in the Eastern United States

BROADCAST APPLICATIONS FOR CONIFER RELEASE: To release spruce, fir, red pine and white pine from competing hardwoods such as red maple, sugar maple, striped maple, alder, birch (white, yellow, and grey), aspen, ash, pin cherry, and rubus spp. and perennial and annual broadleaf weeds, use GARLON 4 Herbicide at rates of 1.5 to 3 quarts per acre alone or plus 3.8 lb/gal 2,4-D amine or low-volatile ester herbicides to provide no more than 4 pounds acrd equivalent per acre from both products. Applications should be made in late summer or early fall after conifers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

NOTE: Sprays may cause discolored needles and temporary growth suppression of some conifers, but they should recover and grow normally.

# Broadcast Applications for Conifer Release in the Lake States Region

BROADCAST APPLICATIONS FOR CONFER RELEASE. To release spruce, fir, red pine and jack pine from competing hardwoods such as aspen, birch, maple, cherry, willow, oak, hazel, and rubus spp. and perennial and annual broadlead weeds, use GARLON 4 Herbicide at rates of 1.5 to 3 quarts per acre. Applications should be made in late summer or early lall after confers have formed their overwintering buds and hardwoods are in full leaf and prior to autumn coloration.

NOTE: Sprays may cause discolored needles and temporary growth suppression in jack pine. Rates exceeding 1.5 quarts/A may result in more severe damage especially to young jack pine 18 inches or tess in height.

# Spot Treatment to Control Clumps of Resprouting Hardwoods Such As Big; Leaf Maple Using a Hovering Helicopter in Forests

STEM TREATMENT BEFORE LEAF-OUT: Mix 1 to 2 gallons; ' ' of GARLON 4 Herbicide with about 20 gallons diesel oil and enough water to make 100 gallons of solution. Apply as an ' , invert emulsion by means of a hovering helicopter equipped with a nozzle system to direct sufficient spray to cover the stems to the ground line of the sprouted trees, usually 3/4 to . . . 1 1/2 gallon per clump.

NOTE: Conifers contacted by this spray may be seriously, . injured; in existing plantations, drift control systems, such as invert emulsions, should be used to minimize injury to adjacent conifers. A dye or other marking system to designate freated trees may be used.

#### **USE PRECAUTIONS**

Apply this product only as specified on this label.

Before using any recommended tank mixtures, read the directions and all use precautions on both labels.

Do not apply GARLON 4 Herbicide directly to, or otherwise permit it to come into direct contact with grapes, tobacco, vegetable crops, flowers or other desirable broadleaf plants and do not permit spray mists containing it to drift onto them.

AVOID INJURIOUS SPRAY DRIFT: Applications should be made only when there is little or no hazard from spray drift. Very small quantities of sprzy, which may not be visible may seriously injure susceptible plants. Do not spray when wind is blowing toward susceptible crops or ornamental plants near enough to be injured, it is suggested that a continuous smoke column at or near the spray site or a smoke generator on the spray equipment be used to detect air movement, lapse conditions, or temperature inversions (stable air). If the smoke layers or indicates a potential of hazardous spray drift, do not spray.

Aerial Application: For aerial application on rights-of-way or other areas near susceptible crops, use NALCO-TROL drift control additive as recommended by the manufacturer or apply through the MICROFOIL boom, THRUVALVE boom, or equivalent drift control system. Thickened sprays prepared by using high viscosity invert systems or other drift reducing systems may be utilized if they are made as drift-free as are mixtures containing NALCO-TROL or applications made with the MICROFOIL boom or THRUVALVE boom. It a spray thickening agent is used, follow all use recommendations and precautions on the product label. Do not use a thickening agent with the MICROFOIL boom, THRUVALVE boom, or other systems that cannot accommodate thick sprays.

With aircraft, drift can be lessened by applying a coarse spray; by using no more than 30 pounds spray pressure at the nozzles; by using a spray boom no longer than 3/4 the rotor length; by spraying only when wind velocities are low; or by using approved drift control system.

Ground Equipment: To aid in reducing spray drift GARLON 4 should be used in thickened (high viscosity) spray mixtures using NALCO-TROL drift control additive, high viscosity invert systems, or equivalent as directed by the manufacturer. With ground equipment, spray drift can be reduced by keeping the spray boom as low as possible; by applying 20 gallons or more of spray per acre; by using no more than 30 pounds spraying pressure with large droplet producing nczzle tips; and by spraying when wind velocity is low. Do not apply with nozzles that produce a fine droplet spray.

HIGH VOLUME LEAF-STEM TREATMENT: To minimize spray drift, do not use pressure exceeding 50 psi at the spray nozzle aj' keep sprays no higher than brush tops. NALCO-TROL thickening agent or equivalent may be used to reduce spray drift.

Do not apply on ditches used to transport irrigation water. Do not apply where runoff or irrigation water may flow onlo agricultural land as injury to crops may result.

Do not graze treated areas or feed treated forage for one year following application.

#### STORAGE AND DISPOSAL

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

\$TORAGE: Store above 28° F or agitate before use.

DISPOSAL:

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Brohibitions - Open dumping is prohibited.

• • CPECIMEN LABEL 86-1471 DATE CODE • • 101086

- REPLACES 86-1471 DATE CODE C586
- DISCARD PREVIOUS SPECIMEN LABELS

Pesticide Disposal - Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to applicable federal, state, or local procedures.

Container Disposel - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved state and local procedures.

General - Consult federal, state, or local disposal authorities for approved alternative procedures.

He sure that use of this product conforms to all applicable regulations.

# WARRANTY LIMITATIONS AND DISCLAIMER

The Dow Chemical Company 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 therein under normal conditions of use, THIS IS THE ONLY WARRANTY MADE ON THIS PRODUCT. NO OTHER EXPRESS AND NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE OUTSIDE OF THIS LABEL. Therefore, neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), under abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes, etc.) or under conditions not reasonably foreseeable to or beyond the control of seller.

When buyer or user suffers losses or damages resulting from the use or handling of this product (including claims based on contract, negligence, strict liability, or other legal theories), buyer or user must promptly notify in writing The Dow Chemicai Company of any claims to be eligible to receive either remedy given below. The EXCLUSIVE REMEDY OF THE BUYER OR USER and the LIMIT OF LIABILITY of The Dow Chemical Company or any other seller will be one of the following, at the election of The Dow Chemical Company:

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

# The seller will not be liable for consequential or incidental damages or losses.

The terms of this Warranty Limitations And Disclaimer cannot be varied by any written or verbal statements or agreements. Any employee or sales agent of the seller is not authorized to vary or exceed the terms of this Warranty Limitations And Disclaimer in any manner.

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THE DOW CHEMICAL COMPANY Midland, Michigan 48674 U.S.A.

\*Trademark of THE DOW CHEMICAL COMPANY

REVISIONS INCLUDE:

- 1) ADDITION OF WILD VIOLET UNDER WEEDS
- 2) ADDITIONS TO ACCEPTABLE DILUENTS
- 3) BRUSH CONTROL TERRITORY CHANGE





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GARLON 4 Herbicide EPA Reg. No. 464-554 Proposed Label Revision February 9, 1987

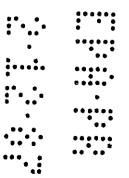
Insert A:

**GENERAL INFORMATION:** To control susceptible woody plants in rights-of-way, other non-crop areas, and forests, use GARLON 4 Herbicide in oil or oil-water mixtures prepared and applied as described below. When preparing mixtures, use as oils either diesel fuel, No. 1 or No. fuel oil, or kerosene. Substitute other oils or diluents only as recommended by the oil or diluent's manufacturer.

OIL MIXTURE SPRAYS: Add GARLON 4 Herbicide to the required amount of oil in the spray tank or mixing tank and mix thoroughly. If the mixture stands over 4 hours, reagitation is required.

Insert B:

**BASAL BARK TREATMENT:** To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 1 to 5 gallons of GARLON 4 Herbicide in enough oil to make 100 gallons of spray mixture.

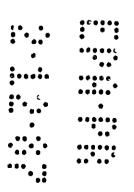


GARLON 4 Herbicide EPA Reg. No. 464-554 Proposed Label Revision February 9, 1987

#### Insert C:

LOW VOLUME BASAL BARK TREATMENT: To control susceptible woody plants with stems less than 6 inches in basal diameter, mix 20 to 30 gallons of GARLON 4 Herbicide in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using low pressure and a solid cone or flat fan nozzle. Spray the basal parts of brush and tree trunks in a manner which thoroughly wets the lower stems, including the root collar area, but not to the point of runoff. Herbicide concentration should vary with size and susceptibility of species treated. Apply at any time, including the winter months, except when snow or water p event spraying to the ground line.

STREAMLINE BASAL BARK TREATMENT: To control or suppress susceptible woody plants on forest sites for conifer rolease, mix 20 to 30 gallons of GARLON 4 Herbicide in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack spraver using equipment which provides a directed straight stream spray. Apply the spray in a 2 to 3-inch wide band to one side of stems less than 3 inches in basal diameter. Direct the spray at a point approximately 12 to 24 inches in basal diameter. Treat both sides of stems which are 3 to 4 inches in basal diameter. Greater efficacy is achieved when spray is applied to thin juvenile bark; direct spray above rough, thickened mature bark. Pines (loblolly, slash, shortleaf, and Virginia) up to 2 inches in dbh can be controlled by directing the spray at a point approximately 4 feet above ground. Vary herbicide concentration with size and susceptibility of the brush species being treated. Apply at any time, including the winter months, except when snow or water prevent spraying at the desired height above ground level.



GAR ON 4 Herbicide EPA Reg. No. 464-554 Proposed Label Revision February 9, 1987

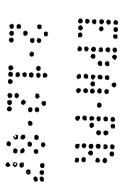
#### Insert D:

TREATMENT OF CUT STUMPS IN CALIFORNIA AND THE PACIFIC NORTHWEST: To control resprouting, apply undiluted GARLON 4 Herbicide to wet the area adjacent to the cambium and bark around the entire circumference of freshly cut stumps. Treatments may be applied throughout the year; however, control may be reduced with treatment during periods of moisture stress as in late summer. Stumps should be cut so that they are approximately level to facilitate uniform GARLON 4 Herbicide coverage. Use an applicator which can be calibrated to deliver the small amounts of material required.

#### Insert E:

DIRECTED SPRAY APPLICATIONS FOR CONIFER RELEASE: To release conifers from competing hardwoods such as red maple, sugar maple, striped maple, sweetgum, red and white oaks, ash, hickory, alder, birch, aspen, and pin cherry, mix 1 to 5 gallons of GARLON 4 Herbicide in enough water to make 100 gallons of spray mixture. This spray should be directed onto foliage of competitive hardwoods using knapsack or backpack sprayers with flat fan nozzles or equivalent any time after the hardwoods have reached full leaf size, but before autumn coloration. The majority of treated hardwoods should be less than 6 feet in height to ensure adequate spray coverage. Care should be taken to direct spray solutions away from conifer foliage, particularly foliage of desirable pines.

NOTE: Sprays may cause temporary damage and growth suppression where contact with conifers occurs; however, injured conifers should recover and grow normally. Over-the-top spray applications can kill pines.



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