

ELANCO

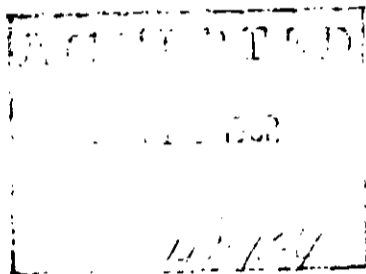
ID 5914



Herbicide

Spike

40P



Net Weight 40 Pounds

A surface applied herbicide for woody plant control in noncrop areas such as:

- Railroad rights-of-way
- Utility rights-of-way
- Industrial sites
- Pipelines
- Fence rows
- Firebreaks
- Ditchbanks
- Along highways
- Other noncropland areas for the control of woody plant species



Spike will kill trees and shrubs. Carefully read the precautions before using.

The degree and duration of control may vary with the amount of chemical applied, soil texture, and other conditions.

Active Ingredient:

tebuthiuron: N-[5-(1,1-dimethylethyl)-1,3,4-thiadiazol-2-yl]-N,N'-dimethylurea	40.0%
Inert Ingredients	60.0%

Contains 16 pounds active ingredient per 40 pound bag

SPIKE—the registered trademark for Elanco Products tebuthiuron

CAUTION: KEEP OUT OF REACH OF CHILDREN.
See back panel for additional caution statements.

Directions for Use Read All Directions Carefully Before Applying

Woody Species Controlled

Apply 2.5 pounds SPIKE 40P per acre to control the following species

<i>Microcypripus tenuisectus</i> (Burrhead)	<i>Lonicera dentata</i> (Deerbrush)	<i>Mimosa biuncifera</i> (Waltwhire-bush)
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Apply 5 pounds SPIKE 40P per acre to control the following species

<i>Alnus altissima</i> (Tree-of-heaven)	<i>Morus rubra</i> (Red mulberry)	<i>Rosa multiflora</i> (Multiflora rose)
<i>Azysa lycodes</i> (Whitebrush)	<i>Pinus monticola</i> (Western white pine)	<i>Salvia leucophylla</i> (White leaf sage)
<i>Artemisia tridentata</i> (Big sagebrush)	<i>Pinus spp.</i> (Pine)	<i>Salvia mellifera</i> (Black sage)
<i>Carya glabra</i> (Pignut hickory)	<i>Prunus emarginata</i> (Bitter cherry)	<i>Symphoricarpos orbiculatus</i> (Buckbrush)
<i>Celtis occidentalis</i> (Western hackberry)	<i>Rhus glabra</i> (Smooth sumac)	<i>Ulmus americana</i> (American elm)
<i>Datura meteloides</i> (Desert thornapple)	<i>Robinia pseudoacacia</i> (Black locust)	<i>Vaccinium or Gaylussacia spp.</i> (Huckleberry)
<i>Lycium delavayana</i> (Horned cholla)		

Apply 7.5 pounds SPIKE 40P per acre to control the following species

<i>Abies balsamea</i> (Balsam fir)	<i>Condalia crotolaria</i> (Lutebush condalia)	<i>Quercus douglasii</i> (Blue oak)
<i>Amelanchier alnifolia</i> (Shadbark)	<i>Lexycomora</i> (Yaupon)	<i>Quercus marilandica</i> (Blackjack oak)
<i>Acer saccharum</i> (Sugar maple)	<i>Larix laricina</i> (Larch)	<i>Quercus stellata</i> (Post oak)
<i>Amygdalus</i> (Almond)	<i>Populus alba</i> (White poplar)	<i>Salix spp.</i> (Willow)
<i>Betula pumila</i> (Gray birch)	<i>Populus balsamifera</i> (Balsam poplar)	<i>Suaeda torreyana</i> (Desert yucca)
<i>Carya ovata</i> (Shadbark hickory)	<i>Populus deltoides</i> (Eastern cottonwood)	<i>Sarcocolla tomentosa</i> (Hardhack)
<i>Celtis occidentalis</i> (Hackberry)	<i>Quercus emoryi</i> (Canyon live oak)	<i>Ulmus alata</i> (Winged elm)

Apply 10 pounds SPIKE 40P per acre to control the following species

<i>Acacia farnesiana</i> (Guajabo)	<i>Condalia crotolaria</i> (Lutebush condalia)	<i>Persea angustifolia</i> (Guayacan)
<i>Acacia greggii</i> (Catclaw acacia)	<i>Quercus dumosa</i> (California scrub oak)	<i>Prosopis juliflora</i> (Mesquite)
<i>Acacia juliflora</i> (Blackthorn acacia)	<i>Chrysolepis</i> (Black oak)	<i>Prunus virginiana</i> (Common chokecherry)
<i>Acacia tortuosa</i> (Tortoise acacia)	<i>Eucalyptus</i> (Eucalyptus)	<i>Pseudotsuga menziesii</i> (Douglas fir)
<i>Acer negundo</i> (Box elder)	<i>Ficus</i> (Ficus)	<i>Pueraria lobata</i> (Kudzu)
<i>Adiantum</i> (Fern)	<i>Jatropha</i> (Jatropha)	<i>Quercus dumosa</i> (California scrub oak)
<i>Amygdalus</i> (Almond)	<i>Liquidambar</i> (Sweet gum)	<i>Quercus palustris</i> (Pin oak)
<i>Campylocarpus</i> (Trop. pebblewort)	<i>Miconia</i> (Miconia)	<i>Quercus rubra</i> (Red oak)
<i>Carya ovata</i> (Shadbark hickory)	<i>Mimosa</i> (Mimosa)	<i>Quercus virginiana</i> (Live oak)
<i>Cercocarpus</i> (Red leaf)	<i>Myrica</i> (Myrica)	<i>Rhus typhina</i> (Staghorn sumac)
<i>Celastrus</i> (Texas cebrina)	<i>Passiflora</i> (Passiflora)	<i>Rubus allegheniensis</i> (Allegheny blackberry)
<i>Colubina</i> (Texas cebrina)	<i>Populus</i> (Populus)	<i>Salvia barbatiflora</i> (Shrubby blue salvia)

Apply 12.5 pounds SPIKE 40P per acre to control the following species

<i>Acer macrophyllum</i> (Red maple)	<i>Juniperus virginiana</i> (Eastern redcedar)	<i>Pinus virginiana</i> (Virginia pine)
<i>Acer glabrum</i> (Norway maple)	<i>Larix laricina</i> (Larch)	<i>Platanus occidentalis</i> (American sycamore)
<i>Acer spicatum</i> (Spotted maple)	<i>Quercus</i> (Oak)	<i>Prunus serotina</i> (Black cherry)
<i>Cornus</i> (Dogwood)	<i>Malva</i> (Malva)	<i>Quercus alba</i> (White oak)
<i>Cornus</i> (Dogwood)	<i>Myrica</i> (Myrica)	<i>Rubus laciniatus</i> (Laciniate blackberry)
<i>Elaeagnus</i> (Silver cholla)	<i>Rhus</i> (Rhus)	<i>Rubus occidentalis</i> (Black raspberry)
<i>Gleditsia</i> (Black locust)	<i>Rubus</i> (Rubus)	<i>Sambucus racemosa</i> (Brazilian peppercorn)

Apply 15 pounds SPIKE 40P per acre to control the following species

<i>Acer glabrum</i> (Norway maple)	<i>Crataegus</i> (Hawthorn)	<i>Rhus laurina</i> (Laurel sumac)
<i>Amelanchier</i> (Shadbark)	<i>Diospyros</i> (Persimmon)	<i>Smilax rotundifolia</i> (Common greenbrier)
<i>Cercocarpus</i> (Texas cebrina)	<i>Elaeagnus</i> (Silver cholla)	<i>Ulmus americana</i> (American elm)
<i>Ceanothus</i> (White thorn chaparral)	<i>Fraxinus americana</i> (White ash)	<i>Ulmus rubra</i> (Spp. elm)

Species growing on deep profile, the textured soils or deep root species may show partial control at rates listed or require a higher rate for effective control.

GENERAL DIRECTIONS

Apply SPIKE 40P uniformly to the woody plant infested area or by individual plant treatment.
Application can be made any time during the year except when the ground is frozen or saturated with water. Effects are slow to appear and will not become apparent until after soil temperature has warmed. SPIKE 40P will penetrate to the root system. The required rate to achieve control depends on soil moisture and temperature and depth of species roots. Soil moisture may vary throughout the season and therefore, the weather and soil conditions should be considered prior to applying.

Broadcast Application:
SPIKE 40P may be applied to land properly prepared ground equipment. Control of woody SPIKE 40P may be applied to bare ground. Broadcast application equipment should be equipped with 10 and 1600 lbs. capacity

meter not designed to control the spread of SPIKE 40P to the target area may result in injury or death of desirable plant species.

Individual (Spot) Woody Plant Application

Apply SPIKE 40P directly to the plant trunk or the roots about the base of the plant with equipment. Water the soil with a hose or sprinkler to help the SPIKE 40P penetrate to the roots. DO NOT USE SPIKE 40P IN THIS MANNER IN ANY AREA WHERE DESIRABLE SPECIES ARE GROWING. THE LOCATION OF THE PLANTS TO BE TREATED IS A SMALL AREA. ONLY A SMALL AMOUNT OF SPIKE 40P IS REQUIRED. THE ROOTS OF DESIRABLE TREES OR OTHER WOODY SPECIES MAY CAUSE INJURY OR DEATH. THE ROOTS OF SUCH PLANTS MAY EXTEND FAR BEYOND THEIR D.R.P. LINES.

PRECAUTIONS



SPIKE 40P is intended for woody plant control. It is an extremely active herbicide which will kill trees, shrubs and other plants of desirable vegetation having roots extending into the treated area. Feeder roots of many species of desirable vegetation extend many feet beyond the drip line of the branches, and a very small amount of SPIKE 40P in contact with the feeder roots of a tree, shrub or other desirable vegetation may cause serious injury or death to the entire plant. An arboriculturist or tree expert should be consulted to help you determine the area of proposed application's feeder roots of desirable vegetation. The effect of SPIKE 40P on desirable vegetation may be reversible and its presence in the soil may prevent growth of other desirable vegetation for some years after application. Read the entire label before using SPIKE 40P to determine if this product is suitable for the desired purpose.

Do not use SPIKE 40P in areas such as walks, driveways, streets, lawns, patios, tennis courts, swimming pools, cemeteries, or other landscaped areas or under asphalt or concrete pavement where future landscaping is planned. Do not apply on or near electrical conduits. Do not apply in any area into which the roots of desirable vegetation may extend. Do not apply in locations where the chemical may be washed by runoff or sheet erosion in contact with roots of desirable vegetation as severe injury or death may occur. **ROOTS OF TREES, SHRUBS AND OTHER DESIRABLE VEGETATION MAY EXTEND FAR BEYOND THE DRIP LINE OF THE PLANTS' BRANCHES.**

Ditchbank Usage- Do not apply SPIKE 40P to any portion of the ditchbank that will come into direct contact with water as movement of SPIKE 40P in this water to non-target plant species may result in injury or death of those plants. Do not apply on ditches used to transport irrigation or potable water.

Keep from contact with pesticides and seeds.

Thoroughly clean all traces of SPIKE 40P from application equipment after use. **DO NOT EMPTY RESIDUES CLEANED FROM APPLICATION EQUIPMENT ON AREAS WHERE THEY MAY COME IN CONTACT WITH THE ROOTS OF DESIRABLE VEGETATION OR THE WATER SOURCE FOR SUCH VEGETATION.**

HERBACEOUS PERENNIALS (NONWOODY PLANTS)

Do not allow domestic livestock to graze in treated areas.

Do not cut forage from treated areas for feeding livestock. SPIKE 40P may injure or suppress certain herbaceous vegetation in the treated area. Therefore, do not apply where such injury cannot be tolerated. Injury to most herbaceous perennials is reduced if SPIKE 40P is applied when this vegetation is dormant.

CAUTION

Human: Harmful if swallowed. Avoid contact with skin, eyes or clothing. Wear protective clothes when applying pellets to non-woody parts by hand. In case of contact, flush with water.

Environmental: Do not contaminate any body of water, ponds or streams as death or injury may occur to vegetation irrigated by such. Do not contaminate water by cleaning of equipment or disposal of wastes.

Storage and Disposal: The herbicidal properties of SPIKE 40P require caution in handling, storage and translocation of this product. Do not dump contents or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container. Dispose in an incinerator or other approved method or bury in a noncrop and area away from desirable plants, trees and their supply.

Limited Warranty

The manufacturer warrants that this product will perform as described on the label. It is sold as a general purpose herbicide and is not intended for use on any specific plant species. The amount of product applied and the timing of application are critical to the success of the treatment. The manufacturer does not warrant the results of the application of this product. The manufacturer does not warrant the results of the application of this product to any specific plant species. The manufacturer does not warrant the results of the application of this product to any specific plant species. The manufacturer does not warrant the results of the application of this product to any specific plant species.

Elanco Products Company • A Division of Eli Lilly and Company
Indianapolis, IN 46285, U.S.A.

WT-240 AMX

(D) 5814

ELANCO

ID 5914



Herbicide

Spike

40P

ACCEPTED
JUN 14 1982
EPA REG. NO. 1471-103
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Net Weight 40 Pounds

A surface applied herbicide for woody plant control in noncrop areas such as:

- Railroad rights-of way
- Utility rights-of-way
- Industrial sites
- Pipelines
- Fence rows
- Firebreaks
- Ditchbanks
- Along highways
- Other noncropland areas for the control of woody plant species



Spike® will kill trees and shrubs. Carefully read the precautions before using.

BEST DOCUMENT AVAILABLE

The degree and duration of control may vary with the amount of chemical applied, soil texture, and other conditions.

Active Ingredient:

tebuthiuron: N-[5-(1,1-dimethylethyl)-1,3,4-thiadiazol-2-yl]-N,N'-dimethylurea	40.0%
Inert Ingredients	60.0%

Contains 16 pounds active ingredient per 40 pound bag
SPIKE®--the registered trademark for Elanco Products tebuthiuron

CAUTION: KEEP OUT OF REACH OF CHILDREN
See back panel for additional caution statements

EPA REG. NO. 1471-103

NET WEIGHT 40 LBS

Directions for Use Read All Directions Carefully Before Applying

Woody Species Controlled

Apply 2.5 pounds SPIKE 40P per acre to control the following species.

Nyctaglossus leucostictus (Burrowing Owl) *Larrea bloomeri* (Creosotebush) *Mimosa biuncifera* (Wart-a-minute-bush)

Apply 5 pounds SPIKE 40P per acre to control the following species.

Alnus incana (Tree-of-heaven) *Rhus glabra* (Red mulberry) *Rosa multiflora* (Multiflora rose)
Alnus rugosa (Whitebark) *Rhus monticola* (Western white pine) *Salvia leucophylla* (Whitethroat sage)
Artemisia tridentata (Big sagebrush) *Pinus spp.* (Pine) *Salvia mellifera* (Black sage)
Carya glabra (Pignut hickory) *Pinus emarginata* (Alder cherry) *Symphoricarpos orbiculatus* (Buckbrush)
Carya occidentalis (Western hackberry) *Rhus glabra* (Smooth sumac) *Ulmus americana* (American elm)
Daphniphyllum (Desert thornapple) *Robinia pseudoacacia* (Black locust) *Vaccinium or Gaylussacia* spp. (Huckleberry)
Lycium delandae (Berlandier wolfberry)

Apply 7.5 pounds SPIKE 40P per acre to control the following species.

Abies balsamea (Balsam fir) *Condalia obtusifolia* (Lobebush condalia) *Quercus douglasii* (Blue oak)
Acacia farnesiana (Huisache) *Ilex vomitoria* (Yaupon) *Quercus marilandica* (Black-jack oak)
Acer saccharum (Sugar maple) *Larix laricina* (Tamarack) *Quercus stellata* (Post oak)
Alnus rugosa (Speckled alder) *Picea glauca* (White spruce) *Salix* spp. (Willow)
Betula populifolia (Gray birch) *Populus balsamifera* (Balsam poplar) *Schaefferia cuneifolia* (Desert yaupon)
Carya texana (Black hickory) *Populus deltoides* (Eastern cottonwood) *Sarcocolla tomentosa* (Hiredack)
Carya pubera (Chapman)

Apply 10 pounds SPIKE 40P per acre to control the following species.

Acacia berlandieri (Gum tree) *Condalia obovata* (Bluewood condalia) *Pithecellobium dulce* (Guayacan)
Acacia greggii (California acacia) *Cornus drummondii* (Roughleaf dogwood) *Prosopis juliflora* (Mesquite)
Acacia ligularis (Blackbrush acacia) *Crataegus* spp. (Hawthorn) *Prunus virginiana* (Common chokecherry)
Acacia tortuosa (Twisted acacia) *Erythrina texana* (Kidneywood) *Pseudotsuga menziesii* (Douglas fir)
Acer negundo (Boxelder) *Fagus grandifolia* (American beech) *Quercus laevis* (Live oak)
Azadirachta indica (Neem) *Jatropha gossypifolia* (Cotton) *Quercus dumosa* (California scrub oak)
Alnus rubra (Red alder) *Leucophyllum hirsutum* (Cenizo [Texas]) *Quercus pilusis* (Pin oak)
Campylodiscus (Trunk potato) *Myrica cerifera* (Southern waxmyrtle) *Quercus rubra* (Red oak)
Carya ovata (Shagbark hickory) *Parthenocissus quinquefolia* (Virginia creeper) *Quercus virginiana* (Live oak)
Cercocarpus biformis (Birchleaf) *Rhus glabra* (Smooth sumac) *Rhus typhina* (Staghorn sumac)
Conium maculatum (Conium) *Rhus copallina* (Staghorn sumac) *Rubus alleghaniensis* (Allegheny blackberry)
Cubana maensis (Texas columbine) *Rubus strigosus* (Black raspberry) *Salvia balotiflora* (Shrubby true salvia)

Apply 12.5 pounds SPIKE 40P per acre to control the following species.

Acer macrophyllum (Bigleaf maple) *Juniperus virginiana* (Eastern redcedar) *Pinus virginiana* (Virginia pine)
Acer palmatum (Norway maple) *Lantana camara* (Lantana) *Platanus occidentalis* (American sycamore)
Acer saccabotum (Sieve maple) *Leptodermis virginiana* (Tuliptree) *Prunus serotina* (Black cherry)
Baccharis spp. (Groundsel herb) *Melaleuca quinquenervia* (Melaleuca) *Quercus alba* (White oak)
Cornus florida (Flowering dogwood) *Pinus banksiana* (Jack pine) *Rubus laciniatus* (Evergreen blackberry)
Fraxinus pennsylvanica (Green ash) *Pinus resinosa* (Shortleaf pine) *Rubus occidentalis* (Black raspberry)
Gambusia affinis (Gambusia) *Pinus resinosa* (Shortleaf pine) *Summus tvebenthulatus* (Brazilian pepper tree)

Apply 15 pounds SPIKE 40P per acre to control the following species.

Acer canadense (Sour maple) *Crataegus chrysolepis* (Cockspear hawthorn) *Rhus glabra* (Smooth sumac)
Arctostaphylos purulenta (Greenleaf manzanita) *Dasycarpus virginiana* (Persimmon) *Smilax rotundifolia* (Common greenbrier)
Cercocarpus carolinensis (Wild geranium) *Eurogynium argenteum* (Red sum olive) *Ulmus americana* (American elm)
Cercocarpus leucostictus (Blackthorn caryophyll) *Faxinus americana* (White ash) *Ulmus rubra* (Slippery elm)

Species growing on deep peat or the textured soils or deeply textured species may show erratic control or may require a higher rate for effective control.

GENERAL DIRECTIONS

Apply SPIKE 40P uniformly to the woody plant tested or area by individual plant treatment.
 Application can be made any time during the year except when the ground is frozen or saturated with water. Effects are slow to appear and will not become apparent until after sufficient moisture has carried the SPIKE 40P into the root zone of target species. The time required to achieve control is dependent on soil texture, amount of rainfall, and depth of species rooting. Some species may go through several defoliation and reformation over a period of approximately two years back to hard.
Broadcast Application
 SPIKE 40P may be applied using precision or broadcast ground application equipment. In high herbicide use areas SPIKE 40P may be applied using a helicopter, equipped with application equipment such as Simplex Models 161P and 163D. Use of equip-

ment not designed to contain the spread of SPIKE 40P to the target area may result in injury or death of desirable plant species.
Individual (Spot) Woody Plant Application
 Apply SPIKE 40P by hand tossing one quarter ounce (1.25 oz) around the base of the unwanted woody plant. Wear protective gloves when applying pellets by hand. Repeat the treatment for each unwanted woody plant in the area. **CAUTION DO NOT USE SPIKE 40P IN THIS MANNER IN ANY AREA WHERE DESIRABLE SPECIES ARE IN THE VICINITY OF THE PLANTS TO BE TREATED.** A SMALL AMOUNT OF SPIKE 40P IN CONTACT WITH THE ROOTS OF DESIRABLE TREES OR OTHER WOODY SPECIES MAY CAUSE SEVERE INJURY OR DEATH. THE ROOTS OF SUCH PLANTS MAY EXTEND FAR BEYOND THEIR DRIP LINES.

BEST DOCUMENT AVAILABLE