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VERTON CE Weed and Brush Killer
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VERTON CE

BRUSH KILLER

A GENERAL BRUSH CONTROL FORMULATION FOR FORMING INVERTED EMULSIONS
FOR AERIAL APPLICATIONS USING CONVENTIONAL EQUIPMENT

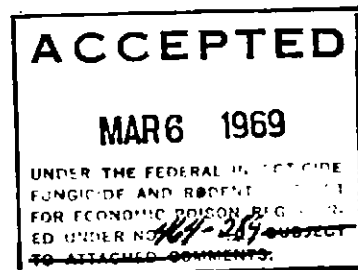
VERTON® CE
Weed and Brush Killer

CAUTION: KEEP OUT OF REACH OF CHILDREN
Read Complete Precautions on Back Panel

In proper
type size

A General Weed and Brush Control Formulation for Forming
Inverted Emulsions

Active Ingredients:
2,4-Dichlorophenoxyacetic acid, Propylene glycol (C₃H₈O to C₆H₁₄O₂)
butyl ether esters 36.0%
2,4,5-Trichlorophenoxyacetic acid, Propylene glycol (C₃H₈O to C₆H₁₄O₂)
butyl ether esters 34.1%
Inert Ingredients 29.9%
Acid Equivalents:
2,4-Dichlorophenoxyacetic acid (2,4-D) 22.2%—2.0 lbs./gallon
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) 22.2%—2.0 lbs./gallon



U.S.D.A. Registration No. 464 - 289

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VERTON CE weed and brush killer is recommended for use in controlling both woody and herbaceous plants growing in non-cropland areas including rights-of-way for power and communication lines, pipelines, railroads, and roadways. It is effective in controlling practically all woody and brushy species normally found in such areas including:

ailanthus	coastal sage	osageorange	wild grape
alder	elder	poison ivy	wild rose
ash	elderberry	poison oak	willow
aspen	elm	rabbitbrush	
big sagebrush	hawthorn	salmonberry	
birch	hazel	sand sagebrush	
brambles (rasp- berry and black- berry)	hickory	sand shinnery oak	
buckbrush	honeysuckle	sassafras	
chokecherry	locust	sumac	
	maple	sweetgum	
	oaks	wild cherry	

Plus many other woody perennials and most annual and perennial broadleaf weeds.

GENERAL DIRECTIONS

Verton CE brush killer, invert (water in oil) formulation, is designed specifically for aerial application when conventional spray equipment is used. It is recommended for controlling both woody and herbaceous plants growing in right-of-ways, including power, communication and pipelines. It is effective in controlling practically all woody and brushy species normally found in such areas.

Apply during the growing season when the foliage growth is vigorous.

SPRAYING EQUIPMENT: Any F.A.A. approved conventional aerial spray application equipment may be used for applying Verton CE to right-of-ways. No special pumps are needed. Standard centrifugal, gear or roller impeller pumps are satisfactory. Bi-pass and/or positive agitation within the spray tanks are not necessary but are desirable if present in the equipment. Nozzle orifice size should be adequate to apply the desired gallons of total spray per acre. Line and nozzle screens should be removed from standard equipment. Nozzles should be equipped with "no-drip" positive shut-off valves.

USE DIRECTIONS

General Information: VERTON CE is designed to be used as a thick "invert" oil-water emulsion spray which minimizes spray drift. Apply only with equipment designed for use with high viscosity (thickened) sprays; using nozzle with large orifices and spraying at low pressure (15 to 30 psi).

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Sprays containing VERTON CE may be applied with either ground or aerial equipment.

AMOUNT OF HERBICIDE TO USE: A minimum of 4 pounds acid equivalent should be applied per acre for good brush control. Additional amounts of acid equivalent will result in proportionately better brush control, however. **The preferred amount of acid equivalent is 6 pounds per acre.** The amount of total spray per acre applied governs the thoroughness of coverage of the brush being sprayed, that is, the greater the volume per acre, the more even the application of the herbicide. **The following mixing proportions should be used to assure correct amounts of desired spray per acre.**

Amounts and When to Use: Apply VERTON CE weed and brush killer at rates of 2 to 4 pounds acid equivalent per acre on annual and perennial herbaceous weeds and on brush highly susceptible to 2,4-D or 2,4,5-T. For control of species such as sassafras, locust, ailanthus and sumac, use 6 pounds of acid equivalent per acre. Use 8 to 12 pounds of acid equivalent per acre for control of more difficult-to-kill species such as ash, elm, hickory and oak. Apply VERTON CE in the total volume of spray desired as shown by the accompanying MIXING PROPORTIONS table.

For best results, apply the spray when the weeds and brush are growing actively. With good growing conditions and high soil moisture, application may be made up to two or three weeks before normal frost time. Control may be less during hot and dry weather when soil moisture is deficient.

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MIXING PROPORTIONS: The following mixing proportions are to be used as a guide to enable the spray applicator to apply the desired amount of herbicide and total spray per acre. If the proportions shown in the table are followed, the resulting spray solution will be a properly inverted (water in oil) emulsion, which can be applied by conventional aerial application equipment.

Pounds Acid Equiv. per Acre	Gallons Total Spray per Acre	Gallons Verton CE	Gallons Oil	Gallons Water
for 4 in	6 - 7	mix 1	plus 1	plus 4 - 5
for 4 in	10 - 11	mix 1	plus 2	plus 7 - 8
for 4 in	14 - 15	mix 1	plus 3	plus 10 - 11
for 4 in	20 - 21	mix 1	plus 4	plus 15 - 16
for 6 in	5 - 6.5	mix 1.5	plus 1	plus 2.5 - 4
for 6 in	8.5 - 10	mix 1.5	plus 2	plus 5 - 6.5
for 6 in	14.5 - 16	mix 1.5	plus 3	plus 10 - 11.5
for 6 in	17.5 - 19	mix 1.5	plus 4	plus 12 - 13.5
for 6 in	22 - 23.5	mix 1.5	plus 5	plus 15.5 - 17

If higher rates of acid equivalent per acre are desired, additional mixing proportions are available. Contact your Dow representative.

MIXING DIRECTIONS: Add amount of Verton CE and oil to mixing tank. (NOTE: Kerosene, diesel oil or fuel oil may be used.) Begin agitation and add appropriate amount of water. The invert emulsion forms with mild agitation only and will be quite thin at first, but as agitation and mixing continues the thickness or viscosity of the mix will increase quickly until it reaches a maximum and the invert will not thicken additionally. The invert emulsion will be a fluid, creamy white mixture, which is then ready for loading into the airplane spray tanks.

Large batches of the invert emulsion may be pre-mixed before the day's spraying operation begins. If unexpected delays occur during spraying operations, the pre-mixed Verton CE will remain stable as an inverted emulsion. Should a separation of the emulsion occur upon long standing, the inverted emulsion is reconstituted easily by mild agitation.

No separation of the formulation of Verton CE occurs under storage conditions as low as 0°F.

Mixing Instructions: To a clean dry spray tank, equipped with good mechanical agitation, add the required amounts of VERTON CE and No. 2 fuel oil or kerosene and agitate until thoroughly mixed. Then, with continued vigorous agitation, add the amount of water required to give the amount of spray needed. After the water has been added, with continued agitation, recycle the mixture through the spray pumping system and back into the tank for approximately 20 minutes to develop the desired thickness (viscosity). Minor variations in thickness may be obtained by adding small amounts of water to increase the thickness or small amounts of oil to decrease the thickness.

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The following mixing proportions table shows the amount of each spray ingredient to be used to prepare various sized batches of total spray, based on the pounds of acid equivalent required per acre.

MIXING PROPORTIONS*				
Pounds of acid equivalent(ae) desired/acre	Total gallons of spray desired/acre	Gallons of VERTON CE to use	Gallons of oil to use	Gallons of water to use
2	10	0.5	1.37	8.13
4	15	1.0	1.75	12.25
6	15	1.5	1.5	12.0
8	15	2.0	1.25	11.75
10	15	2.5	1.0	11.5
12	15	3.0	0.75	11.25
8	16	2.0	1.25	12.75
4	20	1.0	2.75	16.25
6	20	1.5	2.25	16.25
8	20	2.0	2.0	16.00
10	20	2.5	1.5	16.00
12	20	3.0	1.5	15.50

*The amounts of each component may be proportionally increased or decreased if larger or smaller batches are to be mixed. However, the ratio of the components should be kept constant regardless of the batch size needed.

Large batches of the invert emulsion may be premixed before the day's spraying operation begins. If unexpected delays occur during spraying operations, the premixed VERTON CE will remain stable as an inverted emulsion for a reasonable period of time. Should a separation of the emulsion occur upon standing, the inverted emulsion is reconstituted easily by re-agitation.

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EQUIPMENT CLEANING Equipment tanks, lines, booms, nozzles used to spray Verton CE brush killer or inverted emulsion should be flushed with oil. Then the equipment may be flushed with large amounts of water for additional thorough cleaning.

SPRAYING PRECAUTIONS:

1. Other agricultural chemicals should not be added to Verton CE. The emulsifiers in conventional sprays are not compatible with the emulsifier in Verton CE.
2. Hot temperatures are to be avoided, since considerable thinning of Verton CE as an inverted emulsion mixture, results. The temperature of the spray solution should not exceed 90 F.
3. Even though inverted emulsions form thicker solutions than conventional sprays, drift of spray particles should be avoided. Spraying Verton CE in wind velocities above 5 m.p.h. is not recommended.
4. Coarse sprays are less likely to drift. The use of large nozzle orifices is advised.

WARNING

Do not apply Verton CE brush killer directly to, or otherwise permit it to come into contact with vegetables, flowers, ornamentals, cotton, grapes, fruit trees or other desirable plants which are sensitive to 2,4-D or 2,4,5-T. Do not contaminate irrigation ditches or water used for domestic purposes.

To avoid injury to desirable plants, do not store, handle or apply other agricultural chemicals with the same containers or equipment used for Verton CE. Do not store near fertilizers, seeds, insecticides or fungicides.

Local conditions may affect the use of herbicides. State agricultural authorities in many States issue recommendations to fit local conditions.

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

USE PRECAUTION

Do not let VERTON CE or sprays and spray mist containing it, come into contact with vegetables, flowers, grapes, fruit trees, ornamentals, cotton or other desirable plants which are sensitive to 2,4-D or 2,4,5-T, since even minute quantities may cause injury to such plants during either the growing or dormant periods. Applications by either airplane or ground rigs should be made only when there is no hazard from drift. Do not apply by aircraft in the vicinity of cotton, grapes or other desirable vegetation susceptible to phenoxy herbicides. At higher temperatures, vaporization may cause injury to susceptible plants growing nearby. Excessive amounts of this weed killer in the soil may temporarily stop seed germination or plant growth. Do not contaminate irrigation ditches or water used for domestic purposes. Do not store near fertilizers, seeds, insecticides or fungicides. To avoid injury to desirable plants, do not store, handle or apply other agricultural chemicals with the same containers or equipment used for VERTON CE.

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Local conditions may affect the use of herbicides. State agricultural experiment station or extension services weed specialists in many states issue recommendations to fit local conditions. Be sure that use of this product conforms to all applicable regulations.

Carefully note the following points:

1. Other agricultural chemicals should not be added to sprays containing VERTON CE. The emulsifiers used in many conventional sprays may not be compatible with those of VERTON CE.
2. Avoid use of VERTON CE during unusually high temperatures since considerable thinning of the spray mix, as an inverted emulsion, may result. The temperature of the spray solution should not exceed 90°F.
3. Even though the inverted emulsion formed by the proper mixing of VERTON CE is a thicker spray mixture which drifts less than conventional spray mixtures during application, care must still be taken to avoid drift of spray droplets onto susceptible desirable vegetation.
4. Coarse sprays are less likely to drift, therefore, nozzles with large orifices and a low spraying pressure (15 to 30 psi) should be used.

Cleaning of Equipment and Disposal of Waste: Equipment such as tanks, lines, booms, nozzles and containers used in the handling and application of VERTON CE should be flushed after use with oil such as diesel or No. 2 fuel oil. Dispose of flushing and rinse wastes and empty containers by burying in non-crop areas away from water supplies.

⋮
This product is toxic to fish. Keep out of lakes, streams and ponds. Apply only as specified on the label.

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CAUTION
MAY CAUSE SKIN IRRITATION
Avoid Contact with Eyes, Skin and Clothing

CAUTION
KEEP OUT OF THE REACH OF CHILDREN
MAY CAUSE SKIN IRRITATION
May be Harmful if Swallowed
Avoid Contact with Eyes, Skin and Clothing

NOTICE: Seller makes no warranty of any kind, express or implied, concerning the use of this product. Buyer assumes all risk of use or handling, whether in accordance with directions or not.
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THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN
MIDLAND DIVISION

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but 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, or under abnormal conditions or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

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THE DOW CHEMICAL COMPANY
Midland, Michigan 48640

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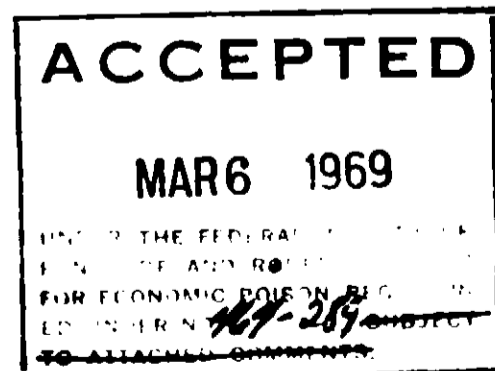
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In proper
type size

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Inverted Emulsions

Active Ingredients:	
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2,4,5-Trichlorophenoxyacetic acid, Propylene glycol (C ₃ H ₈ O to C ₆ H ₁₄ O ₂) butyl ether esters	34.1%
Inert Ingredients	29.9%
Acid Equivalents:	
2,4-Dichlorophenoxyacetic acid (2,4-D)	22.2%—2.0 lbs./gallon
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)	22.2%—2.0 lbs./gallon

U.S.D.A. Registration No. 464 - 289



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for 4	in 20 - 21	mix 1	plus 4	plus 15 - 16
for 6	in 5 - 6.5	mix 1.5	plus 1	plus 2.5 - 4
for 6	in 8.5 - 10	mix 1.5	plus 2	plus 5 - 6.5
for 6	in 14.5 - 16	mix 1.5	plus 3	plus 10 - 11.5
for 6	in 17.5 - 19	mix 1.5	plus 4	plus 12 - 13.5
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Do not let VERTON CE or sprays and spray mist containing it, come into contact with vegetables, flowers, grapes, fruit trees, ornamentals, cotton or other desirable plants which are sensitive to 2,4-D or 2,4,5-T, since even minute quantities may cause injury to such plants during either the growing or dormant periods.

WARNING

To avoid injury to desirable plants, do not store, handle or apply other agricultural chemicals with the same containers or equipment used for VERTON CE. Do not store near fertilizers, seeds, insecticides or fungicides. Local conditions may affect the use of herbicides. State agricultural authorities in many States have made recommendations for local conditions. Be sure that the use of this product conforms to all applicable regulations.

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