

Handwritten notes and a stamp in the top right corner, including the word "May" and some illegible markings.

# TORDON<sup>®</sup> 101 MIXTURE

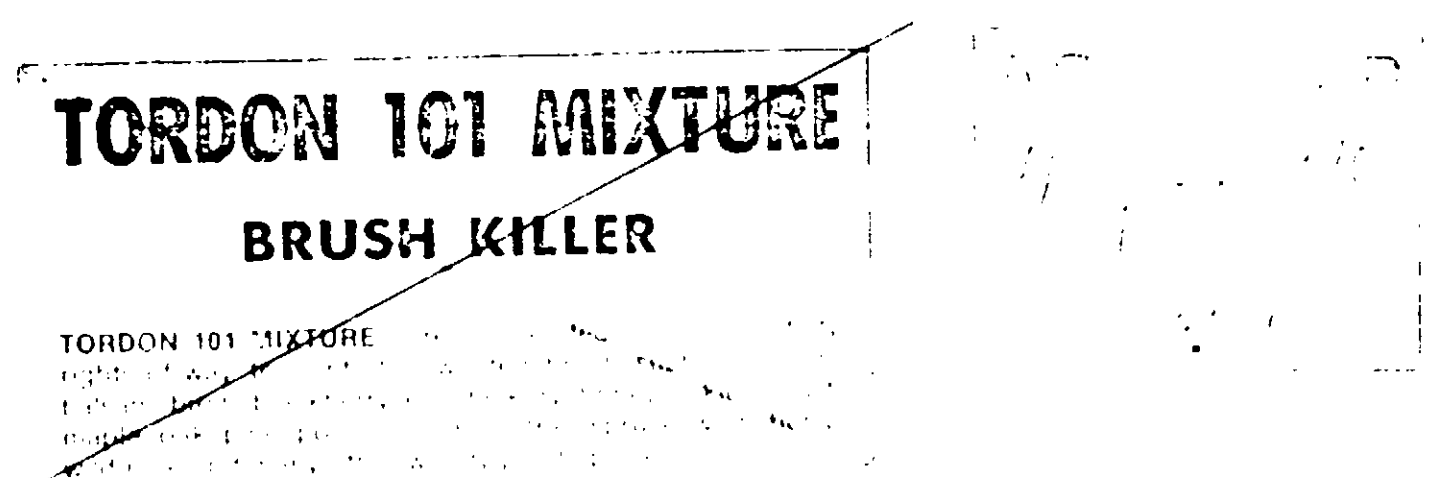
## ~~BRUSH KILLER~~

WEED AND BRUSH KILLER

CAUTION: Keep Out of Reach of Children  
 Read Complete Precautions on Rear Panel

In proper  
 type size

**ACTIVE INGREDIENTS:** 4-amino-3,5,6-trichloropicolinic acid<sup>†</sup> ..... 10.2%  
 as the triisopropanolamine salt ..... 39.6%  
 2,4-dichlorophenoxyacetic acid as the triisopropanolamine salt ..... 50.2%  
**INERT INGREDIENTS** .....  
**ACID EQUIVALENTS:**  
 4-amino-3,5,6-trichloropicolinic acid ..... 5.7%  
 2,4-dichlorophenoxyacetic acid ..... 21.2%  
 U.S.D.A. Registration No. 464-306



### GENERAL INFORMATION

TORDON 101 Mixture weed and brush killer is recommended for control of unwanted annual and perennial broadleaved weeds and woody plants and vines on non-crop areas including industrial manufacturing and storage areas, rights-of-way such as utility easements, line-of-communication lines, pipelines, bridges, and railroads, and in forest areas.

Among the annual and perennial broadleaved weeds controlled by TORDON 101 Mixture are:

- |                 |                   |                     |
|-----------------|-------------------|---------------------|
| Bindweed, Field | Goldenrod         | Snakeweed           |
| Bouncingbet     | Horsenettle       | Sowthistle          |
| Carrot, Wild    | Knapweed, Russian | Spurge, Leafy       |
| Chicory         | Milkweed          | Thistle, Canada     |
| Clover, Sweet   | Plantain          | Thistle, Musk       |
| Clover, Wild    | Prickly Lettuce   | Toadflax, Dalmation |
| Dandelion       | Ragweed, Bur      | Toadflax, Yellow    |
| Dock            | Ragweed, Common   | Vetch, Wild         |
| Fleabane        |                   |                     |

Among the woody plants and vines controlled by TORDON 101 Mixture are:

- |              |             |             |              |
|--------------|-------------|-------------|--------------|
| Ailanthus    | Cherry      | Honeysuckle | Sassafras    |
| Alder        | Douglas Fir | Kudzu       | Sourwood     |
| Aspen        | Elm         | Locust      | Spruce       |
| Birch        | Fir, Balsam | Maple       | Sumac        |
| Blackberry   | Gorse       | Oak         | Tulip Poplar |
| Bracken Fern | Gum         | Persimmon   | Wild Rose    |
| Buttonbush   | Hemlock     | Pine        | Willow       |
| Cedar        | Hickory     | Poison Oak  |              |

### USE DIRECTIONS

Use TORDON 101 Mixture at rates of 1 to 2 gallons per acre to control broadleaved weeds and at rates of 1 to 4 gallons per acre to control woody plants and vines. In all cases use the amounts specified in the directions for thorough and uniform coverage of the plants to be controlled. Note: TORDON 101 Mixture does not mix readily with water.

For best results applications should be made when weeds and brush are actively growing. Applications in late summer when the plants are mature or during period of drought may result in less effective control. Treatment will not cause permanent, if any, damage to common established grasses.

**USE DIRECTIONS**

**LEAF-STEM TREATMENT:** Use 1 gallon of **TORDON 101 MIXTURE** in 100 gallons of water and apply as a drenching spray to woody plants, up to 6 or 8 feet tall, after the foliage is well developed. Spray should thoroughly wet all plant parts including foliage, stems and root collar. For hard to kill species such as ash and oak, also spray the soil around the root collar. Under good growing conditions in humid areas, application made up to 3 weeks before frost is usually effective. However, application made when the foliage has lost its normal green color and vigor may not give satisfactory results.

USE DIRECTIONS

**HIGH VOLUME LEAF-STEM TREATMENT:** Use **TORDON 101 Mixture** at the rate of 1 gallon in water to make 100 gallons of spray to control broadleaved weeds, vines and other woody plants. Apply after the foliage is well developed and in a manner to give thorough spray coverage. For woody plants, up to 6 to 8 feet tall, use a drenching spray and wet all leaves, stems, and root collars. For hard-to-kill species such as ash and oak soak the soil around the root collar. Note: Do not allow the spray to contact desirable plants, and do not soak the soil over roots of such plants.

May 22 1970  
 H. J. ...

May 22 1970

<p style="text-align: center;"><b>AERIAL APPLICATION OF TORDON 101 MIXTURE                  HERBICIDE PLUS NORBAK</b></p> <p>For application by helicopter or airplane, use a spray nozzle which produces a fine mist. Apply 2 to 4 quarts of <b>TORDON 101 MIXTURE</b> per acre, plus 10 to 20 pounds of <b>NORBAK PARTICULATING AGENT</b> per acre. Apply a total spray volume of 10 to 25 gallons per acre. Application should be applied following the instructions for aerial application of rapid growth.</p> <p>Late summer application or application during periods when the plants are not actively growing will result in less effectiveness.</p> <p>Apply <b>TORDON 101 MIXTURE</b> at the rate of 1 gallon per acre, plus 10 to 20 pounds of <b>NORBAK PARTICULATING AGENT</b> per acre. Apply a total spray volume of 10 to 25 gallons per acre. Application should be applied following the instructions for aerial application of rapid growth.</p> <p>Use <b>TORDON 101 MIXTURE</b> at the rate of 1 gallon per acre, plus 10 to 20 pounds of <b>NORBAK PARTICULATING AGENT</b> per acre. Apply a total spray volume of 10 to 25 gallons per acre. Application should be applied following the instructions for aerial application of rapid growth.</p> <p><b>MIXING DIRECTIONS:</b> To prepare 100 gallons of spray, add 15 gallons or 4 quarts of <b>TORDON 101 MIXTURE</b> to 85 gallons of water. Control of weeds and brush will be obtained. For control of weeds and brush growing on heavy clay soils or on heavy, compacted soils, use higher rates and volume of spray. For control of weeds and brush growing on sandy or light soils, use lower rates and volume of spray.</p> <p><b>CAUTION:</b> Do not spray <b>TORDON 101 MIXTURE</b> on desirable plants. Do not spray <b>TORDON 101 MIXTURE</b> on desirable plants. Do not spray <b>TORDON 101 MIXTURE</b> on desirable plants. Do not spray <b>TORDON 101 MIXTURE</b> on desirable plants.</p>	<p style="text-align: center;"><b>RECOMMENDATIONS FOR TORDON 101 MIXTURE                  PLUS NORBAK TO CONTROL WEEDS ON                  HIGHWAY RIGHT OF WAYS</b></p> <p>For control of weeds and brush on highway right of ways, use a spray nozzle which produces a fine mist. Apply 2 to 4 quarts of <b>TORDON 101 MIXTURE</b> per acre, plus 10 to 20 pounds of <b>NORBAK PARTICULATING AGENT</b> per acre. Apply a total spray volume of 10 to 25 gallons per acre. Application should be applied following the instructions for aerial application of rapid growth.</p> <p>Late summer application or application during periods when the plants are not actively growing will result in less effectiveness.</p> <p>Apply <b>TORDON 101 MIXTURE</b> at the rate of 1 gallon per acre, plus 10 to 20 pounds of <b>NORBAK PARTICULATING AGENT</b> per acre. Apply a total spray volume of 10 to 25 gallons per acre. Application should be applied following the instructions for aerial application of rapid growth.</p> <p>Use <b>TORDON 101 MIXTURE</b> at the rate of 1 gallon per acre, plus 10 to 20 pounds of <b>NORBAK PARTICULATING AGENT</b> per acre. Apply a total spray volume of 10 to 25 gallons per acre. Application should be applied following the instructions for aerial application of rapid growth.</p> <p><b>MIXING DIRECTIONS:</b> To prepare 100 gallons of spray, add 15 gallons or 4 quarts of <b>TORDON 101 MIXTURE</b> to 85 gallons of water. Control of weeds and brush will be obtained. For control of weeds and brush growing on heavy clay soils or on heavy, compacted soils, use higher rates and volume of spray. For control of weeds and brush growing on sandy or light soils, use lower rates and volume of spray.</p> <p><b>CAUTION:</b> Do not spray <b>TORDON 101 MIXTURE</b> on desirable plants. Do not spray <b>TORDON 101 MIXTURE</b> on desirable plants. Do not spray <b>TORDON 101 MIXTURE</b> on desirable plants. Do not spray <b>TORDON 101 MIXTURE</b> on desirable plants.</p>
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**LOW VOLUME GROUND OR AERIAL FOLIAGE TREATMENT:** For these uses the required amount of **TORDON 101 Mixture** should be applied in a total spray volume of 10 to 25 gallons per acre, depending upon the plant species, height and density of growth. The preferred volume range is 15 to 25 gallons per acre. For these **LOW VOLUME** uses, **TORDON 101 Mixture** should be used only in thickened (high viscosity) spray mixtures. Such mixtures should be prepared with the use of a separate product such as **NORBAK PARTICULATING AGENT WITH BEEBAC** (available from The Dow Chemical Company) and in the

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TORIDON 101 MIXTURE  
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accompanying "GUIDE TO INGREDIENT NEEDS AND PROCEDURES TO FOLLOW FOR MIXING SPRAYS CONTAINING TORIDON 101 MIXTURE PLUS NORBAK PARTICULATING AGENT". Thickened sprays prepared by using high viscosity invert emulsions or other drift reducing systems may be utilized if they are made as drift-free as are mixtures containing NORBAK particulating agent mixed according to manufacturer's directions.

May 21 1970  
K. J. [unclear]

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May 20 1970

GUIDE TO INGREDIENT NEEDS AND PROCEDURES TO FOLLOW FOR MIXING SPRAYS CONTAINING TORDON 101 MIXTURE PLUS NORBAK PARTICULATING AGENT

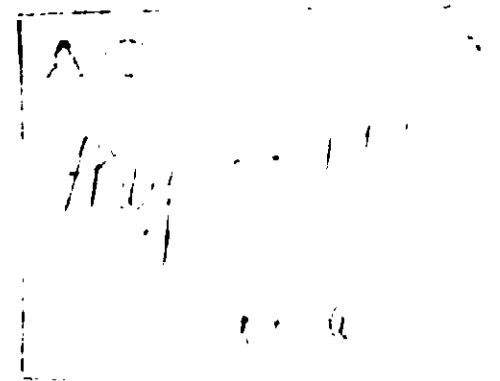
Gallons to use per acre		Amounts of each ingredient needed to prepare 100 gallons of spray mixture <sup>1/</sup>			Required reading for funnel test in seconds <sup>2/</sup>	
TORDON 101 Mixture	Spray Mixture	TORDON 101 Mixture (gallons)	WATER (gallons)	NORBAK Particulating Agent	For use in ground equipment	For use in aerial equipment
0.5	15 to 25	2.5	97.5	5 lb + 10 oz	40 to 65	45 to 85
1.0	15 to 25	5.0	95.0	7 lb + 3 oz	40 to 65	45 to 85
2.0	15 to 25	10.0	90.0	9 lb + 0 oz	40 to 65	45 to 85
3.0	15 to 25	15.0	85.0	10 lb + 10 oz	40 to 65	45 to 85
4.0	20 to 25	20.0	80.0	12 lb + 8 oz	40 to 65	45 to 85

Summary Instructions For Mixing TORDON 101 Mixture With NORBAK Particulating Agent

- I. For high concentration mixtures - (2 to 4 gal TORDON 101 Mixture in 15 to 25 gal spray/A)
- (a) With agitation, make a 1 to 1 mixture of TORDON 101 Mixture and water in spray tank
  - (b) With continuing agitation, slowly add desired amount of NORBAK particulating agent
  - (c) With continuing agitation, add remainder of water required
  - (d) With continuing agitation, wait 20 minutes, then make funnel test<sup>2/</sup>. If necessary, adjust thickness to recommended range in seconds.
- 
- II. For low concentration mixtures - (1/2 to 2 gal TORDON 101 Mixture in 15 to 25 gal spray/A)
- |  |             |   |
|--|-------------|---|
| <p><u>Direct mixing in spray tank</u></p> <ul style="list-style-type: none"> <li>(a) With agitation, put all of required TORDON 101 Mixture and water in tank</li> <li>(b) With continuing agitation, add desired amount of NORBAK particulating agent through powder disperser</li> <li>(c) Follow procedure in I (d), above</li> </ul> | <p>-OR-</p> | <p><u>Mixing in smaller auxilliary tank before transfer to the spray tank</u></p> <ul style="list-style-type: none"> <li>(a) With agitation, make a 1 to 1 mixture of TORDON 101 Mixture and water</li> <li>(b) Add to this mixture the desired amount of NORBAK particulating agent</li> <li>(c) Transfer this mixture to the spray tank containing the remainder of required water under agitation</li> <li>(d) Follow procedure in I (d), above</li> </ul> |
|--|-------------|---|

<sup>1/</sup> Amounts are those needed when sprayed at rate of 20 (average of 15 to 25) gallons per acre. Adjust accordingly for other use rates.

<sup>2/</sup> For complete mixing instructions and detailed directions on how to make the "funnel test" and determine the required readings in seconds, consult manufacturer's publication "INSTRUCTION MANUAL FOR USING NORBAK PARTICULATING AGENT WITH HERBICIDES".



Broadleaved Annual and Perennial Weed and Woody Vine Control: Use TORDON 101 Mixture at rates of 2 quarts to 3 gallons per acre in 15 to 25 gallons of a water spray mixture containing the amount of NORBAK particulating agent required to provide the recommended thickness. Apply to problem weeds and vines any time after growth begins in the spring and before the ground freezes in the fall. For seasonal control of vigorously growing stands of field bindweed, Canada thistle or mixtures of these with susceptible annual weeds such as ragweed, dandelion, plantain, clovers and dock use 2 to 3 quarts of TORDON 101 Mixture per acre in 15 to 25 gallons of water spray containing NORBAK particulating agent. In arid areas and for control of more resistant perennial weeds use 1 to 3 gallons of TORDON 101 Mixture per acre in 15 to 25 gallons of spray containing NORBAK particulating agent. Use 1 to 1.5 gallons per acre to control species such as Canada thistle, field bindweed and milkweed. The higher rates should be used under drought stress conditions and for the more resistant species such as bouncingbet, leafy spurge, toadflax and woody vines.

Woody Plant Control: Use TORDON 101 Mixture at the rate of 1 to 4 gallons per acre in 15 to 25 gallons of a water-spray mixture containing NORBAK particulating agent. For susceptible seedling stages of species such as aspen, cherry, and sumac use 1 to 1.5 gallons of TORDON 101 Mixture per acre in 15 to 25 gallons of a water spray mixture containing NORBAK particulating agent. For more mature and/or less susceptible species such as willow, buttonbush, black locust, sassafras, sumac, tulip poplar and cherry growing in sandy loam soil, use 2 to 2.5 gallons of TORDON 101 Mixture per acre in 15 to 25 gallons of a water spray mixture containing NORBAK particulating agent.

For more resistant brush such as maple, pine, sourwood, blackgum, cedar and oak, where growing on heavy clay soils or on rocky terrain, use 3 to 4 gallons of TORDON 101 Mixture per acre in 15 to 25 gallons of a water spray mixture containing NORBAK particulating agent. Use the higher rate and volume where the foliage of more difficult to kill brush is covered with dense vine growth. Note: For best results under conditions of drought stress use the higher rates recommended. Even these rates under such conditions may not be as effective as the lower rates under good growing conditions.

**CUT SURFACE TREATMENTS:** In forests and other non-crop areas to

control surface vegetation, use TORDON 101 MIXTURE Mixture, such as pine, spruce, TORBAK Mixture,

either undiluted or

1 to 1.5 gallons per acre in 15 to 25 gallons of water.

With Tree Injection Method: Use 1/2 milliliter of undiluted TORDON 101 Mixture or

1 to 2 milliliters of 10% solution of TORDON 101 Mixture in water per inch of diameter of tree trunk.

With Drill or Girdle Method: Use 1/2 milliliter of undiluted TORDON 101 Mixture or 1 to 2 milliliters of 10% solution of TORDON 101 Mixture in water per inch of diameter of tree trunk.

For more information on the use of TORDON 101 Mixture, contact the manufacturer.

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**USE PRECAUTIONS**

Since TORDON herbicide and 2,4-D are highly active, even minute quantities may cause damage to plants during both growing and dormant periods. Therefore, do not apply or otherwise permit TORDON 101 MIXTURE or spray, herbicide or material containing it to contact desirable susceptible plants such as flowers, other ornamental plants, fruit trees, cotton, tobacco, tomatoes, beans of all types including soybeans, and other valuable broadleaved plants. Applications by airplane or other means should be carried out only when the hazard from drift is minimal. Do not apply by airplane in the vicinity of cotton, grapes or other desirable susceptible vegetation. Coarse sprays are less likely to drift. Do not allow the material to contaminate water used for irrigation, drinking or other domestic purposes. Do not store near food, feed stuff, fertilizers, seeds, insecticides, fungicides or other pesticides. Because of the difficulty of thoroughly cleaning sprayers and other equipment following its use for application of TORDON 101 MIXTURE, such equipment should not be used for applying other materials to desirable plants. Shipping containers should not be re-used for other materials which may be applied to desirable plants.

Note: Be sure that all use of TORDON 101 MIXTURE conforms to local regulations.

**USE PRECAUTIONS**

Do Not Allow Spray Drift: TORDON 101 Mixture is highly active against most broadleaved plants. Tiny amounts may cause injury to such plants if applied during either growing or dormant periods. Do not use high pressure sprays. Do not apply or otherwise permit TORDON 101 Mixture or sprays containing it to contact desirable plants such as flowers, other ornamental plants, vegetables, grapes, fruit trees, cotton, tobacco, tomatoes, potatoes, beans of all types including soybeans, and other valuable broadleaved plants, nor the soil containing roots of such valuable plants. Apply TORDON 101 Mixture only when there is little or no wind and no hazard from drift. Coarse sprays are least likely to drift.

Do Not Contaminate Water: To avoid injury to crops or other desirable plants, do not treat or allow spray drift to fall onto inner banks or bottom of irrigation ditches.

Other Precautions: Do not store near food, feedstuff, fertilizer, seeds, insecticides, fungicides or other pesticides. To avoid injury to desirable plants, containers and sprayers used for TORDON 101 Mixture should not be reused to contain or apply other materials.

Rinse equipment and containers thoroughly with water and dispose of wastes by burying in non-croplands away from water supplies. Containers should be disposed of by punching holes in them and burying with waste.



COMBUSTIBLE  
HARMFUL IF SWALLOWED  
CAUSES EYE IRRITATION  
MAY CAUSE SKIN IRRITATION

Keep Away from Heat and Open Flame  
Keep Container Closed  
Avoid Contact with Eyes, Skin and Clothing  
In case of contact, flush eyes and skin with plenty of water for eyes get medical attention. Remove grossly contaminated clothing and wash before reuse.

STORE OUT OF THE REACH OF CHILDREN  
AND ANIMALS

CAUTION

KEEP OUT OF REACH OF CHILDREN

HARMFUL IF SWALLOWED

CAUSES EYE INJURY

MAY CAUSE SKIN IRRITATION

Avoid Contact with Eyes, Skin and Clothing

Wash Well After Handling or Use

Keep Container Closed

Keep Away From Heat and Open Flame

When handling concentrate wear suitable eye protection.  
In case of eye contact, promptly flush with plenty of water and get medical attention. Remove ~~grossly~~ contaminated clothing and wash before reuse.

COMBUSTIBLE LIQUID

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