

# Atraton<sup>®</sup>

# 90

Bare ground weed control with high  
suspensibility and easy wetting.

## Herbicide

For nonselective weed  
control on industrial sites  
and noncrop areas

Do not use on agri-  
cultural lands

**25 Pounds**  
Net Weight

<b>Active Ingredients:</b>	
Atrazine: 2-chloro-4-ethylamino-6-isopropyl-amino-s-triazine . . .	85.5%
Related compounds	4.5%
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<b>Inert Ingredients:</b>	10.0%
<b>Total:</b>	100.0%

Control No. **53160**

Atraton 90 is a water  
dispersible granule

Keep Out of Reach  
of Children.

### Caution

See additional pre-  
cautionary statements  
on panel below.

EPA Est. 100-LA-1  
EPA Reg. No. 100-622

See directions for use  
on panel below.

ACCEPTED

MAR 20 1986

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 100-622

# CIBA-GEIGY

## Atritol® 90

### **DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY**

**IMPORTANT:** Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product.

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#### **Conditions of Sale and Warranty**

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. **CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.

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#### **DIRECTIONS FOR USE**

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

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL AND/OR INJURY TO DESIRABLE PLANTS.**

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#### **General Information**

Atritol 90 is a nonselective herbicide for use on noncrop areas. Atritol 90 can be applied before or after plant growth begins. Although Atritol 90 has some foliage activity, most of its activity is through root absorption. Therefore, moisture is required to move it into the root zone. Very dry soil conditions and lack of sufficient rainfall may result in poor weed control. Postemergence applications should be made when weeds are young and growing actively.

Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported which cannot be effectively controlled by this and related herbicides. Where this is known or suspected and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of this product in registered combinations or in sequence with other registered herbicides which are not triazines. If only resistant biotypes are expected to be present, use a registered non-triazine herbicide. Consult with your state Agricultural Extension Service for specific recommendations.

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## Atritol® 90

Use only in areas where complete control of broadleaf and grass vegetation is desired, such as (1) railroad, highway, and utility rights-of-way, (2) petroleum tank farms, (3) industrial sites, (4) lumberyards, (5) around warehouses and chemical plants, and (6) along industrial fence lines. When applied to the soil, this product usually inhibits plant growth for one year or more. It should not be used on land to be cropped or near adjacent desirable trees, shrubs or plants, or in greenhouses, as injury may occur. Do not allow livestock to graze treated areas.

Atritol 90 is noncorrosive to equipment.

### Mixing Procedures

(1) Be sure sprayer is clean and not contaminated with any material, as sprayer clogging may result. (2) Fill tank  $\frac{1}{4}$  full with clean water, and start agitation. (3) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (4) Pour product directly from bag into tank. (5) Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. (6) Add tank mix herbicides. (7) Complete filling tank, maintaining sufficient agitation at all times to ensure surface action. This applies to both spray and nurse tanks. (8) Empty tank as completely as possible before refilling to prevent buildup of emulsifiable concentrate residue. Always maintain agitation to avoid separation. (9) If an emulsifiable concentrate film starts to build up in tank, drain and clean with strong detergent solution or solvent. (10) Immediately after use, clean sprayer thoroughly by flushing system with water containing a detergent.

### Application Equipment

Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and the same size. Calibrate sprayer before use and recalibrate at the start of each season.

Use a pump with capacity to (1) maintain 35-40 psi at nozzles, (2) provide sufficient agitation in tank to keep mixture in suspension, and (3) to provide a minimum of 20% bypass at all times. Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product. The pump should provide a minimum of 10 gals./minute/100 gal. tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on suction side of the pump should be *16-mesh or coarser*. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

### Application Rates—Atritol 90 Applied Alone

Use sufficient water to assure thorough ground and plant coverage. Use at *least* 1 gallon of water for each pound of Atritol 90; more water may be necessary where weed growth is heavy.

To control annual broadleaf and grass weeds (such as barnyardgrass, cheatgrass, crabgrass, foxtail, lambsquarters, puncturevine, and ragweed) and biennials (such as turkey mullein): Broadcast 5.3-11.1 lbs. of Atritol 90 per acre.

To control most annual and many perennial broadleaf and grass weeds (such as bluegrass, burdock, Canada thistle, dogfennel, orchardgrass, plantain, purpletop, quackgrass, redtop, and smooth brome). Broadcast 11.1-22.2 lbs. of Atritol 90 per acre.

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## Atratol® 90

To control hard-to-kill biennial and perennial weeds (such as bullthistle and sowthistle): Broadcast 22.2-44.4 lbs. of Atratol 90 per acre.

For longer residual control in regions of high rainfall and a long growing season, apply 22.2-44.4 lbs of Atratol 90 per acre.

For small areas, 4 oz. per 1,000 sq. ft. is equivalent to 11.1 lbs. per acre.

### Tank Mixtures

#### **Atratol 90 plus Princep® 80W or Princep Caliber® 90**

Use only for long-term control of broadleaf and grass vegetation in areas listed in respective labels. Do not use on cropland, or near desirable trees, shrubs or other plants, or in greenhouses, as injury may occur.

This tank mixture has similar activity and moisture requirements as described in above General Information section, except that Princep provides preemergence control only.

For best results, apply to soil shortly before weed growth begins or apply postemergence to young, actively growing plants not over 6 inches tall.

Use sufficient water for thorough soil and plant coverage. Use at least 1 gal. of water for each lb. of Atratol 90 plus Princep 80W or Caliber 90 combination. More water may be needed for heavy weed growth. Maintain agitation during mixing and application.

Broadcast tank mixtures at the following rates to control weeds listed. Use the lower rates for light weed infestations and the higher rates for heavier infestations.

Use 2.9-5.6 lbs. of Atratol 90 plus 3.25-6.25 lbs. of Princep 80W or 2.9-5.6 lbs. of Princep Caliber 90 per acre to control weeds listed in the General Information and the several crop sections of the Princep 80W and Princep Caliber 90 labels.

The above rates will also control California burclover, *Orthocarpus purpureus*, riggut brome, smooth catsear, summer lupine, and turkey mullein.

Use 5.6 lbs. of Atratol 90 plus 6.25 lbs. of Princep 80W or 5.6 lbs. of Princep Caliber 90 per acre to control burdock, daisy fleabane, goldenrod, horseweed, little mallow, milkweed, orchardgrass, quackgrass, Russian thistle, shortpod mustard, wild barley, and wood sorrel.

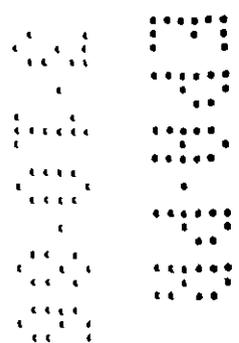
Use 11.1 lbs. of Atratol 90 plus 12.5 lbs. of Princep 80W or 11.1 lbs. of Princep Caliber 90 per acre to control eveningprimrose, shepherds-needle, and tall fescue.

For small areas, ½ cup (4 oz.) of Atratol 90 or ⅔ cup (4.5 oz.) of Princep 80W or ½ cup (4 oz.) of Princep Caliber 90, per 1,000 sq. ft. is equivalent to 11.1 lbs. of Atratol 90 or 12.5 lbs. of Princep 80W or 11.1 lbs. of Princep Caliber 90 per acre, respectively.

#### **Atratol 90 plus Diuron 80W**

Use only for long-term control of broadleaf and grass vegetation in areas listed in respective labels. Do not use on cropland, or near desirable trees, shrubs or other plants, or in greenhouses, as injury may occur.

This tank mixture has activity and moisture requirements similar to that described in above General Information section and in the diuron 80W label. For best results, apply to soil shortly before weed growth begins or apply to young, actively growing plants not over 6 inches tall. For increased contact activity, add a surfactant, such as Surfactant WK, at 2 qts. per 100 gals. of spray volume. Add surfactant as last ingredient to nearly full spray tank.



### Atratul® 90

Use sufficient water for thorough ground and plant coverage. Use at least 1 gal. of water for each pound of tank mixture. More water may be needed for heavy weed growth. Maintain agitation during mixing and application.

Broadcast tank mixtures at the following rates to control weeds listed. Use the lower rates for light weed infestations and the higher rates for heavier infestations.

Use 4.4-5.6 lbs. of Atratul 90 plus 5-6.25 lbs. of diuron 80W, for example, Karmex® 80W, per acre to control weeds listed in crop and noncrop Directions for Use in the diuron 80W label.

Use 5.6 lbs. of Atratul 90 plus 6.25 lbs. of diuron 80W per acre to control broomsedge, buckhorn plantain, Carolina geranium, chicory, downy brome, eveningprimrose, fleabane, goldenrod, horseweed, lespedeza, little mallow, orchardgrass, Russian thistle, shortpod mustard, tall fescue, wild barley, and wood sorrel.

Use 11.1 lbs. of Atratul 90 plus 12.5 lbs. of diuron 80W per acre to control alfalfa, black nightshade, leafy spurge, and shepherds-needle.

To determine compatibility of tank mixtures, thoroughly mix products in a small container at the ratio of 1 qt. of water to 1.75 oz. of Atratul 90 plus 2 oz. of diuron 80W. Let stand for 5 minutes. If the mixture remains mixed, or can be remixed readily, it is compatible and can be sprayed.

For small areas, 1/2 cup (4 oz.) of Atratul 90 or 1.25 cups of diuron 80W, such as Karmex 80W, per 1,000 sq. ft. is equivalent to 11.1 lbs. of Atratul 90 or 12.5 lbs. of diuron 80W per acre.

#### Atratul 90 plus Ontrack® 8E

Use only for control of annual grass weeds, or annual broadleaf and grass weeds on railroad rights-of-way.

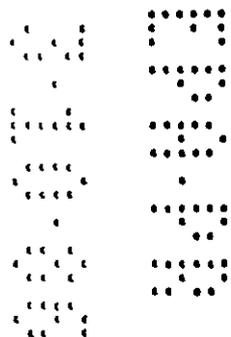
Broadcast the tank mixture of Atratul 90 plus Ontrack 8E at rates of 5.3-11.1 lbs. plus 4 pts., respectively, in 50-100 gals. of water per acre to control barnyardgrass, crabgrass, fall panicum, giant foxtail, kochia, little barley, pigweed, ragweed, riggut brome, Russian thistle, ryegrass, sprangletop, volunteer wheat, wild oats, and witchgrass. Use the lower rates in the rate range for light weed infestations and the higher rates for heavier infestations. Use no more than 4 pts. Ontrack 8E per acre in tank mixtures with Atratul.

For best results, apply immediately prior to weed emergence. The combination of Atratul 90 plus Ontrack 8E may also be applied after weeds emerge, but before they exceed 6 inches in height.

*Precautions:* Do not use near desirable trees, shrubs, plants or in greenhouses, or injury may occur.

#### Atratul 90 plus Oust®

Use this tank mixture to control the weeds listed below with either preemergence, early postemergence, or postemergence applications. Use the higher rates within the ranges given under conditions of heavy weed growth, on soil with over 2½% organic matter, on areas with heavy decaying plant residues, or on high moisture areas such as along road edges or rail shoulders. To improve wetting and/or contact activity on emerged weeds, add a nonionic surfactant such as duPont Surfactant WK or X-77® at 1 qt. per 100 gals. of spray. Do not apply by aircraft. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to the labels of both herbicides for specific noncrop sites and further directions, precautions, and limitations.



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**Atraton® 90**

**Preemergence to Early Postemergence:** To control the weeds listed below apply 4.4-8.9 lbs. of Atraton 90 plus 3-5 oz. of Oust in a minimum of 25 gals. of water per acre.

**Broadleaf Weeds (Up to 3-4' In Height or Diameter)**

bouncingbet	dogfennel	pigweed	sweet clover
buckhorn plantain	filaree	prickly lettuce	tansymustard
burclover	hoary cress	puncturevine	tansy ragwort
Carolina geranium	horsetail	purple starthistle	tumble
common chickweed	kochia	ragweed	mustard
common dandelion	lambsquarters	Russian thistle	turkey mullein
common speedwell	little mallow	sowthistle	vetch
common yarrow	mustard	St. Johnswort	wild carrot
crimson clover	ox-eye daisy	sunflower	yellow rocket

**Grasses (Up to 6-12' In Height)**

Alta fescue	crabgrass	Italian ryegrass	red fescue
annual bluegrass	downy brome	johnsongrass	reed canarygrass
annual ryegrass	fall panicum	(short-term control)	ripgut brome
bahia grass	fescue	little barley	ryegrass
barnyardgrass	foxtails	red brome	smooth brome
cheatgrass	Indiangrass		sprangletop
			witchgrass

**Postemergence:** To control actively growing weeds listed below apply 8.9-17.8 lbs. of Atraton 90 plus 6-12 oz. of Oust in a minimum of 25 gals. of water per acre.

**Actively Growing Weeds**

bedstraw	goldenrod	musk thistle	johnsongrass
burdock	hemlock	plantain	(season-long control)
Canada thistle	honeysuckle	poison ivy	orchardgrass
curly dock	Jerusalem	spanishneedles	quackgrass
dewberry	artichoke	Virginia	redtop
fiddleneck	kudzu	pepperweed	yellow nutsedge
fleabane	mayweed	wild blackberry	

**Atraton 90 plus Arsenal®**  
**(For Use Only In States Where Registered)**

Use this tank mixture to provide postemergence and residual control of the weeds listed in the various categories below. This tank mixture provides quicker postemergence weed control over that of Arsenal applied alone. Use the higher rates within the rate ranges given where heavy or well established infestations of weeds occur. Apply uniformly to the noncrop land area to be treated in 30-60 gals. of water per acre with a spray pressure of 25 to 30 psi. Refer to the Arsenal label for the addition of surfactant when spray volumes over 60 gallons per acre are applied. Also refer to the Atraton 90 and Arsenal label for specific noncrop sites and further directions, precautions, and limitations.

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**Annual Weeds**

Apply 4.4-11.1 lbs. Atratul 90 plus 2-3 pts. of Arsenal per acre.

barnyardgrass ( <i>Echinochloa crusgalli</i> )	lespedeza ( <i>Lespedeza</i> spp.)
broadleaf signalgrass ( <i>Brachiaria platyphylla</i> )	marehail ( <i>Erigeron canadensis</i> )
carpetweed ( <i>Mollugo verticillata</i> )	nightshade ( <i>Solanum</i> spp.)
cheat ( <i>Bromus</i> spp.)	pigweed ( <i>Amaranthus</i> spp.)
common ragweed ( <i>Ambrosia artemisiifolia</i> )	plaintain ( <i>Plantago</i> spp.)
curly dock ( <i>Rumex crispus</i> )	puncturevine ( <i>Tribulus terrestris</i> )
downy brome ( <i>Bromus tectorum</i> )	purslane ( <i>Portulaca</i> spp.)
fleabane ( <i>Erigeron</i> spp.)	ragweed ( <i>Ambrosia</i> spp.)
foxtails ( <i>Setaria</i> spp.)	sicklepod ( <i>Cassia obtusifolia</i> )
goldenrod ( <i>Solidago</i> spp.)	smartweed ( <i>Polygonum</i> spp.)
hoary vervain ( <i>Verbeña stricta</i> )	sorrel ( <i>Rumex</i> spp.)
jimsonweed ( <i>Datura stramonium</i> )	sowthistle ( <i>Sonchus</i> spp.)
kochia ( <i>Kochia scoparia</i> )	sunflower ( <i>Helianthus annuus</i> )
lambquarters ( <i>Chenopodium alba</i> )	velvetleaf ( <i>Abutilon theophrasti</i> )
	wild buckwheat ( <i>Polygonum convolvulus</i> )
	wild mustard ( <i>Brassica kaber</i> )
	wild oats ( <i>Avena fatua</i> )
	yellow woodsorrel ( <i>Oxalis stricta</i> )

Apply 4.4-11.1 lbs. Atratul 90 plus 3-4 pts. of Arsenal per acre.

cocklebur ( <i>Xanthium pennsylvanicum</i> )	crotolaria ( <i>Crotolaria</i> spp.)
crabgrass ( <i>Digitaria</i> spp.)	goosegrass ( <i>Eleusine indica</i> )
	morningglory ( <i>Ipomoea</i> spp.)

**Biennial/Perennial Weeds**

Apply 5.3-11.1 lbs. Atratul 90 plus 2-3 pts. of Arsenal per acre.

dandelion ( <i>Taraxacum officinale</i> )	ox-eye daisy ( <i>Chrysanthemum leucathemum</i> )
field bindweed ( <i>Convolvulus arvensis</i> )	paragrass ( <i>Brachiaria mutica</i> )
guineagrass ( <i>Panicum maximum</i> )	quackgrass ( <i>Agropyron repens</i> )
honeylocust ( <i>Gleditsia triacanthos</i> )	sandspur ( <i>Cenchrus</i> spp.)
johnsongrass ( <i>Sorghum halepense</i> )	tall fescue ( <i>Festuca arundinacea</i> )
multiflora rose ( <i>Rosa multiflora</i> )	vaseygrass ( <i>Paspalum urvillei</i> )
	wild carrot ( <i>Daucus carota</i> )

Apply 5.3-11.1 lbs. Atratul 90 plus 3-4 pts. of Arsenal per acre.

dewberry ( <i>Rubus</i> spp.)	redvine ( <i>Brunnichia cirrhosa</i> )
greenbriar ( <i>Smilax</i> spp.)	trumpetcreeper ( <i>Campsis radicans</i> )
honeysuckle ( <i>Lonicera</i> spp.)	Virginia creeper ( <i>Parthenocissus quinquefolia</i> )
opossum grape ( <i>Cissus sicyoides</i> )	
poison ivy ( <i>Rhus radicans</i> )	

Apply 5.3-11.1 lbs. Atratul 90 plus 4-6 pts. of Arsenal per acre.

bermudagrass ( <i>Cynodon dactylon</i> )	mulberry ( <i>Morus</i> spp.)
blackberry ( <i>Rubus</i> spp.)	sumac ( <i>Rhus</i> spp.)
Canada thistle ( <i>Cirsium arvense</i> )	

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## Storage and Disposal

### Pesticide Storage and Disposal

Store in a dry place. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

### Container Disposal

Completely empty bag into application equipment. Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. Stay out of smoke from burning bags.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call (919) 292-7100 day or night.

## Precautionary Statements

### Hazards to Humans and Domestic Animals

#### CAUTION

Harmful if swallowed, inhaled, or absorbed through the skin. Avoid contact with eyes, prolonged contact with skin, and inhalation of dust. Wash thoroughly after handling and before eating or smoking. Remove and wash contaminated clothing before reuse.

#### Statement of Practical Treatment

**If swallowed:** Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or, if available, by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

**If inhaled:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**If on skin:** Wash with plenty of soap and water. Get medical attention.

**If in eyes:** Flush eyes with *plenty* of water. Call a physician if irritation persists.

**Note to Physician:** There is no specific antidote for atrazine. If this product is ingested, induce emesis or lavage stomach. The use of an aqueous slurry of activated charcoal may be considered.

#### Environmental Hazards

Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water or wetlands. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

**Atraton® 90**

Arsenal® trademark of American Cyanamid Company

Atraton® trademark of CIBA-GEIGY

Caliber® trademark of CIBA-GEIGY

Ontrack® trademark of CIBA-GEIGY

Oust® trademark of E. I. duPont de Nemours and Co., Inc.

Princep® trademark of CIBA-GEIGY for simazine

Karmex® trademark of E. I. duPont de Nemours and Co., Inc. for diuron

X-77® trademark of KALO Agricultural Chemicals, Inc.

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