

2011-4874
2011-10-21

GROUP 3 HERBICIDE

COMMERCIAL
2 kg, 10 kg

**DACTHAL® W-75 Herbicide (75% Wettable
Powder)**

READ LABEL BEFORE USING

CAUTION KEEP OUT OF REACH OF CHILDREN

GUARANTEE: Chlorthal (present as dimethyl ester*) 75% Contains:
Chlorthal Dimethyl (Dimethyl tetrachloroterephthalate)

REGISTRATION NO. 8963 PEST CONTROL PRODUCTS ACT

*Covered under U.S. Patent No. 2923634
AMVAC Chemical Corporation, Suite 1200,
4695 MacArthur Court
Newport Beach CA 92660
1-323-264-3910

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN

Harmful if swallowed.

Avoid contact with eyes and skin.

DO NOT APPLY BY AIR.

DACTHAL W-75 is a wetttable powder so store in a dry ventilated place.

Wash out the spray tank thoroughly after use.

Do not graze on treated areas or feed plant parts to livestock.

Wear a long-sleeved shirt, long pants, shoes plus socks, chemical-resistant gloves during mixing/loading, clean-up and repair activities and when using handheld equipment. In addition, wear a NI OSH-approved dust/mist respirator during mixing/loading.

Do not use in residential areas. Residential areas are defined as sites where bystanders including children may be potentially exposed during or after spraying. This includes around homes, on school grounds, in parks, in playgrounds, on playing fields, around public buildings or any other areas where the general public including children could be exposed.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's web site at: www.croplife.ca

FIRST AID

If swallowed, call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If inhaled, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice. In case of contact with eyes, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice. If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Treat symptomatically.

EMERGENCY TELEPHONE NUMBER

All hours, 1-323-264-3910 ONLY for health and environmental information.

ENVIRONMENTAL HAZARD

Toxic to small mammals.

Chlorthal demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the water table is shallow. Tetrachloroterephthalic acid, a breakdown product of chlorthal, is known to leach through soil as a result of agricultural and turf uses and has been found in groundwater which may be used for drinking water. Users

are advised not to apply chlorthal to sand or loamy sand soils where the water table (groundwater) is close to the surface and where those 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 groundwater used for drinking water.

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted silt or clay.

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

STORAGE

Do not store near feed and foodstuffs, seeds, fertilizers, or other pesticides in order to prevent contamination.

DISPOSAL

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

(1)

Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.

(2) Make the empty, rinsed container unsuitable for further use. If there is no container collection site in your area, dispose of container in accordance with provincial requirements. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

PRODUCT INFORMATION

DACTHAL W-75 is a 75 percent wettable powder formulation for use in pre-emergence application for control of crabgrass and other annual grasses and certain broadleaved weeds on mineral soils in vegetables, strawberries, agronomic crops, ornamentals and turf.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, DACTHAL W-75 is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to DACTHAL W-75 and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of

action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance management strategies should be followed.

To delay herbicide resistance:

Where possible, rotate the use of DACTHAL W-75 or other Group 3 herbicides with different herbicide groups that control the same weeds in a field.

Use tank mixtures with herbicides from a different group when such use is permitted.

Herbicide use should be based on IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.

Monitor treated weed population for resistance development. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed. Contact your local extension specialist or certified crop advisors for any additional pesticide resistance management and/or integrated weed management recommendations for specific crops and weed biotypes.

For further information or to report suspected resistance, contact Amvac at 1-323-264-3910 or at www.amvac-chemical.com.

DIRECTIONS FOR USE

Preparation and Application of the Spray: DACTHAL W-75 should be thoroughly mixed in the spray tank with water to provide for broadcast application of at least 225 litres of water per hectare depending on equipment and local practices. To ensure uniform suspension in the spray tanks, DACTHAL W-75 should be pre-mixed in a clean container at the rate of about 5.5 kilograms to 15 litres of water. This mixture should be stirred until a slurry is formed and then added to the spray tank during or after filling. Adequate agitation should be maintained during filling and spraying to keep material in uniform suspension. Use nozzles suitable for applying wettable powder so that the spray can be uniformly distributed over the properly prepared soil surface. Any screen or strainer in spray equipment should be no finer than 50 mesh to prevent clogging. It is essential that the sprayer be properly calibrated before making applications. Standard low-pressure (207 -345 kPa) boom-type sprayers are recommended. A minimum of 1 centimetre of water, either as rain or irrigation, is necessary to activate DACTHAL W-75 and thereby obtain pre-emergence control of weeds specified. Normally, water must be applied within 3 to 5 days of application, if sufficient rainfall does not occur. However, when surface soil is dry but subsurface soil contains enough moisture to germinate weeds, water should be applied immediately. If furrow irrigation is used, the top of the bed must be thoroughly wet. If rainfall does not occur during this period and irrigation cannot be made, shallow incorporation, when recommended, will aid in weed control.

Soil Preparation: Prior to making application, the soil should be cultivated to provide a weed-free and uniform surface since DACTHAL W-75 herbicide is effective only when applied before weed seed germination occurs. Unless incorporated, DACTHAL W-75 should be applied within two or three days following cultivation, to prevent subsurface germinating weeds from becoming established. When cultivating between rows, use

shields on cultivator to prevent untreated soil from covering treated bands. Cultural practices, such as forming crop beds, should be completed prior to DACTHAL W75 application in order to avoid exposing untreated soil in the bottom of the furrow and concentrating the sprayed soil within the bed.

Soil Incorporation: (Do not incorporate deeper than 5 centimetres) Shallow soil incorporation, when recommended, (see specific crop recommendations) often gives more consistent results. Depending on crop and time of application, several incorporation methods may be used.

Pre-plant Incorporation: This type of incorporation often provides better weed control on irrigated land, and also on non-irrigated land when dry weather is anticipated following planting. When recommended, DACTHAL W-75 can be sprayed on the soil surface and then incorporated into the soil using a disc harrow or related tilling equipment. To ensure complete incorporation, double disc in two directions. For incorporating banded treatments, hooded power driven rotary tillers or ground tillers are essential.

Delayed Pre-emergent Incorporation: For crops where pre-plant incorporation can be used (see recommendations). Incorporation at this time should be done when adequate rainfall or irrigation is not available within 3 to 5 days after planting. Lightly incorporate (1.5 to 2.5 centimetres deep) with drag harrow, rotary hoe or other suitable tillage equipment.

Layby Incorporation: (Just prior to stage when plant growth would prevent further cultivation). Cultivate soil to remove established weeds. Apply DACTHAL W-75 and lightly incorporate with suitable equipment.

Rates of Application and Weeds Controlled: DACTHAL W-75 is recommended at the rates of 6.75-22.5 kg/ha depending on soil type and weeds to be controlled. The following table outlines general recommendations for the use of DACTHAL W-75 on various soil types. The maximum rate for each soil type should be used when moderately susceptible weeds are present. Specific recommendations for each crop should be consulted. DACTHAL W-75 should not be applied to certain crops under conditions of cool, wet weather when plants are not actively growing. Refer to specific label recommendations for seeded melons, tomatoes, peppers and eggplant for further details.

Do not enter or allow entry into treated areas during the restricted-entry interval (REI) of 12 hours.

Soil Type	Organic Matter %	Broadcast Rate of DACTHAL W-75/ha
Light-sand loam or sandy	0- 3	9- 13.5 kg
Medium-silt loam	0- 3	11- 15.5 kg
Heavy-clay loam	0- 3	18 kg
Heavy-silt loam	3- 5	20 kg

Rates of application can be reduced by banding - See conversion chart.

The following weeds are grouped according to their susceptibility to DACTHAL W-75.

Susceptible (controlled at recommended rates): Common lambsquarters, smooth crabgrass, large crabgrass, lovegrass, carpetweed, witchgrass, purslane, yellow foxtail, green foxtail, common chickweed.

Moderately Susceptible (higher rates required for effective control): Redroot pigweed, barnyardgrass, goosegrass, groundcherry, annual bluegrass, johnsongrass (from seed).

Tolerant: Velvetleaf, common ragweed, johnsongrass established from rhizomes, mustards, jimsonweed, galinsoga, smartweed, nutsedge, cocklebur.

Replanting: Replanting crops other than those included on this label, in DACTHAL W-75 treated soil within 8 months of application may result in crop injury. If replanting is required because of an early crop failure, the planting of onions, seeded melons, potatoes, tomatoes, eggplants or peppers at this time may result in crop injury. However, all crops on this label may be planted following harvest of a DACTHAL W-75 treated crop.

ANY APPLICATION OF DACTHAL SHOULD BE MADE PRIOR TO WEED SEED GERMINATION Crops	When to Apply	Rate	Remarks
Broccoli, Brussels sprouts, cauliflower, cabbage	At seeding or transplanting	See section of label on rates of application and weeds controlled. Do not apply more than 15.5 kg/ha	Apply uniformly to the soil as a spray. DACTHAL W-75 can be sprayed directly over transplants without injury. If weed have emerged soil should be clean cultivated and weeded prior to application. Can be pre-plant incorporated.
Seeded melons (cantaloupe, watermelons), cucumbers, squash (summer and winter)	When plants have 4-5 true leaves	Do not apply more than 15.5 kg/ha	Apply only when plants have 4-5 true leaves, are well established and growing conditions are favorable for good plant growth. (If applied earlier than recommended and/or growing conditions are unfavorable, crop injury may result). If weeds have emerged, crop should be cultivated and weeded prior to the DACTHAL W-75 application. Incorporation not recommended.

Garlic and onions	At seeding or transplanting or on onions at layby.*	Do not use more than 18 kg/ha	Apply uniformly to the soil as a spray. DACTHAL W-75 can be sprayed directly over transplants without injury. A layby application can be made on onions up to 14 weeks after planting or transplanting. Should weeds emerge prior to layby, the onions should be cultivated and weeded prior to application. Pre-plant incorporation not recommended.
Sweet potatoes	At transplanting and layby.*	Do not use more than 15.5 kg/ha.	Apply uniformly to the soil as a spray at transplanting. DACTHAL W-75 can be sprayed directly over transplants without injury. Layby application can be made up to 6 weeks after transplanting. If weeds are present, the crop should be weeded and cultivated prior to DACTHAL W-75 application. Incorporation of layby applications not recommended.
Tomatoes, eggplant and peppers (for eggplants and peppers, ppi or at transplant)	4-6 weeks after transplanting at layby* or on direct seeded plants at 10-15 cm in height	Do not use more than 15.5 kg/ha	Application uniformly to the soil should be confined to a period of 4-6 weeks after transplanting. Plants should be well-established and growing conditions favorable for good plant growth. DACTHAL W-75 can be sprayed directly over the transplants without injury. If weeds have emerged the crop should be cultivated and weeded prior to making the DACTHAL W-75 application. Do not apply seeded plants until plants are 10-15 cm in height, well established and growing conditions are favourable for good plant growth.

*Layby application refers to application just prior to the stage when plant growth would prevent further cultivation.

Turf

Application at the rate of 15.5 kg of DACTHAL W-75 in from 450 to 1,100 litres of water per hectare (150 grams/5 to 10 litres/100 sq. metres) gives excellent control of crabgrass and other weeds as listed on this label. One application made in early spring before weed seed germination usually provides seasonal control. Crabgrass seed germination usually coincides with the time when Forsythiablossoms start to fall. In areas which commonly experience stands of late-germinating crabgrass and other annual weedy grasses, a second application at half the regular rate can be safely made two months after the first application. In order to control annual bluegrass (*Poa annua*) and other erratic or late-germinating grasses and weeds, a late summer or early fall application before weed seed germination of 22.5 kg of DACTHAL W-75 in from 450 - 1,100 litres of water per hectare (225 grams/5 - 10 litres per 100 square metres) should supplement the early spring application. Consult agricultural experiment station or extension service weed specialist for date *Poa annua* seed germinates in your area and make application at least two weeks prior to the date. Please note, this product must be watered in immediately following application to turf.

Early Spring application of DACTHAL W75 may be made to new turfgrasses seedlings after the grasses have been mowed for the first time. Such DACTHAL W-75 application gives control of crabgrass without injury to newly-emerged grass. Fall sowing of permanent grasses can follow early Spring applications of DACTHAL W-75.

The use of DACTHAL W-75 on bentgrass greens should be restricted to portions of greens infested with crabgrass and bentgrass greens which are known to be tolerant to DACTHAL W-75. Application to Cohansey or Toronto bents is not recommended. At the recommended rate of application, DACTHAL W-75 herbicide does not cause herbicide injury or discoloration in established common lawn grasses. No more than the recommended rate should be used.

Where some Spring seeding is necessary, there should be a delay of approximately 60 days after the application of most pre-emergence herbicides, including DACTHAL W-75. This delay increases the survival of desirable grasses.

DACTHAL W-75 is not recommended for use on putting greens.

For control of creeping speedwell (*Veronica filiformis*), in British Columbia only, apply 18 kg of DACTHAL W-75 as a split application. 9 kg + 9 kg approximately 1 week apart, in 450 - 1,100 litres of water per hectare as a post-emergence spray when creeping speedwell is growing vigorously. Spring or early Fall applications are usually suitable, provided temperatures are between 18°C and 32°C and there is ample soil moisture. Thorough coverage is essential. Delayed control of creeping speedwell is to be expected and will be manifested first by a gradual loss of color and vigor.

Flower Gardens: Apply after establishment or as supplemental application at the rate of 17 Kg/ha of DACTHAL W-75 in 340 litres of water (150 grams/100 sq. metres). Apply to the soil following establishment or

setting out of flower beds. Where possible, this should be done early in Spring. Delayed or secondary application can be made at any time providing beds have been cultivated and are free of weeds. Weed control up to four months or more may be expected following proper application. See list.

Crops	When to Apply	Rate	Remarks
Strawberries: New Plantings	At trans-planting	13.50 kg/ha	Apply uniformly to the soil as spray. For new beds, apply up to 13.5 kg at transplanting. Can be pre-plant incorporated.
Strawberries: Established Plantings	Fall and early Spring	9-13.5 kg/ha	Application of up to 13.5 kg per hectare may be applied to control late summer or early fall germinating weeds. Application to established plantings should be made in fall and early spring. Do not apply from first bloom through harvest. These applications may be made directly over the plants without injury.

Layby application refers to application just prior to the stage when plant growth would prevent further cultivation.

Established Nursery Stock or Ornamental Plantings: Apply at lining out, late Fall or early Spring at the rate of 17 kg/hectare in 340 litres of water (150 grams/100 sq. metres). Application should be made to soil recently cultivated to a uniform texture. These can be made immediately following lining out of stock. With established plantings, application should be made following proper cultivation to remove existing weeds. Where possible, this should be done early in the Spring. Late Summer applications should be beneficial for control of Fall germinating weeds, if made following cultivation. Weed control up to four months or more may be expected following proper application. See list.

Ornamental Plantings

Abelia, Barberry, Deutzia, Euonymus, Forsythia, Holly, Juniper, Locust, Maple, Oak, Spiraea, Sycamore, Tulip tree, Walnut, Weigela, Willow, Yew, English ivy, Alyssum, Baby's breath, Candytuft, Feverfew, Gladiolus, Marigold, Peony, Petunia, Salvia.

Do not use on following plants:

Germander, Telanthera, Bugleweed, Mesembryanthemum, Button Pink, Pansy, Carnation, Phlox, Geum, Sweet William, Celosia, Snapdragon and Vinca Minor.

AMOUNT OF DACTHAL W-75 TO USE IN TREATING SMALL AREAS

Area to be Treated*	Recommended Rate of DACTHAL W-75 kg/ha	Amount of DACTHAL W-75 toApply
100 m2. (From 5-10 litres of water should be used to spray 100 m2)	22.5 15.5 13.5 11.0 9.0 6.75	225 grams 155 grams 135 grams 110 grams 90 grams 68 grams
10 m2 (From 0.5-1 litre of water should be used to spray 10 m2)	22.5 15.5 13.5 11.0 9.0 6.75	23 grams 16 grams 14 grams 11 grams 9 grams 7 grams

NOTE: In treating small areas it is important to use care in measuring out required quantity for areas to be treated, properly mixing it in water, and keeping it adequately agitated during application.

*Other size areas to be treated can be calculated from the above table. For example: To treat 500 m at the 11 kg/ha rate, use 550 grams (5 x 110 grams).

To treat 50 m at the 13.5 kg/ha rate, use 70 grams.

Rates of application can be reduced by banding. See conversion chart.

CONVERSION CHART FOR DACTHAL W-75

For a 30 cm band of spray, use this amount of DACTHAL W-75 per hectare.

Row Width	If Overall Rate is			
	6.75 kg/ha	9 kg/ha	11 kg/ha	13.5 kg/ha
60 cm	3.3 kg	4.5 kg	5.5 kg	6.7 kg
80 cm	2.5 kg	3.3 kg	4.2 kg	5.0 kg
90 cm	2.2 kg	3.0 kg	3.7 kg	4.5 kg
100 cm	2.0 kg	2.5 kg	3.3 kg	4.0 kg

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