



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

October 26, 2022

David Stay  
Associate Scientist  
AMVAC Chemical Corporation  
4695 MacArthur Court Suite 1200  
Newport Beach, CA 92660

Subject: Additional Registration Review Label Mitigation for Metaldehyde  
Product Name: Durham Metaldehyde Granules 7.5  
EPA Registration Number: 5481-103  
Decision Number: 587630

Dear Mr. Stay:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the December 2021 Metaldehyde Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

Page 2 of 2  
EPA Reg. No. 5481-103  
Decision No. 587630

If you have any questions about this letter, please contact Joseph Belsky by phone at 202-566-2495, or via email at [belsky.joseph@epa.gov](mailto:belsky.joseph@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'VE', followed by a horizontal line extending to the right.

Venus Eagle, Product Manager 01  
Invertebrate and Vertebrate Branch 3  
Registration Division (7505T)  
Office of Pesticide Programs

Enclosure: Stamped Label

**ACCEPTED**

Oct 26, 2022

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 5481-103

# DURHAM<sup>®</sup> METALDEHYDE GRANULES 7.5

**A SOIL SURFACE TREATMENT FOR CONTROL OF SNAILS AND SLUGS AROUND: ORNAMENTALS, LISTED SMALL FRUITS & BERRIES, CITRUS, LISTED VEGETABLE CROPS, AND GRASS GROWN FOR SEED.**

**ACTIVE INGREDIENT:**

Metaldehyde (2,4,6,8-tetramethyl-1,3,5,7-tetraoxycyclo-octane) ..... 7.5%

**INERT INGREDIENTS:** ..... 92.5%

**TOTAL:** ..... 100.0%

## KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor or veterinarian, or going for treatment.	
<b>FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:</b>	
For Medical Emergencies phone: ..... 1-888-681-4261	
For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC <sup>®</sup> .....1-800-424-9300	
For Product Use Information phone : AMVAC <sup>®</sup> .....1-888-462-6822	
Seek medical care as soon as possible after exposure. For incidents involving animals, seek veterinary care as soon as possible after exposure. Have the product container or label with you when you call a poison control center or doctor or veterinarian, or when going for treatment. For information on this pesticide product (including health concerns, medical emergencies, treatment advice, or pesticide incidents), call AMVAC at 1-888-462-6822 or the National Pesticide Information Center at 1-800-858-7378.	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-103  
EPA Est. No.

Net Contents: \_\_\_\_\_  
As Marked on Container



AMVAC Chemical Corporation  
4695 MacArthur Court, Suite 1200  
Newport Beach, CA 92660 U.S.A.  
1-888-462-6822

**Metaldehyde is a systemic toxin. There is no antidote. The following instructions are not intended for laypeople. There is no home treatment. Exposed individuals and animals should receive emergency care as quickly as possible.**

#### **NOTE TO PHYSICIAN**

Dust inhalation is the usual route of accidental exposure; the product is rarely ingested. Treatment is symptomatic and supportive. Monitor severe exposures closely: seizures, electrolyte imbalances, acidosis, dehydration, and increased body temperature have been reported.

#### **NOTE TO VETERINARIAN**

Animals typically are exposed via ingestion. Treatment is symptomatic and supportive. If significant ingestion is suspected, and the animal is asymptomatic, consider induction of emesis or gastric lavage and administration of activated charcoal, cathartic and enema to limit absorption. Monitor asymptomatic and symptomatic animals closely. Treat seizures, electrolyte imbalances, acidosis, dehydration, and increased body temperature. Monitor liver function post recovery.

### **PRECAUTIONARY STATEMENTS**

#### **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Caution: Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust.

**IMPORTANT:** This product can be harmful to children and fatal to domestic animals when ingested. Children and dogs may be attracted to the product. Application of this product is prohibited unless children and domestic animals can be excluded from the treated area from the start of the application until applied material is no longer visible.

#### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Mixers, loaders, applicators, and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves made out of: barrier laminate, butyl rubber  $\geq$  14 mils, nitrile rubber  $\geq$  14 mils, neoprene rubber  $\geq$  14 mils, natural rubber  $\geq$  14 mils, polyethylene, polyvinyl chloride  $\geq$  14 mils, or Viton<sup>®</sup>  $\geq$  14 mils

#### **USER SAFETY REQUIREMENTS**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

#### **USER SAFETY RECOMMENDATIONS**

##### **Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product.
- Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to mollusks (e.g., clams, oysters, scallops, mussels). Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

This pesticide is toxic to birds and mammals. Granules on soil surface may be hazardous to terrestrial wildlife. Cover or collect any such materials spilled during loading.

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## DIRECTIONS FOR USE

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It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

**IMPORTANT:** Read entire label. Use in accordance with precautionary statements and directions, and with applicable Federal and State regulations. **DO NOT APPLY DIRECTLY ONTO PLANTS.** Do not allow bait to contact the edible portion of any food crop.

Areas treated with metaldehyde may be replanted immediately with crops registered for use on this label. Do not plant any crop not listed on this label in the treated area for at least 30 days after the last treatment with metaldehyde.

FOR STATE AND/OR FEDERAL INVASIVE MOLLUSK ERADICATION OPERATIONS
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This product may be used only on the following use sites in response to State and/or Federal invasive mollusk eradication operations. Broadcast applications of this product may be made to the following use-sites for State and/or Federal invasive mollusk eradication operations: fallow land; barrier strips; uncultivated non-agricultural areas; recreational areas; non-food or non-feed brush; weed or dense vegetative areas; railroad, pipeline, highway, power and telephone rights of way and roadsides; guardrails and fences; lumberyards; storage areas; seaports; industrial facility sites, including yards and walkways around industrial buildings, parking areas, parks, golf courses, other public areas; and airport and similar industrial non-crop areas. This product may be applied for State and/or Federal invasive mollusk eradication operations at an individual application rate of no more than 2 lbs. ai/A, and at no more than 6 applications/year. After applying DURHAM METALDEHYDE GRANULES 7.5 for invasive mollusk eradication, do not reapply DURHAM METALDEHYDE GRANULES 7.5 or other products containing metaldehyde to treated areas for 7 days.
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AGRICULTURAL USE REQUIREMENTS
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Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR, Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.
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Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours. Exception: if the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated areas without restriction if there will be no contact with anything that has been treated.
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PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

### **RESTRICTIONS**

This product is intended solely for use on agricultural crops grown for commercial or research purposes and in State and/or Federal invasive mollusk eradication operations. This product may not be applied to residential sites (i.e., in yards, gardens, around homes and apartments) and other sites such as the exterior areas around schools and daycare facilities, and athletic fields, playgrounds, parks, recreation areas, etc.

**Broadcast applications and applications of this product directed to plant parts are prohibited except to grass grown for seed and as specified for use in State and/or Federal invasive mollusk eradication operations.**

Read entire label before using. Use only as a baiting treatment to be applied directly to the soil area beneath plants as listed on this label. Do not allow bait granules to come in contact with plants. The grower is responsible for residues on his crops, as well as for damages caused by drift from his property to that of others. Do not allow drift to adjoining food, fiber or pasture crops. NOTE: DURHAM METALDEHYDE GRANULES 7.5 should never be applied to dry soil. For best results irrigate prior to application. Apply any time of the day but evening applications are preferred for increased snail or slug control. Do not re-water for 48 hours after application.

### **Advisory Resistance Management for Molluscicides**

For resistance management, DURHAM METALDEHYDE GRANULES 7.5 contains metaldehyde, a systemic molluscicide that eliminates pests by destroying the mucus-producing glands of mollusks resulting in dehydration. Naturally occurring biotypes resistant to metaldehyde-based baits may still develop and become dominant after repeated use. Appropriate resistance management strategies should be followed.

The following steps can be used to delay the development of resistance:

- Rotate pest control methods when possible
- Use this product strictly in accordance with the label. Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with the manufacturer, your local university specialist or certified pest control advisor.
- If a pest population continues to persist after treatment with this product, discontinue use of this product, and switch to another management strategy, if available.
- If pest resistance is observed or suspected, please report to AMVAC Chemical Corporation at 1-888-462-6822.

### **USE INFORMATION**

Snails and slugs are nocturnal and generally feed during the night damaging many varieties of plants and plant seedlings. They inhabit damp, moist areas around decaying refuse, organic matter, beneath rocks and hide at the base of growing plants. Their presence can be detected by the shiny trails left on the soil surface, sidewalks, driveways, etc.

## APPLICATION RATES

For control of SNAILS and SLUGS in the following areas. Apply when first plant damage appears or is anticipated.

Apply at the rates specified for each crop to areas likely to be infested at the beginning of the spring planting season or during periods of damp weather before damage occurs. For best results, apply in evening. Especially beneficial if applied following rain or watering since slugs and snails will not crawl over dry soil.

Prior experience has shown most plants are not sensitive to Durham Metaldehyde 7.5. However, for extremely tender plants such as orchids, it is suggested to do a small test application to determine any plant sensitivity before making applications to plants.

For use on ornamentals, artichokes, blueberries, caneberries, strawberries, lettuce, cole crops and other listed leafy greens, mint, corn, soybeans and tomatoes apply in a band, between rows and/or directed towards base of the plants, by hand or with commercial application equipment designed for banded application of granular products.

For use on citrus, apply in a band under tree canopy, by hand or with commercial application equipment designed for banded application of granular products. Do not apply as a wide area broadcast.

Crop	Maximum Rate/Application (Lbs product/A)	Maximum number of applications per growing season	Re-application Interval (days)	Preharvest Interval	Maximum Number of Applications per year
Lettuce, Cole Crops, and the following Leafy Greens: broccoli, brussels sprouts, cabbage, cauliflower, cavalo broccolo, collards, kale, kohlrabi, mizuna, mustard greens, spinach, rape greens	13.3	3	14	0	6
Tomatoes	13.3	3	14	0	6
Berries <sup>1</sup>	10.6	3	14	0	3
Blueberries	10.6	3	14	0	3
Strawberries	13.3	3	14	0	6
Artichokes (Perennial)	13.3	6	18	0	12
Artichokes (Annual)	13.3	2	18	0	4
Citrus	13.3	6	14	0	6
Ornamental <sup>2</sup>	13.3	6	21	0	6
Prickly Pear Cactus	10.6	3	30	0	3
Grass (grown for seed)	10.6	4	21	21	4
Grass (Forage and Hay)	10.6	4	14	21	4
Mint (Peppermint, Spearmint, and their Oils)	13.3	4	21	1	4
Celery, Rhubarb, Swiss chard, Chinese Celery, Celtuce, Cardoon, and Florence Fennel	13.3	4	21	1	8
Taro (wetland) <sup>3</sup>	13.3	7	35	7	7
<sup>1</sup> Caneberries (bingleberry; raspberry, red and black; wild raspberry; blackberry; loganberry; boysenberry, dewberry; lowberry; marionberry; olallieberry; youngberry; Bushberries (aronia berry; blueberry; buffalo currant; Chilean guava; currant; black and red; elderberry; European barberry; gooseberry; cranberry; honeysuckle; huckleberry; jostaberry; juneberry; lingonberry; salal; sea buckthorn; Berry - low growing (bearberry; bilberry; blueberry; cloudberry; cranberry; muntries; partridgeberry).					

Crop	Maximum Rate/Application (Lbs product/A)	Maximum number of applications per growing season	Re-application Interval (days)	Preharvest Interval	Maximum Number of Applications per year
<sup>2</sup> Including ornamentals in greenhouses, hoopouses, and other indoor ornamentals production facilities, as well as outdoor commercial production of ornamental plants. <sup>3</sup> Broadcast application to be made under flooded conditions only. Prior to bait application, stop the water flow into and out of the lo'i (paddies) to be treated; water level should be high enough such that apple snails don't estivate. Apply the bait and hold/impound the water for a minimum of 3 days before allowing water to exit the lo'i. Do not apply more than one application per held/impounded water. If the water level in the lo'i becomes too low within the 3 day holding period (due to faster percolation of water through the soil), such that apple snails begin to estivate, allow additional water into the lo'i.					

For corn and soybean apply as a perimeter treatment at planting and then for the subsequent applications by broadcast directing the product to the soil.

Crop	Growth Stage <sup>1</sup>	Maximum Rate/ Application (Lbs product/A)	Maximum number of applications per season	Re-application Interval (days)	Preharvest Interval	Maximum Number of Applications per year	Application Information
Corn (field)	Up to V8	13.3	3	7	0	3	Perimeter treatment prior to broadcast
Corn (field)	V-8 - VT	13.3	3	7	0	3	Ground directed only
Soybean <sup>2</sup>	Up to V4	5.3	3	7	0	3	Perimeter treatment prior to broadcast
Soybean <sup>2</sup>	V4-R1	5.3	3	7	0	3	Ground directed only

<sup>1</sup>Growth stages are according to the Iowa State University Crop Guides:  
 Corn - <https://crops.extension.iastate.edu/encyclopedia/corn-growth-stages>  
 Soybeans - [https://crops.extension.iastate.edu/soybean/production\\_growthstages.html](https://crops.extension.iastate.edu/soybean/production_growthstages.html)  
<sup>2</sup>Only for use in the following states: Alabama, Arkansas, Connecticut, Delaware, Georgia, Louisiana, Maine, Maryland, Massachusetts, Mississippi, North Carolina, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia. Livestock may not graze in the treated fields. Applications must be completed prior to pod formation.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage and disposal.

**PESTICIDE STORAGE:** This product can be harmful to children and fatal to dogs and other domestic animals if ingested. Dogs have been known to ingest metaldehyde after opening or tearing the packaging. Store this product in its original packaging, in a cool, secure location, and out of the reach of children and pets.

**PESTICIDE DISPOSAL:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. When completely empty, offer for recycling, if available or dispose of empty bag in a sanitary landfill or by incineration.



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## LIMITED WARRANTY AND DISCLAIMER

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The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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