

DACONIL ACTION

Date: 2/5/2014
Replaces: 1/16/2014

1. PRODUCT IDENTIFICATION

Product identifier on label: **DACONIL ACTION**
Product No.: A16422A
Use: Fungicide/Plant Activator
Manufacturer: Syngenta Crop Protection, LLC
Post Office Box 18300
Greensboro NC 27419
Manufacturer Phone: 1-800-334-9481

Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

Classifications: Skin Corrosion/Irritation: Category 2
Oral: Category 4
Dermal: Category 4
Inhalation: Category 3
Skin Sensitizer: Category 1B
Carcinogenicity: Category 2
Specific Target Organ Toxicity: Repeated Category 2
Specific Target Organ Toxicity: Drowsiness Category 3
Eye Damage/Irritation: Category 2A

Signal Word (OSHA): Danger

Hazard Statements: Harmful if swallowed
Harmful in contact with skin
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
Toxic if inhaled
May cause respiratory irritation
May cause drowsiness or dizziness
Suspected of causing cancer
May cause damage to blood, liver, lung, kidney, spleen through prolonged or repeated exposure.

Hazard Symbols:



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Precautionary Statements: Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe mist, vapors, spray.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves, protective clothing, eye protection.
If swallowed: Immediately call a poison center, doctor or Syngenta. Rinse mouth.
If on skin: Wash with plenty of soap and water.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If exposed or concerned: Call a poison center, doctor or Syngenta.
Call a poison center, doctor or Syngenta if you feel unwell.
See Section 4 First Aid Measures.
If skin irritation or rash occurs: Get medical advice.
If eye irritation persists: Get medical advice.
Take off immediately all contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | Common Name | CAS Number | Concentration |
|--|----------------------|-------------|---------------|
| 1,2-Propanediol | Propylene Glycol | 57-55-6 | Trade Secret |
| Tetrachloroisophthalonitrile | Chlorothalonil | 1897-45-6 | (53.94%) |
| 1,2,3-Benzothiadiazole-7-carbothioic acid S-methyl ester | Acibenzolar-S-Methyl | 135158-54-2 | (0.11%) |

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20

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minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

Eye irritation
Skin irritation
Allergic skin reaction

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage.

Special protective equipment and precautions for firefighters:

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Precautions for safe handling:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:

Store locked up.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Occupational Exposure Limits:

| Chemical Name | OSHA PEL | ACGIH TLV | Other | Source |
|----------------------|-----------------|-----------------|---------------------------|----------|
| Propylene Glycol | Not Established | Not Established | 10 mg/m ³ TWA | AIHA |
| Chlorothalonil | Not Established | Not Established | 0.1 mg/m ³ TWA | Syngenta |
| Acibenzolar-S-Methyl | Not Established | Not Established | 10 mg/m ³ TWA | Syngenta |

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

Ingestion:

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact:

Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Grey liquid

Odor: Weak paint

Odor Threshold: Not Available

pH: 7.4 (1% solution in deionized H₂O @ 77°F [25°C])

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Available

Flash Point (Test Method): > 212°F (Pensky-Martens CC)

Flammable Limits (% in Air): Not Available

Flammability: Not Applicable

Vapor Pressure: Acibenzolar-S-Methyl 0.00000165mmHg @ 68°F (20°C)

Chlorothalonil 0.00000057mmHg @ 77°F (25°C)

Vapor Density: Not Applicable

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Relative Density: 1.350 g/cm³ @ 68°F (20°C)
Solubility (ies): Acibenzolar-S-Methyl 7.7 mg/l @ 68°F (20°C)
Chlorothalonil 0.81 mg/l @ 77°F (25°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: > 1202°F

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: None

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.

Chemical stability: Stable under normal use and storage conditions.

Possibility of hazardous reactions: Will not occur.

Conditions to Avoid: Not Available

Incompatible materials: Not Available

Hazardous Decomposition Products: Not Available

11. TOXICOLOGICAL INFORMATIONHealth effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Skin irritation, Drowsiness or dizziness

Delayed, immediate and chronic effects of exposure: Developmental toxicity, Possible carcinogenicity

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion: Oral (LD50 Female Rat) : 3045 mg/kg body weight
Dermal: Dermal (LD50 Rat) : > 5000 mg/kg body weight
Inhalation: Inhalation (LC50 Rat) : > 0.51 mg/l air - 4 hours
Eye Contact: Severely Irritating (Rabbit)
Skin Contact: Slightly Irritating (Rabbit)
Skin Sensitization: A weak skin sensitizer (based on the technical material)

Reproductive/Developmental Effects

Acibenzolar-S-Methyl: Developmental toxicity and fetal malformations observed at high maternal doses (rats). Additional testing showed that these effects are not relevant to humans.

Chlorothalonil: Did not show reproductive toxicity effects in animal experiments. Did not show teratogenic effects in animal experiments.

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Chronic/Subchronic Toxicity Studies

Acibenzolar-S-Methyl: Slight hemolytic anemia at highest dose level (rats, mice and dogs). Liver and spleen effects observed in highest dose level (rats and dogs).

Chlorothalonil: In dogs, 1 year administration caused a significant decrease in body weight gain and increases in absolute liver and kidney weights.

Neurotoxicity: No evidence in regulatory studies.

Carcinogenicity

Acibenzolar-S-Methyl: Not carcinogenic at dietary levels up to 7500 ppm (rat) and 6000 ppm (mouse).

Chlorothalonil: Chlorothalonil causes kidney tumors in rats and mice via a nongentoxic mode of action secondary to target organ toxicity.

Did not show mutagenic effects in animal experiments.

IARC identifies chlorothalonil as a 2B carcinogen (possibly carcinogenic to humans).

| Chemical Name | NTP/IARC/OSHA Carcinogen |
|--|--------------------------|
| 1,2-Propanediol | No |
| Tetrachloroisophthalonitrile | IARC Group 2B |
| 1,2,3-Benzothiadiazole-7-carbothioic acid S-methyl ester | No |

Other Toxicity Information

None

Toxicity of Other Components

Propylene Glycol

Test results reported in Section 11 for the final product take into account any acute hazards related to the propylene glycol in the formulation.

Reported to cause central nervous system depression (anesthesia, dizziness, confusion), headache and nausea.

Chronic dietary exposure caused kidney and liver injury in experimental animals.

Target Organs

Active Ingredients

Acibenzolar-S-Methyl: Blood, liver, spleen

Chlorothalonil: Lung, kidney

Inert Ingredients

Propylene Glycol: Nervous system, kidney, liver

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Chlorothalonil:

Green Algae 5-day EC50 190 ppb

Bird (Mallard Duck) LD50 Oral > 4640 mg/kg

Invertebrate (Water Flea) 48-hour EC50 70 ppb

Fish (Rainbow Trout) 96-hour LC50 47 ppb

Acibenzolar-S-Methyl:

Fish (Rainbow Trout) 96-hour LC50 0.88 ppm

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 2.9 ppm

Green Algae 72-hour EC50 80.1 ppm

Bird (Bobwhite Quail) 14-day LD50 > 2000 mg/kg

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Environmental Fate

Acibenzolar-S-Methyl:

The information presented here is for the active ingredient, acibenzolar-s-methyl.
Low bioaccumulation potential. Not persistent in soil or water. Low mobility in soil. Sinks in water (after 24 h).

Chlorothalonil:

The information presented here is for the active ingredient, chlorothalonil.
Low bioaccumulation potential. Not persistent in soil or water. Low mobility in soil. Sinks in water (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

Not regulated.

Tank Truck: Environmentally Hazardous Substance, Liquid, N.O.S. (Chlorothalonil), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Chlorothalonil), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Air Transport

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Chlorothalonil)

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

15. REGULATORY INFORMATION

Pesticide Registration:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Warning: Causes substantial but temporary eye injury. Harmful if swallowed May be fatal if inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

EPA Registration Number(s):

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100-1364

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard
 Chronic Health Hazard

Section 313 Toxic Chemicals: Chlorothalonil (53.94%) (CAS No. 1897-45-6)

California Proposition 65:

This product contains a chemical known to the State of California to cause cancer.

CERCLA/SARA 304 Reportable Quantity (RQ):

None

RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

TSCA Status:

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 2
 Flammability: 1
 Instability: 0

HMIS Hazard Ratings

Health: 2
 Flammability: 1
 Reactivity: 0

| | |
|---|----------|
| 0 | Minimal |
| 1 | Slight |
| 2 | Moderate |
| 3 | Serious |
| 4 | Extreme |

Syngenta Hazard Category: C,S

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 5/3/2011

Revision Date: 2/5/2014

Replaces: 1/16/2014

Section(s) Revised: 2

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.