

SECTION I: Identification of the Substance/Mixture and of the Company/Undertaking**1.1 Product Identifier**

Product name: Dovetail
EPA Registration Number: 94396-12

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use: Fungicide
Uses Advised Against: Activities contrary to label recommendations

1.3 Details of the supplier of the safety data sheet

Company: Aquatrols Corporation of America
1273 Imperial Way
Paulsboro, NJ 08066

Website: www.aquatrols.com

Phone number: (856) 537-6003

Email: jyichye@aquatrols.com

1.4 Emergency telephone

Phone number: CHEMTEL - (800) 255-3924
CHEMTEL INTERNATIONAL- +1-813-248-0585

SECTION II: Hazards Identification**2.1 Classification of the substance or mixture**

Product description: -

Classification according to 29 CFR 1910.1200

Acute Toxicity – Dermal	Category 4
Acute Toxicity – Inhalation (Gases)	Category 2
Acute Toxicity – Inhalation (Vapors)	Category 2
Acute Toxicity – Inhalation (Dust/Mists)	Category 4
Skin Sensitization	Category 1

Germ Cell Mutation	Category 2
Carcinogenicity	Category 2

2.2 GHS label elements

DANGER

Hazards Statements: Harmful in contact with skin. Fatal if inhaled. May cause an allergic skin reaction.

Suspected of causing genetic effects.

Suspected of causing cancer.



Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood

Wear cold insulating gloves/face shield/eye protection

Do not breathe dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

In case of inadequate ventilation wear respiratory protection

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

IF ON SKIN: Wash with plenty of soap and water

Call a POISON CENTER or doctor if you feel unwell

Wash contaminated clothing before reuse

If skin irritation or rash occurs: Get medical advice/attention

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

2.3 Other hazards which do not result in classification

- Very toxic to aquatic life with long lasting effects
- Very toxic to aquatic life
- May be harmful in contact with skin

SECTION III: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Classification	Concentration
Thiophanate-methyl	23564-05-8	-	19.65%
3-(3,5-Dichlorophenyl)-2,4-dioxo-N-iso propylimidazolidine-1-carboxamide	36734-19-7	-	19.65%

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

SECTION IV: FIRST AID MEASURES**4.1 Description of first aid measures**

- Protection of First-aiders:** Use personal protective equipment.
- Eye contact:** 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 a poison control center or doctor for treatment advice.
- Skin contact:** Remove and wash contaminated clothing before re-use. Wash off immediately with soap and plenty of water for at least 15 minutes. Call a poison control center or doctor for treatment advice.
- Inhalation:** 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 a physician or poison control center immediately.
- Ingestion:** Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed.

Most Important Symptoms and Effects: May cause allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Note to physician:

No information available.

SECTION V: FIREFIGHTING MEASURES**5.1 Extinguishing media**Suitable extinguishing media: Carbon dioxide (CO₂). Aquatic. Foam.

Unsuitable extinguishing media: No data available.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: Thermal decomposition can lead to release of irritating gases and vapours.

Hazardous decomposition products: Heat and fire may result in thermal decomposition and the release of hydrogen chloride and oxides of nitrogen, sulfur and carbon.**5.3 Advice for firefighters****Special protective equipment:** Use personal protective equipment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.**Further information:** Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.**SECTION VI: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures.**

Avoid contact with skin and eyes. Wear protective gloves/protective clothing and eye/face protection. Wash thoroughly after handling.

6.2 Environmental precautions

Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

6.3 Methods and materials for containment and cleanup

Methods of containment:	Stop leak if safe to do so. Dam up with sand or inert earth (do not use combustible materials).
Recovery:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.
Decontamination/cleaning:	Clean contaminated surface thoroughly. Wash non-recoverable remainder with large amounts of water. Recover the cleaning water for subsequent disposal. Decontaminate tools, equipment and personal protective equipment in a segregated area.
Disposal:	Dispose of in accordance with local regulations.

6.4 Reference to other sections

See Section VII for Handling and Storage.

SECTION VII: HANDLING AND STORAGE

7.1 Precautions for safe handling of the substance/mixture.

Technical measures:	Provide adequate ventilation.
Advice on safe handling and usage:	Avoid inhalation of vapor or mist. Avoid contact with skin, eyes and clothing. Keep out of reach of children.
Hygiene measures:	Personal hygiene is an important workplace practice exposure control measure and the following general

measures should be taken when working with or handling this material:

- 1) Do not eat, drink or smoke when using this product.
- 2) Remove and wash contaminated clothing before re-use.
- 3) Wear suitable gloves and eye/face protection.
- 4) Wash hands before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Recommended: Keep container tightly closed in a dry, cool, well-ventilated place. Keep out of reach of children.

Incompatible materials: Strong oxidizing agents.

Storage stability

Storage temperature: No data available.

7.3 Specific end use(s)

See Section I

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION
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General comments

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Exposure limits: Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is

	preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.
Protective measures:	Ensure that eyewash stations and safety showers are close to workstation. Emergency equipment immediately accessible, with instructions for use. Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.
Eye protection:	Eye contact should be prevented through the use of safety glass with side-shields. If splashes are likely to occur, wear Goggles.
Hand protection:	Chemical resistant gloves.
Body protection:	Chemical resistant apron. Long sleeved clothing. Long pants. Socks and footwear.
Respiratory protection:	Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134.
Hygiene measures:	Personal hygiene is an important workplace practice exposure control measure and the following general measures should be taken when working with or handling this material: 5) Do not eat, drink or smoke when using this product.

- 6) Remove and wash contaminated clothing before re-use.
- 7) Wear suitable gloves and eye/face protection.
- 8) Wash hands before breaks and immediately after handling the product.

SECTION IX: CHEMICAL AND PHYSICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

Physical state:	Liquid Emulsion
Color:	White
Odor:	No information available
pH:	6
Melting Point/Freezing point:	7° C / 45° C
Boiling Point/Range	No information available
Flashpoint:	No information available
Evaporation rate:	No information available
Flammability:	No information available
Upper Flammability Limit:	No information available
Lower Flammability Limit:	No information available
Vapor pressure:	No information available
Relative density:	No information available
Specific Gravity :	1.1974
Bulk density:	9.974 lb/gal
Solubility:	No information available
Partition n-octanol/water:	No information available
Autoignition temperature:	No information available
Thermal decomposition:	No information available
Viscosity:	No information available
Explosive properties:	No information available
Oxidizing properties:	No information available

9.2 Other information

Not applicable

SECTION X: STABILITY AND REACTIVITY**10.1 Reactivity**

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

Keep away from heat and sources of ignition. Keep away from flames and sparks.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon oxides.

SECTION XI: TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute toxicity**

Acute oral toxicity: LD50 > 5000 mg/kg rat

Acute inhalation toxicity: LC50 – 1.8 mg/l (4 hr)

Acute dermal toxicity: LD50 > 2000 mg/kg rabbit

Skin corrosion/irritation

Skin irritation: Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Serious eye damage/eye irritation

Eye irritation: May cause irritation.

Respiratory or skin sensitization

Sensitization: Repeated or prolonged contact may cause allergic reactions in very susceptible persons.

Inhalation: May be harmful if inhaled.

Mutagenicity

Genotoxicity in vitro: no data available.

Genotoxicity in vivo: no data available.

Carcinogenicity

Carcinogenicity: Iprodione (technical grade) = Produced benign testicular tumors in rats and benign liver and ovary tumors in mice when tested at a maximum tolerated dose.
Iprodione is not considered to be a neurotoxicant and was not mutagenic or genotoxic based published information available.
Iprodione did not cause reproductive toxicity in multigeneration studies in rats.
Information indicates that iprodione is not a primary developmental toxicant.

Thiophanate methyl: Repeated or long term administration produced effects on the thyroid, liver, or kidneys in rats, mice or dogs. An increased evidence of liver tumors was observed in mice and thyroid tumors were observed in male rats following long term oral exposure. No effects were seen on the ability of male or female rats to reproduce when exposed orally for 2 successive generations. No birth defects were observed in the offspring of rats exposed orally during pregnancy. In rabbits, developmental toxic effects were noted at maternally toxic doses.

Toxicity for reproduction and development

Toxicity to reproduction/fertility: No effects were observed on reproduction when exposed orally to rats, for two successive generations.
Developmental toxicity/teratogenicity: No genetic changes were observed in tests using animal cells.

SECTION XII: ECOLOGICAL INFORMATION**12.1 Toxicity**

Acute aquatic toxicity:

- Thiophanate methyl
- Carp 96 hr LC50 = >100 mg/L
- Fiddler crab 96 hr LC50 = >560 mg/L
- Bluegill 96 hr LC50 = 15.8 mg/L
- Daphnid 48 hr EC50 = 15.6 mg/L
- Shrimp 96 hr LC50 = 25.1 mg/L
- Trout 96 hr LC50 = 2.2 mg/L
- Oyster 96 hr LC50 = 4.6 ppm

Highly toxic to catfish

59.71% of the mixture consists of components(s) of unknown hazards to the aquatic environment

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Does not bioaccumulate

Chemical Name	Log Pow
3-(3,5-Dichlorophenyl)-2,4-dioxo-N-isopropylimidazolidine-1-carboxamide 36734-19-7	3

12.4 Other adverse effects

No data available

SECTION XIII: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Advice on disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Contaminated containers: Refer to product label.

SECTION XIV: TRANSPORT INFORMATION

14.1 DOT

When shipped in containers less than or equal to 5 gallons the product is Not regulated. When shipped in packages greater than 5 gallons the following description will apply:

UN/ID No.: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s
(Thiophanate methyl)
Hazard Class: 9

Packing Group: PGIII
Reportable Quantity: 10 lbs. (Thiophanate methyl)

14.2 ICAO

UN/ID No.: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s
(Thiophanate methyl)
Hazard Class: 9
Packing Group: PGIII

14.3 IATA

UN/ID No.: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s
(Thiophanate methyl)
Hazard Class: 9
Packing Group: PGIII

14.4 IMDG

UN/ID No.: UN3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s
(Thiophanate methyl)
Hazard Class: 9
Packing Group: PGIII
Environmental Hazards: This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO

14.6 Special precautions for use

No additional information available

14.6.1 Ground transport

No additional information available

14.6.2 Sea transport

No additional information available.

14.6.3 Air transport

No additional information available

14.7 Transport in bulk according to Annex II of Marpol 73/78 and IBC Code

Not applicable.

SECTION XV: REGULATORY INFORMATION

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:

Signal Word: CAUTION
Ventilation Control: Pesticide applicators and workers: These workers must refer to the product labeling and directions for use in accordance with EPA Worker Protection Standard 40 CFR Part 170.

Harmful if swallowed. Causes moderate eye irritation. Keep out of reach of children.

15.1 Safety legislation specific for the substance or mixture**15.1.1 EU-Regulations**

No restrictions according to Annex XVII of REACH. Does not contain REACH candidate substances.

15.1.2 Federal regulations

SARA 313 Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

CERCLA Not applicable

Chemical Name	RQ	CERCLA EHS RQs	RQ
Thiophanate methyl 23564-05-8	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ

CERCLA

Component	RQ
Thiophanate methyl 23564-05-8 (19.65)	10 lb

SARA Product RQ

RCRA

Component	RCRA-D Series Wastes	RCRA-P Series Wastes	RCRA-U Series Wastes
Thiophanate methyl 23564-05-8 (19.65)			U409

15.2 Pesticide Information

State Regulations

Component	CAS No.	Category
3-(3,5-Dichlorophenyl)-2,4-dioxo-N-isopropylimidazolidine-1-carboxamide (19.65)	36734-19-7	Carcinogen

Prop 65 Pictogram :



Prop 65 Warning Statement: WARNING!

California Proposition 65:

This product can expose you to chemicals including those listed below, which is [are] known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov15.2

Component	California Prop 65	Non-additive, corrosive chemical type
Thiophanate methyl 23564-05-8 (19.65)	Female Reproductive Male Reproductive	Female Reproductive Male Reproductive
3-(3,5-Dichlorophenyl)-2,4-dioxo-N-isopropylimidazolidine-1-carboxamide 36734-19-7 (19.65)	Carcinogen	

State Right-to-Know

Not applicable

SECTION XVI: OTHER INFORMATION

NFPA **HEALTH 1** **FLAMMABILITY 0** **INSTABILITY 0** **PHYSICAL HAZARD -**

More information**Abbreviations**

ADR:	European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMDG:	International Maritime Code for Dangerous Goods
LC50:	Lethal Concentration 50%
LD50:	Lethal Dose 50%
EC50:	Effective Dose 50%
CLP:	Classification, Labelling and Packaging
CAS:	Chemical Abstract Service
RID:	Regulations concerning the International Carriage of Dangerous Goods by Rail
IATA-DGR:	International Air Transport Association Dangerous Goods Regulations
GHS:	Globally Harmonized System (GHS) of Labelling Chemical Products
REACH:	Registration, Evaluation, Authorization and Restriction of Chemical Products

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