

# Material Safety Data Sheet

## FLORAMITE® SC MITICIDE

Version 1.12      Revision Date: 14.05.2015      MSDS Number: 400000003977      Country: CA  
Language: EN

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### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : FLORAMITE® SC MITICIDE  
Product code : 400000003977  
Chemical nature : Miticide

#### Manufacturer or supplier's details

Company name of supplier : MacDermid Agricultural Solutions, Inc  
Address : 245 Freight St  
Waterbury, CT United States of America 06702  
Telephone : (800) 423-8569

#### Recommended use of the chemical and restrictions on use

Recommended use : Plant protection agent  
Restrictions on use : Agriculture, For professional users only.

Prepared by :  
Regulatory.Affairs@AgripharCropSolutions.com

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### SECTION 2. HAZARDS IDENTIFICATION

#### Emergency Overview

<b>WARNING!</b>	
Appearance	liquid
Colour	off-white, to, tan
Odour	slight, sweet
Hazard Summary	This product is registered under the Pest Control Products Act and is therefore exempt from WHMIS supplier labeling and MSDS requirements. Please read entire MSDS and product label for safety precautions.  May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

**WHMIS Regulatory status** : This product is registered under the Pest Control Products Act and is therefore exempt from WHMIS supplier labeling and MSDS requirements. Please read entire MSDS and product label for safety precautions.

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### Potential Health Effects

Skin : May cause allergic skin reaction.

Aggravated Medical Condition : None known.

Symptoms of Overexposure : irritant effects  
sensitising effects  
Symptoms may be delayed.

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### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Miticide

#### Hazardous components

Chemical Name	CAS-No.	Concentration (%)
Bifenazate	149877-41-8	>= 20 - < 30

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### SECTION 4. FIRST AID MEASURES

If inhaled : Remove to fresh air.  
If not breathing, give artificial respiration.  
Obtain medical attention.

In case of skin contact : Wash off with warm water and soap.  
Remove contaminated clothing and shoes.  
Wash clothing before reuse.  
If symptoms persist, call a physician.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water  
for at least 15 minutes.  
Obtain medical attention.

If swallowed : If victim is fully conscious, give a cupful of water.  
Do not induce vomiting without medical advice.  
Get medical attention immediately.  
Do not give milk, alcoholic beverages or castor oil.

Notes to physician : The first aid procedure should be established in consultation  
with the doctor responsible for industrial medicine.

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### SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Extinguishing media - large fires

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Alcohol-resistant foam  
(on small fires)  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : Water spray jet

Specific hazards during fire-fighting : No information available.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Complete suit protecting against chemicals  
Full protective flameproof clothing

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment.  
Avoid contact with skin and eyes.

Environmental precautions : Do not allow material to contaminate ground water system.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.  
Dam up.  
Large spills should be collected mechanically (remove by pumping) for disposal.

In accordance with local and national regulations.

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### SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid inhalation, ingestion and contact with skin and eyes.  
Use only in area provided with appropriate exhaust ventilation.  
Wash thoroughly after handling.

Conditions for safe storage : Keep in a dry, cool place.

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### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

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**Engineering measures** : effective ventilation in all processing areas  
Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

### Hand protection

Remarks : Impervious gloves

Eye protection : Safety glasses with side-shields

Skin and body protection : impervious clothing

Hygiene measures : Ensure adequate ventilation, especially in confined areas.  
Remove and wash contaminated clothing before re-use.  
Handle in accordance with good industrial hygiene and safety practice.  
Wash hands before breaks and immediately after handling the product.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : off-white, to, tan

Odour : slight, sweet

Odour Threshold : No data available

pH : 5 - 9

Melting point/range : Not applicable

Boiling point/boiling range : > 100 °C

Flash point : does not flash

Evaporation rate : No data available

Upper explosion limit : Not explosive

Lower explosion limit : Not explosive

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : 1.050 - 1.070 (25 °C)

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Density : > 1 g/cm<sup>3</sup>

Solubility(ies)  
Water solubility : dispersible

Solubility in other solvents : Description: miscible with most organic solvents

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : > 399 °C

Decomposition temperature : No data available

Viscosity  
Viscosity, dynamic : 300 - 700 mPa.s (20 °C)

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Self-Accelerating decomposition temperature (SADT) : Method: No information available.

Surface tension : 42.1 mN/m, 25 °C

Oxidising potential : The substance or mixture is not classified as oxidizing.

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous polymerisation does not occur.

Conditions to avoid : Extremes of temperature and direct sunlight.

Incompatible materials : Oxidizing agents

Hazardous decomposition products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)

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### SECTION 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### Product:

- Acute oral toxicity : LD50 (Rat, male): > 5,000 mg/kg  
GLP: yes
- LD50 (Rat, female): > 2,000 mg/kg  
GLP: yes
- Acute inhalation toxicity : LC50 (Rat): > 1.94 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
GLP: yes  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.
- Acute dermal toxicity : LD50 Dermal (Rabbit): > 5,000 mg/kg  
GLP: yes

##### Components:

##### Bifenazate:

- Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes
- LD50 (Mouse, male and female): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes
- Acute inhalation toxicity : LC50 (Rat, male and female): > 4.4 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.
- Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

#### Skin corrosion/irritation

##### Product:

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Species: Rabbit  
Result: No skin irritation  
GLP: yes

### **Components:**

#### **Bifenazate:**

Species: Rabbit  
Exposure time: 4 h  
Method: OECD Test Guideline 404  
Result: No skin irritation  
GLP: yes

### **Serious eye damage/eye irritation**

#### **Product:**

Species: Rabbit  
Result: No eye irritation  
GLP: yes

### **Components:**

#### **Bifenazate:**

Species: Rabbit  
Result: No eye irritation  
Exposure time: 48 h  
Method: OECD Test Guideline 405  
GLP: yes

### **Respiratory or skin sensitisation**

#### **Product:**

Species: Guinea pig  
Assessment: May cause sensitisation by skin contact.  
GLP: yes

### **Components:**

#### **Bifenazate:**

Test Type: Maximisation Test (GPMT)  
Species: Guinea pig  
Assessment: May cause sensitisation by skin contact.  
Method: OECD Test Guideline 406  
GLP: yes

### **Germ cell mutagenicity**

#### **Components:**

#### **Bifenazate:**

Genotoxicity in vitro : Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative  
GLP: yes

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- Genotoxicity in vitro : Test Type: In Vitro mammalian Cell Gene Mutation Test  
Metabolic activation: with and without metabolic activation  
Result: negative  
GLP: yes
- Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro  
Metabolic activation: with and without metabolic activation  
Result: negative  
GLP: yes
- Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse  
Result: negative  
GLP: yes
- Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

### Carcinogenicity

#### Components:

##### **Bifenazate:**

- Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

### Reproductive toxicity

#### Components:

##### **Bifenazate:**

- Reproductive toxicity - Assessment : No toxicity to reproduction  
No effects on or via lactation

### STOT - single exposure

#### Product:

Assessment: Based on available data, the classification criteria are not met.

#### Components:

##### **Bifenazate:**

Assessment: Based on available data, the classification criteria are not met.

### STOT - repeated exposure

#### Product:

Assessment: Based on available data, the classification criteria are not met.

#### Components:

##### **Bifenazate:**

Assessment: Based on available data, the classification criteria are not met.



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### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Product:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.4 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.4 mg/l  
Exposure time: 48 h
- Toxicity to algae : EC50 (Algae): 1.3 mg/l  
Exposure time: 72 h

##### Components:

##### Bifenazate:

- Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.58 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
GLP: yes
- LC50 (Oncorhynchus mykiss (rainbow trout)): 0.76 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.5 mg/l  
Exposure time: 48 h  
Test Type: flow-through test  
GLP: yes
- LC50 (Crassostrea virginica): 0.42 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
GLP: yes
- Toxicity to algae : IC50 (Lemna gibba): > 3.82 mg/l  
Exposure time: 7 d  
Analytical monitoring: yes  
GLP: yes
- NOEC (Lemna gibba): > 3.82 mg/l  
Exposure time: 7 d  
Analytical monitoring: yes  
GLP: yes
- NOEC (Selenastrum capricornutum (green algae)): 0.25 mg/l  
Exposure time: 96 h  
GLP: yes

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ErC50 (*Selenastrum capricornutum* (green algae)): > 2.02 mg/l

Exposure time: 96 h

GLP: yes

EbC50 (*Selenastrum capricornutum* (green algae)): 0.9 mg/l

Exposure time: 96 h

GLP: yes

NOEC (*Navicula pelliculosa*): 0.52 mg/l

Exposure time: 96 h

GLP: yes

EbC50 (*Navicula pelliculosa*): 0.82 mg/l

Exposure time: 96 h

GLP: yes

ErC50 (*Navicula pelliculosa*): 1.4 mg/l

Exposure time: 96 h

GLP: yes

NOEC(b) (*Anabaena flos-aquae* (cyanobacterium)): 0.53 mg/l

Exposure time: 96 h

GLP: yes

NOEC(r) (*Anabaena flos-aquae* (cyanobacterium)): 1.13 mg/l

Exposure time: 96 h

GLP: yes

EbC50 (*Anabaena flos-aquae* (cyanobacterium)): 1.8 mg/l

Exposure time: 96 h

GLP: yes

ErC50 (*Anabaena flos-aquae* (cyanobacterium)): > 4.48 mg/l

Exposure time: 96 h

GLP: yes

NOEC (*Skeletonema costatum*): 0.2 mg/l

Exposure time: 96 h

GLP: yes

EbC50 (*Skeletonema costatum*): 0.3 mg/l

Exposure time: 96 h

GLP: yes

ErC50 (*Skeletonema costatum*): 0.36 mg/l

Exposure time: 96 h

GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to fish (Chronic toxicity) : NOEC (*Oncorhynchus mykiss* (rainbow trout)): 0.017 mg/l  
Exposure time: 87 d

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Test Type: flow-through test  
Analytical monitoring: yes  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.15 mg/l  
Exposure time: 21 d  
Analytical monitoring: yes  
GLP: yes

M-Factor (Chronic aquatic toxicity) : 1

Toxicity to soil dwelling organisms : LC50 (Eisenia fetida (earthworms)): > 1,250 mg/kg  
Exposure time: 14 d  
GLP: yes

NOEC (Eisenia fetida (earthworms)): 95 mg/kg  
Exposure time: 14 d  
GLP: yes

Toxicity to terrestrial organisms : LD50 (Apis mellifera (bees)): 8.50 µg/bee  
Exposure time: 48 h  
End point: mortality  
GLP: yes

### Persistence and degradability

#### Product:

Biodegradability : Result: Not readily biodegradable.  
Remarks: Not readily biodegradable.

#### Components:

##### **Bifenazate:**

Biodegradability : Result: According to the results of tests of biodegradability this product is not readily biodegradable.

### Bioaccumulative potential

#### Components:

##### **Bifenazate:**

Partition coefficient: n-octanol/water : log Pow: 3.4 (25 °C)

### Mobility in soil

#### Product:

Mobility : Remarks: No data available

### Other adverse effects

#### Product:

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Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Toxic to aquatic life with long lasting effects.

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### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

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### SECTION 14. TRANSPORT INFORMATION

#### International Regulation

##### IATA-DGR

UN/ID No. : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Bifenazate)  
Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964

##### IMDG-Code

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Bifenazate)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### National Regulations

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### TDG

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bifenazate)  
Class : 9  
Packing group : III  
Labels : 9  
ERG Code : 171  
Marine pollutant : no  
Remarks : Not regulated by DOT and TDG if shipped or transported in packaging less than 450 liters by road and/or rail.  
Marine pollutant : no

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### SECTION 15. REGULATORY INFORMATION

**WHMIS Classification** : D2B: Toxic Material Causing Other Toxic Effects  
This product is registered under the Pest Control Products Act and is therefore exempt from WHMIS supplier labeling and MSDS requirements. Please read entire MSDS and product label for safety precautions.

### EPCRA - Emergency Planning and Community Right-to-Know Act

**SARA 311/312 Hazards** : Chronic Health Hazard

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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### SECTION 16. OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

CA / EN

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Version  
1.12

Revision Date:  
14.05.2015

MSDS Number:  
400000003977

Country: CA  
Language: EN

### Carechem24 International Worldwide Coverage

#### Emergency Phone Number

<u>Europe:</u>	All European Countries	+44 (0) 1235 239 670 (NCEC)
<u>Asia Pacific:</u>	East / South East Asia – Regional Number	+65 3158 1074
	Australia	+61 2801 44558
	New Zealand	+64 9929 1483
	China	+86 532 8388 9090
	China Taiwan	+86 10 5100 3039
	Japan	+81 345 789 341
	Indonesia	00780 3011 0293
	Malaysia	+60 3 6207 4347
	Thailand	001800 1 2066 6751
	Korea	+65 3158 1285 +82 (0)234 798 401
	Vietnam	+65 3158 1255
	India	+65 3158 1198 +91 1166 411 405
	Pakistan	+65 3158 1329
	Philippines	+65 31581203
	Sri Lanka	+65 3158 1195
	Emergency Phone Number	+65 3158 1200
<u>Middle East / Africa:</u>	Arabic speaking countries	+44 (0) 1235 239 671
	South Africa	+27 21 300 2732
	All other countries	+44 (0) 1235 239 670
<u>America</u>	United States of America and Canada	+1866 928 0789 +1 215 207 0061
<u>Latin America:</u>	Brazil	+55 113 711 9144
	Mexico	+52 555 004 8763
	Chile	+56 225 829 336
	All other countries	+44 (0) 1235 239 670