



# Material Safety Data Sheet

## Vigilant 4SC

Version: 1.6

Revision Date: 10/11/2010

Print Date: 04/29/2011

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: *Vigilant 4SC*

Product Use Description: Plant protection agent

Synonyms: Bifenazate

Chemical nature: Acaricide

Company: Chemtura Corporation  
199 Benson Road  
Middlebury, CT  
06749  
United States of America  
  
Telephone: 866-430-2775

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300  
:  
Chemtura Corporation Emergency Response: CHEMTURA : 800-292-5898  
  
For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by: Product Safety Department  
(US) +1 866-430-2775  
  
+011-886-2-2712-5668      MSDSRequest@chemtura.com

### SECTION 2. HAZARDS IDENTIFICATION

#### Emergency Overview

#### CAUTION!

Form: liquid      Colour: off-white to tan      Odour: characteristic

Hazard Summary :  
Harmful if swallowed.  
May cause eye irritation.  
May cause sensitization by skin contact.



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### OSHA Hazards

: THIS MATERIAL IS HAZARDOUS UNDER THE CRITERIA OF THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD 29CFR 1910.1200.

### Potential Health Effects

#### Primary Routes of Entry

: Skin contact  
Inhalation  
Eye contact

#### Inhalation

: May cause respiratory tract irritation.

#### Skin

: May cause allergic skin reaction.

#### Eyes

: May cause eye irritation.

#### Ingestion

: Harmful if swallowed.

#### Chronic Exposure

: May cause allergic skin reaction.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous components

Component	CAS-No.	Weight percent
BIFENAZATE	149877-41-8	43.2 %
propane-1,2-diol	57-55-6	5 - 10 %

## SECTION 4. FIRST AID MEASURES

### First aid procedures

#### Inhalation

: Move to fresh air.  
If not breathing, give artificial respiration.  
Call a POISON CENTER or doctor/ physician.

#### Skin contact

: Remove contaminated clothing and shoes.  
Wash off immediately with plenty of water for at least 15 minutes.  
Call a POISON CENTER or doctor/ physician.

#### Eye contact

: Rinse immediately with plenty of water, also under the eyelids, for at least 15



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minutes.  
Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.  
Call a POISON CENTER or doctor/ physician.

Ingestion : Call a physician or poison control centre immediately.  
Have person sip a glass of water if able to swallow.  
Do not induce vomiting unless told to do so by the poison control center or doctor.  
Do not give anything by mouth to an unconscious person.

### SECTION 5. FIRE-FIGHTING MEASURES

#### Flammable properties

Flash point : > 219 °F (104 °C)

Lower explosion limit : Remarks: no data available

Upper explosion limit : Remarks: no data available

#### Fire fighting

Suitable extinguishing media : Extinguishing media - large fires  
Alcohol-resistant foam  
(on small fires)  
Carbon dioxide (CO2)  
Dry chemical

Unsuitable extinguishing media : Water spray jet

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

#### Protective equipment and precautions for firefighters

Specific hazards during fire fighting : Burning produces irritant fumes.  
Exposure to decomposition products may be a hazard to health.

Special protective equipment for fire-fighters : Body covering protective clothing, full "turn-out" gear.  
Self-contained breathing apparatus.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions : Should not be released into the environment.



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Do not flush into surface water or sanitary sewer system.  
Avoid subsoil penetration.

Methods for containment / : Dam up.  
Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Pick up and transfer to properly labelled containers.  
Large spills should be collected mechanically (remove by pumping) for disposal.

### SECTION 7. HANDLING AND STORAGE

#### Handling

Handling procedures : Handle in accordance with good industrial hygiene and safety practice.  
Avoid contact with skin and eyes.  
Avoid inhalation of vapour or mist.  
Use with adequate ventilation.  
Wash thoroughly after handling.

#### Storage

Requirements for storage : Keep in a dry, cool place.  
Other data : Stable under recommended storage conditions.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Exposure Guidelines

##### Components with workplace control parameters

Components / CAS-No.	Value / Basis / Update	Control parameters	Further information
propane-1,2-diol 57-55-6	TWA US WEEL 2008-01-01	10 mg/m3	
butan-1-ol 71-36-3	TWA ACGIH 2007-01-01	20 ppm	
	TWA OSHA P1 1997-08-04	100 ppm 300 mg/m3	
	C	50 ppm	



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	OSHA P0 1989-01-19	150 mg/m3	
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### Engineering measures

### Personal protective equipment

- Eye protection : Safety glasses with side-shields
- Hand protection : Chemical resistant protective gloves
- Skin and body protection : Long sleeved clothing  
Lab coat
- Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

- Form : liquid
- Colour : off-white  
to  
tan
- Odour : characteristic

### Safety data

- Flash point : > 219 °F (104 °C)
- Lower explosion limit : Note: no data available
- Upper explosion limit : Note: no data available
- pH : 7.0
- Boiling point/boiling range : Note: no data available
- Vapour pressure : Note: similar to water
- Density : 1.104 g/cm3  
at 77 °F (25 °C)



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Water solubility : Note: dispersible

Viscosity, dynamic : 550 mPa.s  
at 77 °F (25 °C)

#### SECTION 10. STABILITY AND REACTIVITY

Materials to avoid : Remarks: Oxidizing agents  
Strong acids and strong bases

Hazardous decomposition products : Note: Carbon oxides

Hazardous reactions : Hazardous polymerisation does not occur.

#### SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50: > 5,000 mg/kg  
Species: rat

: LD50: > 2,000 mg/kg  
Species: rat

Acute inhalation toxicity : LC50: > 1.8 mg/l  
Exposure time: 4 h  
Species: rat

Acute dermal toxicity : LD50: > 5,000 mg/kg  
Species: rabbit

Skin irritation : Species: rabbit  
Result: No skin irritation

Eye irritation : Species: rabbit  
Result: No eye irritation

Sensitisation : Species: guinea pig  
Classification: May cause sensitization by skin contact.

Repeated dose toxicity



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BIFENAZATE : Species: dog, male and female  
Application Route: Oral  
Exposure time: (28 d)  
NOEL: < 7.9 mg/kg  
Lowest observable effect level: 7.9 mg/kg

CMR effects  
BIFENAZATE : Carcinogenicity: Not classifiable as a human carcinogen.  
Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.  
Reproductive toxicity: No toxicity to reproduction

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

Toxicity to fish : LC50: 1.4 mg/l  
Exposure time: 96 h  
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates. : EC50: 1.4 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)

Toxicity to algae : EC50: 1.3 mg/l  
Exposure time: 72 h  
Species: Algae

Bioaccumulation  
BIFENAZATE : Bioconcentration factor (BCF): 83  
Method: estimated

### Further information on ecology

## SECTION 13. DISPOSAL CONSIDERATIONS

Further information : In accordance with local and national regulations.  
Do not dispose of waste into sewer.

## SECTION 14. TRANSPORT INFORMATION



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#### DOT

UN number : 3082  
Description of the goods : Environmentally hazardous substances, liquid, n.o.s.  
: (Bifenazate)  
Class : 9  
Packing group : III  
ERG Code : 171

#### IATA

UN number : 3082  
Description of the goods : Environmentally hazardous substance, liquid, n.o.s.  
: (Bifenazate)  
Class : 9  
Packing group : III

#### IMDG

UN number : 3082  
Description of the goods : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
: (Bifenazate)  
Class : 9  
Packing group : III  
EmS Letter 1 : F-A  
EmS Letter 2 : S-F  
Marine pollutant : yes  
Bifenazate

### SECTION 15. REGULATORY INFORMATION

**OSHA Hazards** : This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

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





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### SECTION 16. OTHER INFORMATION

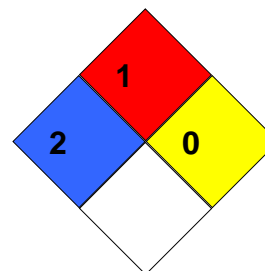
#### Further information

#### HMIS Classification

: Health hazard: 2  
Chronic Health Hazard: \*  
Flammability: 1  
Physical hazards: 0  
PPI: Ask supervisor or safety specialist for handling instructions

#### NFPA Classification

: Health hazard: 2  
Fire Hazard: 1  
Reactivity Hazard: 0



#### Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+52 113 711 91 44
	All other countries	+44 (0)208 762 8322
<u>Mexico:</u>		+52 555 004 87 63

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.