

VIGILANT® 4SC

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 09/26/2016

Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : VIGILANT® 4SC
Product code : 400000004589
Other means of identification : EPA Reg. No. 400-514

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

Recommended use : Insecticides, acaricides and products to control other arthropods, Plant Protection products
Restrictions on use : Agriculture, For professional users only

1.3. Details of the supplier of the safety data sheet

MacDermid Agricultural Solutions, Inc.
245 Freight Street
Waterbury, CT 06702 - USA
T 1-866-761-9397
sds@arysta.com

1.4. Emergency telephone number

Emergency number : FOR 24-HOUR MEDICAL EMERGENCY ASSISTANCE CALL PROPHARMA: 1-866-303-6952
or +1-651-603-3432
FOR 24-HOUR CHEMICAL EMERGENCY (Spill, leaks, fire, exposure or accident) call
CHEMTREC: 1-800-424-9300 or +1-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Sensitisation — Skin, Category 1 H317
Specific target organ toxicity — Repeated exposure, Category 2 H373
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410

Full text of H statements : see section 16

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H317 - May cause an allergic skin reaction
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
Precautionary statements (GHS-US) : P260 - Do not breathe mist, vapours
P272 - Contaminated work clothing must not be allowed out of the workplace
P273 - Avoid release to the environment
P280 - Wear protective gloves, protective clothing
P302 + P352 - If on skin: Wash with plenty of soap, water
P314 - Get medical advice/attention if you feel unwell
P321 - Specific treatment (see First aid measures on this label)
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
P391 - Collect spillage
P501 - Dispose of contents/container to an authorised waste collection point

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Bifenazate	(CAS No) 149877-41-8	40 - 50	Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If medical advice is needed, have product container or label at hand.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Artificial respiration and/or oxygen if necessary.
- First-aid measures after skin contact : Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
- First-aid measures after eye contact : Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Do NOT induce vomiting. Rinse mouth. Get medical advice/attention.

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

- Symptoms/injuries : May cause damage to organs through prolonged or repeated exposure.
- Symptoms/injuries after skin contact : May cause an allergic skin reaction.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry powder. Water fog. alcohol resistant foam.
- Unsuitable extinguishing media : Water spray.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Burning produces irritating, toxic and noxious fumes.
- Reactivity : No dangerous reactions known.

5.3. Advice for firefighters

- Firefighting instructions : Use extinguishing media appropriate for surrounding fire. Do not allow run-off from fire fighting to enter drains or water courses.
- Protection during firefighting : Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid contact with skin, eyes and clothing. Use personal protective equipment as required. Do not breathe aerosol.

6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Do not discharge into drains or the environment. Prevent entry to sewers and public waters.

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6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Absorb and/or contain spill with inert material, then place in suitable container.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin, eyes and clothing. Use only outdoors or in a well-ventilated area. Do not breathe mist, vapours.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Do not store near food, foodstuffs, drugs, or potable water supplies. Keep container tightly closed. Store at room temperature.
- Incompatible products : Strong bases. Strong acids. Strong oxidizers.
- Heat and ignition sources : Keep away from heat, sparks and flame.
- Prohibitions on mixed storage : Incompatible materials.
- Storage area : Store in dry, cool, well-ventilated area. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Bifenazate (149877-41-8)

Not applicable

8.2. Exposure controls

- Appropriate engineering controls : Mechanical ventilation is recommended. Ensure good ventilation of the work station. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Emergency safety showers should be available in the immediate vicinity of any potential exposure.
- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear suitable gloves resistant to chemical penetration.
- Eye protection : Safety glasses with side shields.
- Skin and body protection : Long sleeved protective clothing.
- Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. If needed, use an air-purifying respirator with organic vapor cartridges and a dust/mist prefilter.
- Environmental exposure controls : Prevent leakage or spillage. Prevent contaminated water run-off.
- Consumer exposure controls : Keep out of reach of children.
- Other information : Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Colour : Off-white tan
- Odour : Sweet
- Odour threshold : No data available
- pH : 5 - 9
- Melting point : No data available
- Freezing point : No data available
- Boiling point : > 100 °C
- Flash point : No data available
- Relative evaporation rate (butylacetate=1) : No data available

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Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.1
Density	: 1.1 g/cm ³ @ 25 °C
Solubility	: slightly soluble.
Log Pow	: No data available
Auto-ignition temperature	: > 400 °C
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: No oxidizing properties.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Heat.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Burning produces irritating, toxic and noxious fumes. Carbon oxides (CO, CO₂). Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	: Inhalation; Skin and eye contact
Acute toxicity	: Not classified

VIGILANT® 4SC	
LD50 oral rat	> 2000 mg/l
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 1.94 mg/l/4h

Bifenazate (149877-41-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 5000 mg/kg

Skin corrosion/irritation	: Not classified (Not irritating to rabbits on cutaneous application)
Serious eye damage/irritation	: Not classified (Not irritating to rabbits on ocular application)
Respiratory or skin sensitisation	: May cause an allergic skin reaction. (Positive. Guinea pig)
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Bifenazate (149877-41-8)	
NOAEL (chronic, oral, animal/male, 2 years)	0.001 mg/kg bodyweight rat
NOAEL (chronic, oral, animal/female, 2 years)	0.0012 mg/kg bodyweight rat

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Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.

Bifenazate (149877-41-8)	
LOAEL (oral, rat, 90 days)	13.8 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	> 15 mg/kg bodyweight/day early embryonic development; >200 mg/kg bodyweight/day Teratogenicity (rabbit, female)
Additional information	Affected organs: liver, Thymus and spleen, bone marrow, lymphatic node, kidneys, adrenal glands

Aspiration hazard	: Not classified
Symptoms/injuries after skin contact	: May cause an allergic skin reaction.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	: Very toxic to aquatic life with long lasting effects.
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Bifenazate (149877-41-8)	
LC50 fish 1	0.58 mg/l 96 h <i>Lepomis macrochirus</i>
LC50 other aquatic organisms 1	0.42 mg/l 96 h <i>Crassostrea virginica</i>
EC50 Daphnia 1	0.5 mg/l 48 h
ErC50 (algae)	> 2.02 mg/l 96 h <i>Selenastrum capricornutum</i>
ErC50 (other aquatic plants)	1.4 mg/l 96 h <i>Navicula pelliculosa</i>
NOEC (acute)	0.25 mg/l 96 h <i>Selenastrum capricornutum</i>
NOEC chronic fish	0.017 mg/l 87 d <i>Oncorhynchus mykiss</i>
NOEC chronic crustacea	0.15 mg/l 21 d <i>Daphnia magna</i>
NOEC chronic algae	> 3.82 mg/l 7 d <i>Lemna gibba</i>

12.2. Persistence and degradability

VIGILANT® 4SC	
Persistence and degradability	May cause long-term adverse effects in the environment.

Bifenazate (149877-41-8)	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

VIGILANT® 4SC	
Bioaccumulative potential	Not established.

Bifenazate (149877-41-8)	
Log Pow	3.4 @ 25 °C

12.4. Mobility in soil

VIGILANT® 4SC	
Ecology - soil	No additional information available.

12.5. Other adverse effects

Other information	: No additional information available.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Do not allow into drains or water courses.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Non-bulk (<= 119 gallons / 450 liters) Not regulated

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Bulk (>119 gallons / 450 liters):

Transport document description : UN3082 Environmentally hazardous substances, liquid, n.o.s. (Bifenazate), 9, III

UN-No.(DOT) : UN3082

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (Bifenazate)

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)



Dangerous for the environment : Yes

Marine pollutant : Yes



Additional information

Emergency Response Guide (ERG) Number : 171

Other information : No supplementary information available.

Transport by sea

IMDG

Transport hazard class(es) (IMDG) : 9



Marine pollutant : Yes

UN-No. (IMDG) : 3082

Transport document description (IMDG) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bifenazate), 9, III, MARINE POLLUTANT

Class (IMDG) : 9 - Miscellaneous dangerous substances and articles

Packing group (IMDG) : III - substances presenting low danger

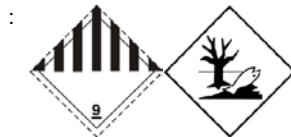
EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-F

Air transport

IATA

Transport hazard class(es) (IATA) : 9



Marine pollutant : Yes

UN-No. (IATA) : 3082

Transport document description (IATA) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bifenazate), 9, III

Class (IATA) : 9 - Miscellaneous Dangerous Goods

Packing group (IATA) : III - Minor Danger

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SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Bifenazate (149877-41-8)

EPA TSCA Regulatory Flag	Exempt from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide
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This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.:

EPA Registration Number	400-514
FIFRA Signal Word	CAUTION
FIFRA Hazard Statement	Harmful if swallowed. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.
FIFRA Other	This pesticide is toxic to birds, estuarine/marine invertebrates, and fish. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not use or store near heat or open flame.

15.2. International regulations

CANADA

VIGILANT® 4SC

WHMIS Classification	No additional information available
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15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Revision date : 09/26/2016

Data sources : ACGIH (American Conference of Government Industrial Hygienists).
European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>.
Kristen Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
Manufacturer Information.
National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition.
NIOSH Occupational Health Guide for chemical Substances - Vol. II, September, 1978.
OSHA 29CFR 1910.1200 Hazard Communication Standard.
TSCA Chemical Substance Inventory. Accessed at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.

Other information : None.

Full text of H-statements:

H317	May cause an allergic skin reaction
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Abbreviations and acronyms:

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	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

NFPA health hazard

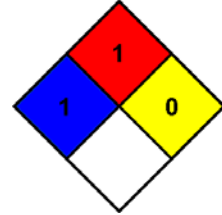
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

: 1 - Must be preheated before ignition can occur.

NFPA reactivity

: 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



SDS Prepared by:

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product