



**CERTIFICATE OF REGISTRATION OF PESTICIDE/VECTOR
REPELLENT**

ISSUED UNDER SECTION 8 OF THE CONTROL OF VECTORS AND PESTICIDES
ACT 1998

Registration Number : SINENVI-SusCN/041/0195

This is to certify that


Name of Registrant : BASF SINGAPORE PTE LTD
Address of Principal Place of Business : 7 TEMASEK BOULEVARD
#35-01 SUNTEC TOWER ONE
SINGAPORE 038987
Company/Business Certificate No : 198902034E

has been granted registration of the following pesticide for advertisement, sale and supply in Singapore.

Product Name : TENOPA SC
Active Ingredient : ALPHA-CYPERMETHRIN
FLUFENOXURON
Content : ALPHA-CYPERMETHRIN 2.94% W/W
FLUFENOXURON 2.94% W/W
Formulation : SUSPENSION CONCENTRATE
Manufacturer : SOREX LIMITED
ST. MICHAEL'S INDUSTRIAL ESTATE
WIDNES, CHESHIRE WA8 8TJ
UNITED KINGDOM

The Certificate of Registration is issued subject to the conditions stated overleaf.

22 May 2001
Date of Registration


+ Commissioner of Public Health
Registration Authority

Safety data sheet

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BASF Safety data sheet
Date / Revised: 22.05.2018
Product: **TENOPA®**

Version: 5.0

(30264788/SDS_GEN_SG/EN)

Date of print 23.05.2018

1. Substance/preparation and manufacturer/supplier identification

TENOPA®

Use: insecticide

Manufacturer/supplier:

BASF (Malaysia) Sdn Bhd
No 2, Jalan Astaka U8/87
Bukit Jelutong, Seksyen U8
40150 Shah Alam, Selangor, MALAYSIA

Contact address:

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SINGAPORE
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Emergency information:

Singapore Emergency Toll-Free Number:
Telephone: 1800-723-1361
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:

Acute toxicity: Cat. 5 (oral)

Reproductive toxicity: Cat. Additional category for effects on or via lactation.

Specific target organ toxicity — repeated exposure: Cat. 2

Hazardous to the aquatic environment - acute: Cat. 1

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Hazardous to the aquatic environment - chronic: Cat. 1

Label elements and precautionary statement:

Pictogram:



Signal Word:

Warning

Hazard Statement:

H303	May be harmful if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H362	May cause harm to breast-fed children.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P260	Do not breathe dust/gas/mist/vapours.
P202	Do not handle until all safety precautions have been read and understood.
P263	Avoid contact during pregnancy/while nursing.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P308 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P391	Collect spillage.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.
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Other hazards which do not result in classification:

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

May cause paraesthesia. ALPHA-CYPERMETHRIN

3. Composition/information on ingredients

Chemical nature

biocide, insecticide, suspension concentrate (SC)

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Hazardous ingredients

alpha-Cypermethrin

Content (W/W): 2.9 %
CAS Number: 67375-30-8

Acute Tox.: Cat. 4 (Inhalation - dust)
Acute Tox.: Cat. 3 (oral)
Skin Corr./Irrit.: Cat. 3
STOT SE: Cat. 3 (irr. to respiratory syst.)
STOT RE (Nervous system): Cat. 2
Aquatic Acute: Cat. 1
Aquatic Chronic: Cat. 1

Flufenoxuron

Content (W/W): 2.9 %
CAS Number: 101463-69-8

Repr.: Cat. Add. cat. lact.
Aquatic Acute: Cat. 1
Aquatic Chronic: Cat. 1
M-factor acute: 10000
M-factor chronic: 10000

Poly(oxy-1,2-ethanediyl), .alpha.-[2,4,6-tris(1,1-dimethylethyl)phenyl]-.omega.-hydroxy-

Content (W/W): < 1 %
CAS Number: 9046-09-7

Acute Tox.: Cat. 4 (oral)
Eye Dam./Irrit.: Cat. 1
Aquatic Acute: Cat. 2
Aquatic Chronic: Cat. 2

propane-1,2-diol

Content (W/W): < 25 %
CAS Number: 57-55-6

4. First-Aid Measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:

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Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further symptoms are possible, numbness and tingling of hands and feet, lung oedema, convulsions

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

Specific hazards:

carbon monoxide, hydrogen chloride, hydrogen cyanide, carbon dioxide, nitrogen oxides, organochloric compounds, sulfur oxides

The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental Release Measures

Personal precautions:

Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Do not breathe vapour/spray.

Environmental precautions:

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

7. Handling and Storage

Handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

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Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Storage

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect against moisture. Protect from direct sunlight.

Storage stability:

Storage duration: 36 Months

Protect from temperatures below: -10 °C

The product can crystallize below the limit temperature.

Protect from temperatures above: 40 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure controls and personal protection

Components with occupational exposure limits

No occupational exposure limits known.

Personal protective equipment

Respiratory protection:

Respiratory protection not required.

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form: suspension

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Colour:	white	
Odour:	slight odour	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
pH value:	approx. 6 - 8 (20 °C) (measured with the undiluted substance)	
Melting point:	The product has not been tested.	
Boiling point:	approx. 100 °C Information applies to the solvent.	
Flash point:	Non-flammable.	(Directive 92/69/EEC, A.9)
Evaporation rate:	not applicable	
Flammability (solid/gas):	No dangerous quantities of flammable gases will be produced by contact with water.	(Directive 92/69/EEC, A.12)
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Ignition temperature:	500 °C	(Directive 92/69/EEC, A.15)
Thermal decomposition:	195 °C , 30 kJ/kg	(DSC (OECD 113))
	400 °C , > 120 kJ/kg	(DSC (OECD 113))
Explosion hazard:	not explosive	(Directive 92/69/EEC, A.14)
Fire promoting properties:	not fire-propagating	(UN Test O.2 (oxidizing liquids))
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.	
Density:	approx. 1.03 g/cm ³ (20 °C)	
Relative vapour density (air):	not applicable	

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Solubility in water: dispersible
Partitioning coefficient n-octanol/water (log Pow):
not applicable

Viscosity, dynamic: approx. 100 mPa.s
(20 °C, 100 1/s)

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Conditions to avoid:

See MSDS section 7 - Handling and storage.

Thermal decomposition: 195 °C, 30 kJ/kg (DSC (OECD 113))

Thermal decomposition: 400 °C, > 120 kJ/kg (DSC (OECD 113))

Substances to avoid:

strong bases, strong acids, strong oxidizing agents

Corrosion to metals: mild steel
tin

Hazardous reactions:

No hazardous reactions if stored and handled as prescribed/indicated.

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Acute toxicity

Assessment of acute toxicity:

Of low toxicity after single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

LD50 rat (oral): 4,478 mg/kg

LC50 rat (by inhalation): > 2.37 mg/l 4 h

Highest concentration available for testing. No mortality was observed. An aerosol was tested.

LD50 rat (dermal): > 2,000 mg/kg

No mortality was observed.

Irritation

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

Skin corrosion/irritation rabbit:

Serious eye damage/irritation rabbit:

Respiratory/Skin sensitization**Assessment of sensitization:**

There is no evidence of a skin-sensitizing potential. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

modified Buehler test guinea pig:

Germ cell mutagenicity**Assessment of mutagenicity:**

The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity**Assessment of carcinogenicity:**

The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Reproductive toxicity**Assessment of reproduction toxicity:**

The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity**Assessment of teratogenicity:**

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Flufenoxuron**Assessment of teratogenicity:**

May cause harm to breastfed babies.

Specific target organ toxicity (single exposure):**Assessment of STOT single:**

The available information is not sufficient for the evaluation of specific target organ toxicity.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: alpha-cypermethrin

Assessment of repeated dose toxicity:

Repeated oral exposure may affect certain organs. Damages the peripheral nerve system.

Information on: Flufenoxuron

Assessment of repeated dose toxicity:

The substance may cause the formation of methemoglobin after repeated uptake of high doses.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: alpha-cypermethrin

Toxicity to fish:

LC50 (96 h) 0.00093 mg/l, Pimephales promelas (OPP 72-1 (EPA-Guideline), Flow through.)

Information on: Flufenoxuron

Toxicity to fish:

LC50 (96 h) > 0.0049 mg/l, Oncorhynchus mykiss (Flow through.)

LC50 (96 h) > 0.00519 mg/l, Brachydanio rerio (OPP 72-1 (EPA-Guideline), Flow through.)

Information on: alpha-cypermethrin

Aquatic invertebrates:

EC50 (48 h) 0.0003 mg/l, Daphnia magna (OECD Guideline 202, part 1)

Information on: Flufenoxuron

Aquatic invertebrates:

EC50 (48 h) approx. 0.000051 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Information on: alpha-cypermethrin

Aquatic plants:

EC50 (7 d) > 0.00139 mg/l (growth rate), Lemna gibba (OECD Guideline 201)

No observed effect concentration (7 d) > 0.00139 mg/l (growth rate), Lemna gibba (OECD guideline 221, static)

EC50 (72 h) > 0.027 mg/l (growth rate), Anabaena flos-aquae (OECD Guideline 201)

Information on: Flufenoxuron

Aquatic plants:

EC50 (96 h) > 0.004 mg/l, Selenastrum capricornutum

Information on: alpha-cypermethrin

Chronic toxicity to fish:

No observed effect concentration (34 d) 0,03 µg/L, Pimephales promelas (OPP 72-4 (EPA-Guideline), Flow through.)

Information on: alpha-cypermethrin

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d), 0.00003 mg/l 0,03 µg/L, Daphnia magna (OPP 72-4 (EPA-Guideline), semistatic)

Mobility

Assessment transport between environmental compartments:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: alpha-cypermethrin

Assessment transport between environmental compartments:

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Information on: Flufenoxuron

Assessment transport between environmental compartments:

The substance will not evaporate into the atmosphere from the water surface.

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: alpha-cypermethrin

Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria).

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Information on: Flufenoxuron
Assessment biodegradation and elimination (H₂O):
Not readily biodegradable (by OECD criteria).

Bioaccumulation potential

Assessment bioaccumulation potential:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: alpha-cypermethrin
Bioaccumulation potential:
Bioconcentration factor: 155 - 910 (73 d), *Cyprinus carpio* (OECD Guideline 305 C)

Information on: Flufenoxuron
Bioaccumulation potential:
Bioconcentration factor: 25,720, *Oncorhynchus mykiss*
Accumulation in organisms is expected.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal Considerations

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Domestic transport:

Packing group:	III
ID number:	UN 3082
Transport hazard class(es):	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains ALPHA-CYPERMETHRIN, FLUFENOXURON)

Sea transport

IMDG

Packing group:	III
ID number:	UN 3082
Transport hazard class(es):	9, EHSM
Marine pollutant:	YES

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Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains ALPHA-CYPERMETHRIN, FLUFENOXURON)

Air transport

IATA/ICAO

Packing group: III
ID number: UN 3082
Transport hazard class(es): 9, EHSM
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (contains ALPHA-CYPERMETHRIN, FLUFENOXURON)

15. Regulatory Information

Hazard determining component(s) for labelling: FLUFENOXURON, ALPHA-CYPERMETHRIN

Other regulations

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.