

## VERTIMEC

Version 9

Revision Date 19.02.2008

Print Date 20.02.2008

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### PRODUCT INFORMATION

**Product name** : VERTIMEC  
**Design Code** : A8612A  
**Use** : Insecticide  
**Company** : Syngenta Crop Protection AG  
 Postfach  
 CH-4002 Basel  
 Switzerland  
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Harmful



Dangerous for the environment

### 2. HAZARDS IDENTIFICATION

Harmful if swallowed.  
 Irritating to eyes.  
 May cause sensitization by skin contact.  
 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Hazardous components

Chemical Name	CAS-No.	EC-No.	Symbol(s)	R-phrases(s)	Concentration
abamectin	71751-41-2		N, T+	R26/28 R50/53	1.9 % W/W
1-hexanol	111-27-3	203-852-3	Xn	R22	25 - 35 % W/W
phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-	128-37-0	204-881-4		R53	1 - 5 % W/W
2-pyrrolidinone, 1-methyl-	872-50-4	212-828-1	Xi	R36/38	20 - 30 % W/W

\* indicates substances for which there are Community workplace exposure limits.  
 For the full text of the R-phrases mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

**General advice** : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.

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- Inhalation** : Remove to fresh air.  
If breathing is irregular or stopped, administer artificial respiration.  
Keep patient warm and at rest.  
Call a physician or Poison Control Centre immediately.
- Skin contact** : Take off all contaminated clothing immediately.  
Wash off immediately with plenty of water.  
If skin irritation persists, call a physician.  
Wash contaminated clothing before re-use.
- Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Remove contact lenses.  
Immediate medical attention is required.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label.  
Do NOT induce vomiting.

**Symptoms** : Lack of coordination  
Tremors  
Dilatation of the pupil

- Medical advice** : This material is believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic mectin exposure.  
Toxicity can be minimized by early administration of chemical absorbents (e.g. activated charcoal).  
If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged.  
Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.

### 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media** : Extinguishing media - small fires  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
Extinguishing media - large fires  
Alcohol-resistant foam  
or  
Water spray
- Extinguishing media which shall not be used for safety reasons** : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting** : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products

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of combustion (see section 10).  
Exposure to decomposition products may be a hazard to health.

- Special protective equipment for fire-fighters** : Wear full protective clothing and self-contained breathing apparatus.
- Further information** : Do not allow run-off from fire fighting to enter drains or water courses.  
Cool closed containers exposed to fire with water spray.

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**6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions** : Refer to protective measures listed in sections 7 and 8.  
Keep people away from and upwind of spill/leak.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.  
Remove all sources of ignition.  
Pay attention to flashback.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so.  
Do not flush into surface water or sanitary sewer system.
- Methods for cleaning up** : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
- Additional advice** : If the product contaminates rivers and lakes or drains inform respective authorities.

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**7. HANDLING AND STORAGE****HANDLING**

- Advice on safe handling** : Avoid contact with skin and eyes.  
When using, do not eat, drink or smoke.  
Take precautionary measures against static discharges.  
Use only in an area containing flame proof equipment.  
For personal protection see section 8.

**STORAGE**

- Requirements for storage areas and containers** : Keep containers tightly closed in a dry, cool and well-ventilated place.  
Keep out of the reach of children.  
Keep away from food, drink and animal feedingstuffs.  
Keep away from heat and sources of ignition.  
Keep away from combustible material.  
Keep in an area equipped with sprinklers.  
No smoking.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	Exposure limit(s)	Type of exposure limit	Source
2-pyrrolidinone, 1-methyl-	20 ppm 20 ppm 100 ppm	8 h TWA 8 h TWA Short term exposure limit	DFG SUVA SUVA
phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-	10 mg/m <sup>3</sup> 10 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	8 h TWA 8 h TWA 8 h TWA	DFG SUVA ACGIH
abamectin	0.02 mg/m <sup>3</sup>	8 h TWA	SYNGENTA

#### ENGINEERING MEASURES

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

If airborne mists or vapors are generated, use local exhaust ventilation controls.

Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.

Where necessary, seek additional occupational hygiene advice.

#### PERSONAL PROTECTIVE EQUIPMENT

**Protective measures** : The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

**Respiratory protection** : A combination gas, vapor and particulate respirator may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

**Hand protection** : Chemical resistant gloves should be used. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be changed when breakthrough is suspected. Suitable material:  
Nitrile rubber

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- Eye protection** : If eye contact is possible, use tight-fitting chemical safety goggles.
- Skin and body protection** : Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material. Wash with soap and water after removing protective clothing. Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.) Wear as appropriate:  
impervious protective suit

**9. PHYSICAL AND CHEMICAL PROPERTIES**

- Form** : liquid
- Colour** : yellow to red brown
- pH** : 2.6 - 3.6 at 1 % w/v (20 - 25 °C)
- Flash point** : 72.5 °C at 1,013.25 hPa DIN EN 22719  
: 161 °F at 1,013.25 hPa Abel-Pensky c.c.
- Oxidizing properties** : not oxidizing
- Explosive properties** : Not explosive
- Density** : 0.96 g/cm<sup>3</sup> at 20 - 25 °C
- Miscibility** : Miscible
- Viscosity, dynamic** : 19.0 mPa.s at 20 °C  
: 11.4 mPa.s at 40 °C
- Surface tension** : 37.1 mN/m at 20 °C

**10. STABILITY AND REACTIVITY**

- Hazardous decomposition products** : Combustion or thermal decomposition will evolve toxic and irritant vapors.
- Hazardous reactions** : None known.  
Hazardous polymerization does not occur.  
Stable under normal conditions.

**11. TOXICOLOGICAL INFORMATION**

- Acute oral toxicity** : LD50 Rat, 300 mg/kg
- Acute inhalation toxicity** : LC50 Rat, 7.8 mg/l, 4 h

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<b>Acute dermal toxicity</b>	:	LD50 Rat, > 1,800 mg/kg
	:	LD50 Rabbit, > 2,000 mg/kg
<b>Skin irritation</b>	:	Rabbit: Non-Irritating
<b>Eye irritation</b>	:	Rabbit: Irritant
<b>Sensitisation</b>	:	guinea pig: Sensitizing
<b>Long term toxicity</b>		Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

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**12. ECOLOGICAL INFORMATION****ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)**

<b>Biodegradability</b>	:	Abamectin is not readily biodegradable.
<b>Bioaccumulation</b>	:	Abamectin does not bioaccumulate.
<b>Stability in water</b>	:	Degradation half life: 3 d Abamectin is not persistent in water.
<b>Stability in soil</b>	:	Degradation half life : 10.7 - 52.2 d Abamectin is not persistent in soil.
<b>Mobility</b>	:	Abamectin has slight mobility in soil.
<b>ECOTOXICITY EFFECTS</b>		
<b>Toxicity to fish</b>	:	LC50 Bluegill sunfish, ca. 0.3 mg/l , 96 h
	:	LC50 Oncorhynchus mykiss (rainbow trout), 0.13 mg/l , 96 h
<b>Toxicity to aquatic invertebrates</b>	:	EC50 Daphnia magna (Water flea), 0.029 mg/l , 48 h
<b>Toxicity to algae</b>	:	ErC50 Pseudokirchneriella subcapitata (green algae), > 82 mg/l , 72 h

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**13. DISPOSAL CONSIDERATIONS**

<b>Product</b>	:	Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration.
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If recycling is not practicable, dispose of in compliance with local regulations.

**Contaminated packaging** : Empty remaining contents.  
Triple rinse containers.  
Empty containers should be taken for local recycling or waste disposal.  
Do not re-use empty containers.

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**14. TRANSPORT INFORMATION****Land transport***ADR/ RID:*

UN-Number: 2902  
Class: 6.1  
Danger Label Number : 6.1  
Packaging group III  
Proper shipping name : PESTICIDE, LIQUID, TOXIC, N.O.S.  
(ABAMECTIN )

**Sea transport***IMDG:*

UN-Number: 2902  
Class: 6.1  
Danger Label Number : 6.1  
Packaging group: III  
Proper shipping name : PESTICIDE, LIQUID, TOXIC, N.O.S.  
(ABAMECTIN )

Marine pollutant : Marine pollutant

**Air transport***IATA-DGR*

UN-Number: 2902  
Class: 6.1  
Danger Label Number : 6.1  
Packaging group: III  
Proper shipping name : PESTICIDE, LIQUID, TOXIC, N.O.S.  
(ABAMECTIN )

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**15. REGULATORY INFORMATION****Labelling according to EC Directives**

Hazardous components which must be listed on the label:

- abamectin
- 1-hexanol

<b>Symbol(s)</b>	: Xn N	Harmful Dangerous for the environment
<b>R-phrase(s)</b>	: R22 R36 R43 R50/53	Harmful if swallowed. Irritating to eyes. May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>S-phrase(s)</b>	: S 2 S13  S20/21 S35  S36/37  S57	Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke. This material and its container must be disposed of in a safe way. Wear suitable protective clothing and gloves. Use appropriate container to avoid environmental contamination.
<b>Special labelling of certain preparations</b>	: To avoid risks to man and the environment, comply with the instructions for use. Safety datasheet available on request for professional users.	



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**16. OTHER INFORMATION****Further information**

Text of R-phrases mentioned in Section 3:

<b>R22</b>	Harmful if swallowed.
<b>R26/28</b>	Very toxic by inhalation and if swallowed.
<b>R36/38</b>	Irritating to eyes and skin.
<b>R50/53</b>	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>R53</b>	May cause long-term adverse effects in the aquatic environment.

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