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SECTION 1. IDENTIFICATION

Product name : AVICTA COMPLETE BEANS 500

Design code : A19409A

Product Registration number : 100-1457

Manufacturer or supplier's details

Company name of supplier : Syngenta Crop Protection, LLC

Address : Post Office Box 18300 Greensboro NC 27419

United States of America (USA)

Telephone : 1 800 334 9481 Telefax : 1 336 632 2192

E-mail address : sds.requests@syngenta.com

Emergency telephone : 1 800 888 8372

Recommended use of the chemical and restrictions on use

Recommended use : Nematicide

Fungicide Insecticide

Restrictions on use : Restricted Use Pesticide

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Oral) : Category 3

Acute toxicity (Inhalation) : Category 2

Carcinogenicity : Category 1A

Reproductive toxicity : Category 2

Specific target organ toxicity : Category 1 (Nervous system)

- repeated exposure

Other hazards

None known.

GHS label elements

Hazard pictograms





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Signal Word : Danger

Hazard Statements : H301 Toxic if swallowed.

H330 Fatal if inhaled. H350 May cause cancer.

H361d Suspected of damaging the unborn child.

H372 Causes damage to organs (Nervous system) through

prolonged or repeated exposure.

Precautionary Statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P260 Do not breathe mist or vapors. P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection/ hearing protection. P284 Wear respiratory protection.

Response:

P301 + P310 + P330 IF SWALLOWED: Immediately call a

POISON CENTER/ doctor. Rinse mouth.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON

CENTER/ doctor.

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container

tightly closed.

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
abamectin (combination of avermectin B1a and aver- mectin B1b) (ISO)	71751-41-2*	22.21	-
thiamethoxam (ISO)	153719-23-4*	11.1	-
propane-1,2-diol	57-55-6*	>= 3 - <= 7	TSC

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propane-1,2,3-triol	56-81-5*	>= 3 - <= 7	TSC
ethanol	64-17-5*	>= 1 - <= 5	TSC
metalaxyl-M (ISO)	70630-17-0*	1.67	-
kaolin	1332-58-7*	>= 0.1 - <= 1	TSC
fludioxonil (ISO)	131341-86-1*	0.55	-
triethylamine	121-44-8*	<= 0.1	TSC

^{*} Indicates that the identifier is a CAS No.

TSC- the actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : Have the product container, label or Safety Data Sheet with

you when calling the emergency number, a poison control

center or physician, or going for treatment.

If inhaled : Take the victim into fresh air.

If breathing is irregular or stopped, administer artificial respira-

tion.

Keep patient warm and at rest.

Call a physician or poison control center immediately.

In case of 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.

In case of 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.

If swallowed : If swallowed, seek medical advice immediately and show this

container or label.

Do NOT induce vomiting. Lack of coordination

Most important symptoms and effects, both acute and

Tremors

delayed

Dilatation of the pupil

Toxic if swallowed. Fatal if inhaled. May cause cancer.

Suspected of damaging the unborn child.

Causes damage to organs through prolonged or repeated

exposure.

Notes to physician : This material is believed to enhance GABA activity in animals.

It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiaziphines, 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

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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 meas-

urements.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media :

Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or car-

bon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam

or

Water spray

Unsuitable extinguishing

media

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 ingredients, fire

will produce dense black smoke containing hazardous prod-

ucts of combustion (see section 10).

Exposure to decomposition products may be a hazard to

health.

Hazardous combustion prod: :

ucts

Carbon oxides

Nitrogen oxides (NOx) Chlorine compounds

Sulfur oxides

Fluorine compounds

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.

Special protective equipment :

for fire-fighters

Wear full protective clothing and self-contained breathing ap-

paratus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- :

tive equipment and emer-

gency procedures

Refer to protective measures listed in sections 7 and 8.

Environmental precautions Prevent further leakage or spillage if safe to do so.

> Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for containment and 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). Clean contaminated surface thoroughly.

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Clean with detergents. Avoid solvents.

Retain and dispose of contaminated wash water.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : No special protective measures against fire required.

Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

Conditions for safe storage : No special storage conditions required.

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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
abamastin (sambination of	71751-41-2	exposure) TWA	concentration	Cumaanta
abamectin (combination of avermectin B1a and avermec-	/1/51-41-2	IVVA	0.02 mg/m3	Syngenta
tin B1b) (ISO)				
thiamethoxam (ISO)	153719-23-4	TWA	5 mg/m3	Syngenta
propane-1,2-diol	57-55-6	TWA	10 mg/m3	US WEEL
propane-1,2,3-triol	56-81-5	TWA (mist,	5 mg/m3	OSHA Z-1
		respirable		
		fraction)		
		TWA (mist,	15 mg/m3	OSHA Z-1
		total dust)		
		TWA (Mist -	10 mg/m3	OSHA P0
		total dust)		
		TWA (Mist -	5 mg/m3	OSHA P0
		respirable		
	0.4.4	fraction)	4 000	100111
ethanol	64-17-5	STEL	1,000 ppm	ACGIH
		TWA	1,000 ppm	NIOSH REL
		T14/4	1,900 mg/m3	00114 7.4
		TWA	1,000 ppm	OSHA Z-1
		T14/4	1,900 mg/m3	OCUA DO
		TWA	1,000 ppm	OSHA P0
motology (M (ICO)	70630-17-0	TWA	1,900 mg/m3	Cumanata
metalaxyl-M (ISO)		TWA (Res-	5 mg/m3	Syngenta ACGIH
kaolin	1332-58-7	`	2 mg/m3	ACGIH
		pirable par- ticulate mat-		
		ter)		
		TWA (Res-	5 mg/m3	NIOSH REL
		pirable)	J mg/ms	MOOFFICE
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total	15 mg/m3	OSHA Z-1
		dust)		

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		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
fludioxonil (ISO)	131341-86-1	TWA	5 mg/m3	Syngenta
		TWA (Inhal- able particu- late matter)	1 mg/m3	ACGIH
triethylamine	121-44-8	TWA	0.5 ppm	ACGIH
		STEL	1 ppm	ACGIH
		TWA	25 ppm 100 mg/m3	OSHA Z-1
		STEL	15 ppm 60 mg/m3	OSHA P0
		TWA	10 ppm 40 mg/m3	OSHA P0

Engineering measures

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

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.

Maintain air concentrations below occupational exposure standards.

Seek additional occupational hygiene advice.

Personal protective equipment

Respiratory protection

Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Remarks : Wear protective gloves. The choice of an appropriate glove

does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and

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breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things from the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical break-

through.

Eye protection : No special protective equipment required.

Skin and body protection : Choose body protection in relation to its type, to the concen-

tration and amount of dangerous substances, and to the spe-

cific work-place.

Remove and wash contaminated clothing before re-use.

Wear as appropriate: Impervious clothing

Protective measures : The use of technical measures should always have priority

over the use of personal protective equipment.

When selecting personal protective equipment, seek appro-

priate professional advice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : red

Odor : No data available

Odor Threshold : No data available

pH : 5.7 - 6.2

Concentration: 100 %w/v

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : Method: Pensky-Martens closed cup

does not flash

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

according to the OSHA Hazard Communication Standard



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Density 1.114 g/cm3 (77 °F / 25 °C)

Solubility(ies)

Water solubility No data available

Solubility in other solvents No data available

Partition coefficient: n-

octanol/water

No data available

797 °F / 425 °C Autoignition temperature

Decomposition temperature No data available

Viscosity

Viscosity, kinematic No data available

Explosive properties Not explosive

Oxidizing properties The substance or mixture is not classified as oxidizing.

Particle characteristics

Particle size No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity None reasonably foreseeable. Chemical stability Stable under normal conditions.

Possibility of hazardous reac-

tions

No dangerous reaction known under conditions of normal use.

No decomposition if used as directed. Conditions to avoid None known.

Incompatible materials

Hazardous decomposition

No hazardous decomposition products are known.

products

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Ingestion Inhalation Skin contact Eye contact

Acute toxicity

Toxic if swallowed. Fatal if inhaled.

Product:

Acute oral toxicity LD50 (Rat, female): 97.83 mg/kg estimated

LC50 (Rat, male and female): > 0.055 - < 0.53 mg/l Acute inhalation toxicity

Exposure time: 4 h

Test atmosphere: dust/mist

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Assessment: The substance/mixture is not toxic on inhalation

as defined by dangerous goods regulations.

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Acute oral toxicity : LD50 (Rat, male): 8.7 mg/kg

Acute inhalation toxicity : LC50 (Rat, female): > 0.034 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male): 200 - 300 mg/kg

Assessment: The component/mixture is toxic after single con-

tact with skin.

thiamethoxam (ISO):

Acute oral toxicity : LD50 (Rat, male and female): 1,563 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 3.72 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

propane-1,2-diol:

Acute oral toxicity : LD50 (Rat): > 20,000 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rabbit): 317,042 mg/l

Exposure time: 2 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

propane-1,2,3-triol:

Acute oral toxicity : LD50 (Rat, female): > 4,000 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : LC50 (Rat, male): > 2.75 mg/l

Exposure time: 4 h
Test atmosphere: vapor

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Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat, female): > 5,000 mg/kg

ethanol:

Acute oral toxicity : LD50 (Rat): 10,470 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 1,800 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rabbit): 15,800 mg/kg

metalaxyl-M (ISO):

Acute oral toxicity : LD50 (Rat, female): 375 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.29 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Highest attainable concentration

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

fludioxonil (ISO):

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.6 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

triethylamine:

Acute oral toxicity : Assessment: The component/mixture is toxic after single in-

gestion.

Acute inhalation toxicity : LC50 (Rat): 7.22 mg/l

Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rat): 580 mg/kg

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Skin corrosion/irritation

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

Product:

Species : Rabbit

Result : No skin irritation

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Species : Rabbit

Result : No skin irritation

thiamethoxam (ISO):

Species : Rabbit

Result : No skin irritation

propane-1,2-diol:

Result : No skin irritation

propane-1,2,3-triol:

Species : Rabbit

Result : No skin irritation

ethanol:

Result : No skin irritation

metalaxyl-M (ISO):

Species : Rabbit

Result : No skin irritation

fludioxonil (ISO):

Species : Rabbit

Result : No skin irritation

triethylamine:

Species : Rabbit

Result : Corrosive after 3 minutes or less of exposure

Serious eye damage/eye irritation

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

Product:

Species : Rabbit

Result : No eye irritation

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Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Species : Rabbit

Result : No eye irritation

thiamethoxam (ISO):

Species : Rabbit

Result : No eye irritation

propane-1,2-diol:

Result : No eye irritation

propane-1,2,3-triol:

Species : Rabbit

Result : No eye irritation

ethanol:

Result : No eye irritation

metalaxyl-M (ISO):

Species : Rabbit

Result : Risk of serious damage to eyes.

fludioxonil (ISO):

Species : Rabbit

Result : No eye irritation

triethylamine:

Result : Risk of serious damage to eyes.

Respiratory or skin sensitization

Skin sensitization

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

Respiratory sensitization

Not classified due to lack of data.

Product:

Species : Guinea pig

Result : Does not cause skin sensitization.

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Test Type : Local lymph node assay (LLNA)

Species : Mouse

Result : Does not cause skin sensitization.

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thiamethoxam (ISO):

Species Guinea pig

Does not cause skin sensitization. Result

propane-1,2-diol:

Result Does not cause skin sensitization.

propane-1,2,3-triol:

Species Guinea pig

Not a skin sensitizer. Result

ethanol:

Result Does not cause skin sensitization.

metalaxyl-M (ISO):

Species Guinea pig

Result Does not cause skin sensitization.

fludioxonil (ISO):

Species Guinea pig

Result Does not cause skin sensitization.

Germ cell mutagenicity

Not classified due to lack of data.

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Germ cell mutagenicity -

Assessment

Animal testing did not show any mutagenic effects.

thiamethoxam (ISO):

Germ cell mutagenicity -

Animal testing did not show any mutagenic effects.

Assessment

propane-1,2-diol:

Germ cell mutagenicity -

Animal testing did not show any mutagenic effects.

Assessment

propane-1,2,3-triol:

Germ cell mutagenicity -

In vitro tests did not show mutagenic effects

Assessment

ethanol:

Germ cell mutagenicity -

Weight of evidence does not support classification as a germ

Assessment cell mutagen.

metalaxyl-M (ISO):

Germ cell mutagenicity -

Animal testing did not show any mutagenic effects.

Assessment

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fludioxonil (ISO):

Germ cell mutagenicity -Animal testing did not show any mutagenic effects.

Assessment

triethylamine:

Germ cell mutagenicity -In vitro tests did not show mutagenic effects

Assessment

Carcinogenicity

May cause cancer.

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Carcinogenicity - Assess-No evidence of carcinogenicity in animal studies.

thiamethoxam (ISO):

Carcinogenicity - Assess-Weight of evidence does not support classification as a car-

ment cinogen

propane-1,2-diol:

Carcinogenicity - Assess-No evidence of carcinogenicity in animal studies.

ment

propane-1,2,3-triol:

Carcinogenicity - Assess-No evidence of carcinogenicity in animal studies.

ment

ethanol:

Carcinogenicity - Assess-No evidence of carcinogenicity in animal studies.

ment

Carcinogenicity - Assess-No evidence of carcinogenicity in animal studies.

ment

fludioxonil (ISO):

metalaxyl-M (ISO):

Carcinogenicity - Assess-No evidence of carcinogenicity in animal studies.

ment

IARC Group 1: Carcinogenic to humans

> ethanol 64-17-5

Group 1: Carcinogenic to humans

kaolin 1332-58-7

(Silica dust, crystalline)

OSHA No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP Known to be human carcinogen

1332-58-7

(Silica, Crystalline (Respirable Size))

Reproductive toxicity

Suspected of damaging the unborn child.

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Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on development, based on

animal experiments.

thiamethoxam (ISO):

Reproductive toxicity - As-

sessment

Weight of evidence does not support classification for repro-

ductive toxicity

propane-1,2-diol:

Reproductive toxicity - As-

sessment

No toxicity to reproduction, No effects on or via lactation

propane-1,2,3-triol:

Reproductive toxicity - As-

sessment

No toxicity to reproduction, No effects on or via lactation

ethanol:

Reproductive toxicity - As-

sessment

Weight of evidence does not support classification for repro-

ductive toxicity

metalaxyl-M (ISO):

Reproductive toxicity - As-

sessment

No toxicity to reproduction

fludioxonil (ISO):

Reproductive toxicity - As-

sessment

No toxicity to reproduction

triethylamine:

Reproductive toxicity - As-

sessment

No toxicity to reproduction

STOT-single exposure

Not classified due to lack of data.

Components:

thiamethoxam (ISO):

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

propane-1,2-diol:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

ethanol:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

according to the OSHA Hazard Communication Standard



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triethylamine:

Assessment : The substance or mixture is classified as specific target organ

toxicant, single exposure, category 3 with respiratory tract

irritation.

STOT-repeated exposure

Causes damage to organs (Nervous system) through prolonged or repeated exposure.

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Target Organs : Nervous system

Assessment : The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 1.

thiamethoxam (ISO):

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

propane-1,2-diol:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

propane-1,2,3-triol:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

ethanol:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

metalaxyl-M (ISO):

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

fludioxonil (ISO):

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

Aspiration toxicity

Not classified due to lack of data.

Components:

propane-1,2-diol:

No aspiration toxicity classification

according to the OSHA Hazard Communication Standard



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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.0027 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia pulex (Water flea)): 0.00012 mg/l

Exposure time: 48 h

EC50 (Americamysis): 0.000022 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

ErC50 (Navicula pelliculosa (Freshwater diatom)): > 1 mg/l

Exposure time: 96 h

EC10 (Navicula pelliculosa (Freshwater diatom)): 0.71 mg/l

End point: Growth rate Exposure time: 96 h

EC10 (Skeletonema costatum (marine diatom)): 0.095 mg/l

End point: Growth rate Exposure time: 72 h

ErC50 (Skeletonema costatum (marine diatom)): 0.11 mg/l

Exposure time: 72 h

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.00052 mg/l

Exposure time: 72 d

Toxicity to daphnia and other : aquatic invertebrates (Chron-

aquatic invertebrates

ic toxicity)

EC10 (Daphnia magna (Water flea)): 0.0032 μg/l

Exposure time: 21 d

NOEC (Americamysis): 0.0022 µg/l

Exposure time: 28 d

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l

Exposure time: 3 h

thiamethoxam (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

EC50 (Cloeon sp.): 0.014 mg/l

Exposure time: 48 h

EC50 (Chironomus riparius (harlequin fly)): 0.035 mg/l

Exposure time: 48 h

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Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)): >

81.8 mg/l

Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)):

81.8 mg/l

End point: Growth rate Exposure time: 72 h

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 28 d

Test Type: flow-through test

NOEC (Oncorhynchus mykiss (rainbow trout)): > 20 mg/l

Exposure time: 88 d Test Type: Early-life Stage

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 100 mg/l

Exposure time: 21 d

NOEC (Chironomus riparius (Midge larvae)): 0.01 mg/l

Exposure time: 30 d

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l

Exposure time: 3 h

propane-1,2-diol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l

Exposure time: 96 h Test Type: static test

Toxicity to daphnia and other :

aquatic invertebrates

(Ceriodaphnia dubia (water flea)): 18,340 mg/l

Exposure time: 48 h Test Type: static test

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)):

19,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Ceriodaphnia dubia (Water flea)): 13,020 mg/l

Exposure time: 7 d

Test Type: semi-static test

metalaxyl-M (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

LC50 (Cyprinus carpio (Carp)): > 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

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Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)):

271 mg/l

Exposure time: 96 h

NOEC (Raphidocelis subcapitata (freshwater green alga)):

19.7 mg/l

End point: Growth rate Exposure time: 96 h

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): 50 mg/l

Exposure time: 28 d

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 25 mg/l

Exposure time: 21 d

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l

Exposure time: 3 h

fludioxonil (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.23 mg/l

Exposure time: 96 h

LC50 (Pimephales promelas (fathead minnow)): 0.7 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.4 mg/l

Exposure time: 48 h

EC50 (Americamysis): 0.27 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)):

0.259 mg/l

Exposure time: 96 h

EC10 (Raphidocelis subcapitata (freshwater green alga)):

0.077 mg/l

End point: Growth rate Exposure time: 96 h

ErC50 (Skeletonema costatum (marine diatom)): 0.43 mg/l

Exposure time: 96 h

NOEC (Skeletonema costatum (marine diatom)): 0.14 mg/l

End point: Growth rate Exposure time: 96 h

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.04 mg/l

Exposure time: 28 d

EC10 (Pimephales promelas (fathead minnow)): 0.018 mg/l

Exposure time: 116 d

Toxicity to daphnia and other aquatic invertebrates (Chron-

NOEC (Daphnia magna (Water flea)): 0.035 mg/l

Exposure time: 21 d

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ic toxicity)

NOEC (Americamysis): 0.018 mg/l

Exposure time: 28 d

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l

Exposure time: 3 h

triethylamine:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 36 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)): 9.8

mg/l

Exposure time: 72 h

Persistence and degradability

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 96.5 d

Remarks: Product is not persistent.

thiamethoxam (ISO):

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 11 d

Remarks: Product is not persistent.

propane-1,2-diol:

Biodegradability : Result: Readily biodegradable.

metalaxyl-M (ISO):

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 22.4 - 47.5 d

Remarks: Product is not persistent.

fludioxonil (ISO):

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 450 - 700 d

Remarks: Persistent in water.

triethylamine:

Biodegradability : Result: Readily biodegradable.

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Bioaccumulative potential

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Bioaccumulation : Bioconcentration factor (BCF): 69

Remarks: Does not bioaccumulate.

Partition coefficient: n-

octanol/water

: log Pow: 4.4

thiamethoxam (ISO):

Bioaccumulation : Remarks: Low bioaccumulation potential.

Partition coefficient: n-

octanol/water

: log Pow: -0.13 (77 °F / 25 °C)

metalaxyl-M (ISO):

Bioaccumulation : Remarks: Low bioaccumulation potential.

Partition coefficient: n-

octanol/water

: log Pow: 1.71 (77 °F / 25 °C)

fludioxonil (ISO):

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-

octanol/water

: log Pow: 4.12 (77 °F / 25 °C)

Mobility in soil

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Distribution among environ-

mental compartments

: Remarks: immobile

Stability in soil

: Dissipation time: 2.1 d

Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

thiamethoxam (ISO):

Distribution among environ-

mental compartments

Remarks: Moderately mobile in soils

Stability in soil : Dissipation time: 51 d

Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

metalaxyl-M (ISO):

Distribution among environ-

mental compartments

Remarks: Highly mobile in soils

Stability in soil : Dissipation time: < 50 d

Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

fludioxonil (ISO):

Distribution among environ-

mental compartments

Remarks: immobile

Stability in soil : Dissipation time: 14 d

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> Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

Other adverse effects

Components:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Results of PBT and vPvB

assessment

Substance is not persistent, bioaccumulative, and toxic (PBT).

Endocrine disrupting poten-

Substance does not have endocrine disrupting properties.

thiamethoxam (ISO):

Results of PBT and vPvB

assessment

Substance is not persistent, bioaccumulative, and toxic (PBT).

metalaxyl-M (ISO):

Results of PBT and vPvB

assessment

Substance is not persistent, bioaccumulative, and toxic (PBT).

Remarks: Weight of evidence

Endocrine disrupting poten-

tial

Substance does not have endocrine disrupting properties.

Remarks: Weight of evidence

fludioxonil (ISO):

Results of PBT and vPvB

assessment

Endocrine disrupting poten-

tial

Substance is not persistent, bioaccumulative, and toxic (PBT).

Substance does not have endocrine disrupting properties.

triethylamine:

Results of PBT and vPvB

assessment

Substance is not persistent, bioaccumulative, and toxic (PBT).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues Where possible recycling is preferred to disposal or incinera-

tion.

It must undergo special treatment, e.g. at suitable disposal

site, to comply with local regulations.

This product will not be classified as a RCRA characteristic

hazardous waste when discarded.

Dispose of as unused product. Contaminated packaging

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN 2810 UN number

TOXIC LIQUID, ORGANIC, N.O.S. Proper shipping name

(ABAMECTIN, THIAMETHOXAM)

Class 6.1 Ш Packing group

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Labels : 6.1 Environmentally hazardous : yes

IATA-DGR

UN/ID No. : UN 2810

Proper shipping name : Toxic liquid, organic, n.o.s.

(ABAMECTIN, THIAMETHOXAM)

Class : 6.1
Packing group : III
Labels : Toxic
Packing instruction (cargo : 663

aircraft)

Packing instruction (passen-

655

ger aircraft)

IMDG-Code

UN number : UN 2810

Proper shipping name : TOXIC LIQUID, ORGANIC, N.O.S.

(ABAMECTIN, THIAMETHOXAM)

Class : 6.1
Packing group : III
Labels : 6.1
EmS Code : F-A, S-A
Marine pollutant : yes

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 2810

Proper shipping name : Toxic, liquids, organic, n.o.s.

(ABAMECTIN, THIAMETHOXAM)

Class : 6.1
Packing group : III
Labels : POISON
ERG Code : 153
Marine pollutant : no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label: Warning

May be fatal if inhaled.

May be fatal if swallowed.

Do not breathe vapor.

Harmful if absorbed through skin.

Causes moderate eye irritation.

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Avoid contact with skin, eyes or clothing.

Remove and wash contaminated clothing before re-use.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Acute toxicity (any route of exposure)

Carcinogenicity
Reproductive toxicity

Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels es-

tablished by SARA Title III, Section 313:

abamectin (com- 71751-41-2 >= 20 - < 30 %

bination of avermectin B1a and avermectin B1b)

(ISO)

California Prop. 65

WARNING: This product can expose you to chemicals including ethanol, kaolin, which is/are known to the State of California to cause cancer, and

abamectin (combination of avermectin B1a and avermectin B1b) (ISO), ethanol, n-hexane, methanol, ethanediol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Regulated Carcinogens

kaolin 1332-58-7

SECTION 16. OTHER INFORMATION

Further information

according to the OSHA Hazard Communication Standard

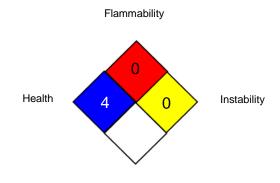


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NFPA 704:



Special hazard

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA P0 : USA. Table Z-1-A Limits for Air Contaminants (1989 vacated

values)

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Lim-

its for Air Contaminants

Syngenta : Syngenta Occupational Exposure Limits

US WEEL : USA. Workplace Environmental Exposure Levels (WEEL)

ACGIH / TWA : 8-hour, time-weighted average ACGIH / STEL : Short-term exposure limit

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA P0 / TWA : 8-hour time weighted average
OSHA P0 / STEL : Short-term exposure limit
OSHA Z-1 / TWA : 8-hour time weighted average
Syngenta / TWA : Time weighted average

US WEEL / TWA : 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization: IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI -Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population;

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LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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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.

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