AVICTA COMPLETE BEANS 500

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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 - repeated exposure : Category 1 (Nervous system)

Other hazards

None known.

GHS label elements

Hazard pictograms :



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 disposal 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 avermectin B1b) (ISO)	71751-41-2*	22.21	-
thiamethoxam (ISO)	153719-23-4*	11.1	-
propane-1,2-diol	57-55-6*	>= 3 - <= 7	TSC

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 respiration. 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.
Most important symptoms and effects, both acute and delayed	:	Lack of coordination Tremors 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

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.

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency 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.

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 (Form of exposure)	Control parameters / Permissible concentration	Basis
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2	TWA	0.02 mg/m3	Syngenta
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, respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (mist, total dust)	15 mg/m3	OSHA Z-1
		TWA (Mist - total dust)	10 mg/m3	OSHA P0
		TWA (Mist - respirable fraction)	5 mg/m3	OSHA P0
ethanol	64-17-5	STEL	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA P0
metalaxyl-M (ISO)	70630-17-0	TWA	5 mg/m3	Syngenta
kaolin	1332-58-7	TWA (Respirable particulate matter)	2 mg/m3	ACGIH
		TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1

		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 (Inhalable particulate 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

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 breakthrough.

Eye protection : No special protective equipment required.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific 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 appropriate 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

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
Autoignition temperature	:	797 °F / 425 °C
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 reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	No decomposition if used as directed.
Incompatible materials	:	None known.
Hazardous decomposition products	:	No hazardous decomposition products are known.

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
Acute inhalation toxicity	:	LC50 (Rat, male and female): > 0.055 - < 0.53 mg/l Exposure time: 4 h Test atmosphere: dust/mist

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 contact 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 inhalation 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 toxicity

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 toxicity

Acute inhalation toxicity : LC50 (Rat, male): > 2.75 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Assessment: The substance or mixture has no acute inhalation 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 inhalation 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 inhalation 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 inhalation 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 ingestion.

Acute inhalation toxicity : LC50 (Rat): 7.22 mg/l
Exposure time: 4 h
Test atmosphere: vapor

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

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

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.

thiamethoxam (ISO):

Species : Guinea pig
Result : Does not cause skin sensitization.

propane-1,2-diol:

Result : Does not cause skin sensitization.

propane-1,2,3-triol:

Species : Guinea pig
Result : Not a skin sensitizer.

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 - Assessment : Animal testing did not show any mutagenic effects.

propane-1,2-diol:

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

propane-1,2,3-triol:

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

ethanol:

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

metalaxyl-M (ISO):

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

fludioxonil (ISO):

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

triethylamine:

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

Carcinogenicity

May cause cancer.

Components:

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

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

thiamethoxam (ISO):

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

propane-1,2-diol:

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

propane-1,2,3-triol:

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

ethanol:

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

metalaxyl-M (ISO):

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

fludioxonil (ISO):

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

IARC	Group 1: Carcinogenic to humans ethanol	64-17-5
	Group 1: Carcinogenic to humans kaolin (Silica dust, crystalline)	1332-58-7
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 kaolin (Silica, Crystalline (Respirable Size))	1332-58-7

Reproductive toxicity

Suspected of damaging the unborn child.

Components:

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

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

thiamethoxam (ISO):

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

propane-1,2-diol:

Reproductive toxicity - Assessment : No toxicity to reproduction, No effects on or via lactation

propane-1,2,3-triol:

Reproductive toxicity - Assessment : No toxicity to reproduction, No effects on or via lactation

ethanol:

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

metalaxyl-M (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

fludioxonil (ISO):

Reproductive toxicity - Assessment : No toxicity to reproduction

triethylamine:

Reproductive toxicity - Assessment : 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.

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

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 toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 0.00052 mg/l Exposure time: 72 d
Toxicity to daphnia and other aquatic invertebrates (Chronic 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

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 toxicity)	:	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 (Chronic 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 (Chronic 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

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 toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 50 mg/l Exposure time: 28 d
Toxicity to daphnia and other aquatic invertebrates (Chronic 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 toxicity)	:	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

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.

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 environmental compartments : Remarks: immobile

Stability in soil : Dissipation time: 2.1 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

thiamethoxam (ISO):

Distribution among environmental 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 environmental 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 environmental compartments : Remarks: immobile

Stability in soil : Dissipation time: 14 d

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 potential	:	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 potential	:	Substance does not have endocrine disrupting properties. Remarks: Weight of evidence

fludioxonil (ISO):

Results of PBT and vPvB assessment	:	Substance is not persistent, bioaccumulative, and toxic (PBT).
Endocrine disrupting potential	:	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 incineration. 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.
Contaminated packaging	:	Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 2810
Proper shipping name	:	TOXIC LIQUID, ORGANIC, N.O.S. (ABAMECTIN, THIAMETHOXAM)
Class	:	6.1
Packing group	:	III

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 aircraft)	:	663
Packing instruction (passenger aircraft)	:	655

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.

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 established by SARA Title III, Section 313:

abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2	>= 20 - < 30 %

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.

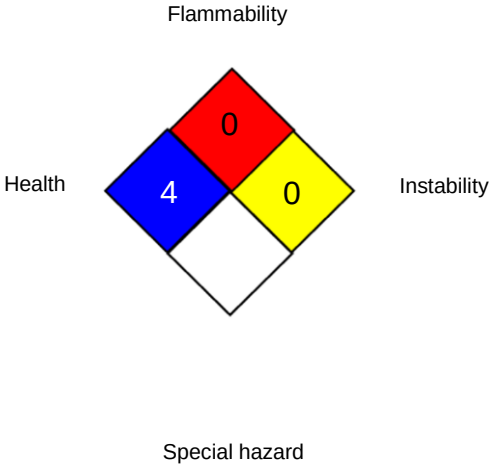
California Regulated Carcinogens

kaolin	1332-58-7

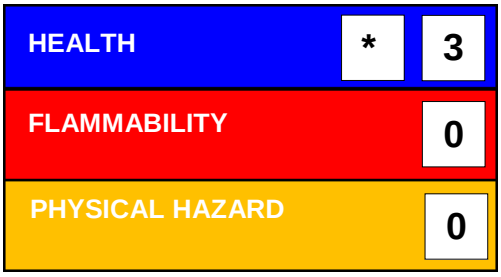
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



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 Limits 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;

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

Revision Date : 06/09/2025

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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