ZC Formulation:
Mixture of Capsule Suspension (CS) and Suspension Concentrate (SC).

Non-flammable

An insecticide for the control of Lepidoptera caterpillars such as Diamondback moth (*Plutella xylostella*) in brassicas, American bollworm (*Helicoverpa armigera*) in tomatoes, Fall armyworm (*Spodoptera frugiperda*) in maize and other caterpillars in other crops as listed on the label.

Chemical group:
Chlorantraniliprole is an Anthranilamide.
Lambda-cyhalothrin is a synthetic Pyrethroid.

TRB Certificate No.: 19-21-D-08

® Registered Trademarkof a Syngenta Group Company

LXXXXXXX ZIMB/04X PPE XXXXXXX

Ampligo® 150ZC

syngenta

Reg. No.
12-D-136-55-D-194-1

Net content:
250 ml

DANGER

POISON

Composition (mass/volume)
Chlorantraniliprole: ..... 100 g/litre
Lambda-cyhalothrin: .... 50 g/litre
Inert ingredients: ..... to 1 litre

Before using this product read and understand the entire label.

Date of manufacture / Batch No:
Please refer to inkjet print.

Shelf Life: 2 years if stored in a cool dry place in original unopened container.

Emergency Call Number:
Swiss Toxicological Information Centre
(24 h) +41 44 251 51 51

Manufacturer: Syngenta Crop Protection AG, Basel, Switzerland

Registered by: Syngenta Agro AG
32 Sandringham Drive,
Alexandra Park, Harare.
Tel.: 08677005432 / 08677005434

Please remove before printing.
Retirez s'il vous plait avant l'impression
Por favor, eliminar antes de imprimir.

TO CAUSE A HAZARD IN THE USE, STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE.

PRECAUTIONS

- Handle with care; avoid splashing/contact; poisonous by swallowing, inhalation and contact with the skin.
- Wear suitable protective clothing, i.e. for mixing – impermeable gloves, overalls, eye/face protection; for application - overalls, hat, and solid footwear.
- DANGEROUS TO FISH.
- TOXIC TO BEES.
- KEEP OUT OF REACH OF CHILDREN.
- KEEP APART FROM FOOD, FOODSTUFFS, seeds and fertilizers
- Store in original container in a cool, dry place and keep under lock and key
- Use only on the crops for which the product is registered.
- Avoid drift onto adjacent crops or soil.
- Do not eat, drink or smoke while handling this product.
- On completion of mixing/spraying remove protective clothing and wash entire body and change clothing.

- Decontamination of Sprayer – after use clean the sprayer thoroughly and ensure that all traces of Ampligo150 ZC are removed. Make use of the following method: (a) Drain tank then rinse tank, sprayer boom and hoses with clean water for at least 10 minutes. (b) Fill tank with clean water and add to it 1,0 litre household bleach (5%) or 1,5 litres household bleach (3,5%) per 200 litres of water. Rinse hoses and sprayer boom and leave in the tank for 15 minutes whilst agitating. Drain through the nozzle outlets. (c) Repeat step (b) and thereafter, rinse thoroughly with clean water and dispose of the wash water at a site designated for the disposal of pesticides.
- Empty container disposal – invert the empty container over the spray tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container 3 times with a volume of water equal to at least 10% of that of the container. And the rinsate to the contents of the spray tank. Destroy the empty container by perforation and flattening. Place it in a secure disposal area and offer it for recycling. DO NOT use it for any other purpose.

SYMPTOMS OF POISONING

There are no specific symptoms of poisoning known for this compound. May cause tingling numbness in exposed areas (paraesthesia). The effect is transient, may be lasting up to 24 hours.

FIRST AID

Eye contact: Rinse eyes with clean water for several minutes. Go to a doctor.
Skin contact: Remove contaminated clothing; wash affected skin with soap and water.
Go to a doctor if skin is affected.
If inhaled: Move to clean air.
If swallowed: DO NOT induce vomiting; repeatedly administer medicinal charcoal in plenty of water. Seek medical advice immediately if a large volume of concentrate was ingested.
Note: Never give anything to an unconscious patient.

NOTE TO PHYSICIAN

If gastric lavage is performed, take care to prevent aspiration of gastric contents. Consider administration of activated charcoal and a laxative.
No specific antidote is known. Apply symptomatic therapy.

USER'S RISK

The user bears the risk for damage resulting from factors beyond the manufacturer's control.
All recommendations for use of the product are based on the current state of the manufacturer's knowledge.
Since the manufacturer cannot control the application, use or storage of the product, the manufacturer cannot accept responsibility therefore.
Since the occurrence of resistance cannot be foreseen, the manufacturer accepts no responsibility for any loss or damage to crops resulting from failure of Ampligo® 150 ZC to control a resistant strain of the target pest.

PRODUCT INFORMATION

Mode of Action and Spectrum of Activity

Chlorantraniliprole is a novel substituted anthranilamide insecticide which activates insect ryanodine receptors. The proposed IRAC mode of action group is 28. It is highly potent on Lepidoptera mainly, but also on some Coleoptera and Diptera. Chlorantraniliprole is systemic in plants, with long-lasting protection and has excellent rainfastness.

Lambda-cyhalothrin is a pyrethroid insecticide which disrupts sodium channel modulators. The proposed IRAC mode of action group is 3. It offers rapid knockdown, residual control and anti-feeding and repellency properties against some pests. Lambda-cyhalothrin is not systemic in pants.

INSECTICIDE RESISTANCE MANAGEMENT (IRM)

Ampligo® 150 ZC contains chlorantraniliprole, a Group 28 insecticide, and lambda-cyhalothrin, a Group 3A insecticide, based on the International Resistance Action Committee (IRAC) Mode of Action classification. Repeated and exclusive use of Ampligo® 150 ZC or other Group 28 or Group 3A insecticides may create resistant insect populations. Follow these recommendations to prevent or delay the development of insecticide resistance to Ampligo® 150 ZC:

- Do not apply more than the recommended applications of Ampligo® 150 ZC per season for any crop. Refer to "Directions for use" for the particular crop guidelines.
- Apply Ampligo® 150 ZC or other Group 28 or Group 3A insecticides using a "window" approach to avoid exposure of multiple successive pest generations to the same mode of action. A window is defined as the period of residual activity with insecticides of the same mode of action within an approximate 30 day period.
- Two successive applications of Ampligo® 150 ZC may be made within a treatment window to protect new growth or control high pest populations.
- Following a window of use with Ampligo® 150 ZC or other Group 28 or Group 3A insecticides, rotate to a window using effective insecticides with a different mode of action.

- Incorporate IPM practices (cultural and biological control) into the pest management program.
- Monitor insect populations for loss of field efficacy.
- Target the most sensitive life stage of the pest, typically small larvae.
- If you experience difficulty with control, and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternate method of control for your area.

DIRECTIONS FOR USE:

Warnings
PRE HARVEST INTERVAL
Minimum number of days between last application and harvesting:
Tomatoes:
7 days; broccoli & cauliflower: 3 days; cabbage & Brussels sprout: 7 days; tobacco & leafy vegetables: 14 days; peas and beans: 15 days; soyabeans: 21 days.
For export crops DO NOT apply more than 2 times per crop cycle.
Compatibility:
Ampligo® 150 ZC is compatible with most insecticides and fungicides. As compatibility can be adversely affected by the quality of the water used in the mixture, the manufacturer recommends that a trial mixture be done using the water intended for spraying.

Mixing:
Half fill the sprayer tank with clean water. Shake the Ampligo® 150 ZC container well. Add the recommended volume of Ampligo® 150 ZC to the water while agitating. Top up tank with required volume of water.
Always stir the spray mixture well and apply within a few hours. Do not prepare more spray mixture than is needed for the immediate operation.
Application
In all cases apply as a full cover spray. Avoid run-off. Make sure the equipment is properly calibrated to give even distribution at the correct volume. Do not spray during the hot hours of the day, if the foliage is wet or if rain is imminent or if windy.
Spray intervals: Depend on scouting results.

RATES

CROP	PEST	DOSAGE	APPLICATION DETAILS
Leafy vegetables and salad crops: e.g. cabbages, broccoli, cauliflower, kale, endive, lettuce	**Lepidoptera:** Diamond back moth (DBM; *Plutella xylostella);* Other caterpillars *(Helicoverpa* spp.; *Spodoptera* spp.)	**0,2-0,4 Lt/ha (1-4 sprays)** in 200-1000 Lts water per ha	• Application timing and frequency should be based on economic thresholds. • Apply as required by scouting. • Add wetting agent to waxy Brassica crops. • Insect Resistance Management: Alternate with insecticides with different mode of action such as Match® and Proclaim®.
Potatoes & Fruiting Vegetables: e.g. tomatoes, peppers, chillies, eggplants, cucumbers, squash, courgettes, melons	**Lepidoptera:** American bollworm *(Helicoverpa armigera; Heliothis* spp.); Other caterpillars *(Agriotes ipsilon; Potato tuber moth; Spodoptera* spp.; *Trichoplusia ni; Tuta absoluta)*	**0,2-0,4 Lt/ha (1-4 sprays)** in 200-1000 Lts water per ha	• Application timing and frequency should be based on economic thresholds. • Apply as required by scouting. • To control boring species, time applications before they bore into the fruits or stems. • IRM: Alternate with insecticides with different mode of action such as Match® and Proclaim®.

CROP	PEST	DOSAGE	APPLICATION DETAILS
Pulses: e.g. peas, beans, soyabeans, cowpeas	**Lepidoptera:** *Helicoverpa* spp., *Spodoptera* spp., *Trichoplusia ni.*	**0,2 Lt/ha (1-2 sprays)** in 200-1000 Lts water per ha	As for Fruiting Vegetables
Tobacco Lands: TRB Certificate No.:19-21-D-08 Harvest interval: 7 days	**Lepidoptera:** Budworm (*Heliothis armigera*) Leafminer (*Phthorimaea operculella*)	Mix 56ml Ampligo® 150 ZC in100 litres water and apply a minimum 250 litres / ha of the mixture. Mix 65 ml Ampligo® 150 ZC in100 litres water and apply a minimum 250 litres / ha of the mixture.	• Scout for pests every 7 days from transplanting up to topping time. • Apply Ampligo® if there are more than 10 budworms on 100 plants. • On untopped plants ensure good spray penetration of the apical bud. • Repeat the application every 7-10 days depending on re-infestation and pest pressure. • For Leafminer apply Ampligo® at the first signs of leaf mining. Ensure full cover sprays every 7-10 days. • Do not exceed a maximum of 3 sprays per crop cycle.

CROP	PEST	DOSAGE	APPLICATION DETAILS
Maize	**Lepidoptera:** Fall armyworm (*Spodoptera frugiperda*). Maize stalk borers (*Chilo* spp*; Busseola* spp*; & Sesamia* spp).	**0,24 Lt/ha (1-4 sprays)** in 200-400 Lts water per ha aiming to cover the funnel, tassel or silks depending on where the pest is feeding.	• Scout for pests every 7 days after emergence up to hard dough stage. • Apply Ampligo® at the first sign of pest presence during the early development stages of the larvae. • Repeat the application after 10 - 14 days depending on re-infestation and pest pressure. • Do not exceed a maximum of 3 sprays per crop cycle.

AMPLIGO.

Version	Revision Date:	SDS Number:	This version replaces all previous versions.
9.0	15.04.2016	S1377529350	

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : **AMPLIGO.**

Design code : A15397G

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

Use of the Sub-stance/Mixture : Insecticide

1.3 Details of the supplier of the safety data sheet

Company : Syngenta Crop Protection AG
Postfach
CH-4002 Basel
Switzerland

Telephone : +41 61 323 11 11

Telefax : +41 61 323 12 12

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

1.4 Emergency telephone number

Emergency telephone number : +44 1484 538444

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H332: Harmful if inhaled.
Acute aquatic toxicity, Category 1	H400: Very toxic to aquatic life.
Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements	:	H302 + H332	Harmful if swallowed or if inhaled
		H410	Very toxic to aquatic life with long lasting effects.
Supplemental Hazard Statements	:	EUH208	Contains 1,2-benzisothiazol-3-one. May produce an allergic reaction.
		EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
Precautionary statements	:	**Prevention:**	
		P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
		P264	Wash skin thoroughly after handling.
		P273	Avoid release to the environment.
		Response:	
		P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
		P391	Collect spillage.
		Disposal:	
		P501	Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:
lambda-cyhalothrin (ISO)

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration (%)
chlorantraniliprole	500008-45-7	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 2.5 - < 10
lambda-cyhalothrin (ISO)	91465-08-6 415-130-7 415-130-7	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Aquatic Acute 1; H400 Aquatic Chronic 1;	>= 3 - < 7

		H410	
poly(oxy-1,2-ethanediyl), alpha-phosphono-omega-[2,4,6-tris(1-phenylethyl)phenoxy]-	90093-37-1 618-446-5	Eye Irrit. 2; H319	>= 3 - < 10
solvent naphtha (petroleum), heavy arom.	64742-94-5 265-198-5 01-2119451151-53	Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 2.5 - < 10
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400	< 0.05

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of 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 : Move the victim 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.

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.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Aspiration may cause pulmonary oedema and pneumonitis.
Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, ver-

miculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

Refer to disposal considerations listed in section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : 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.

7.3 Specific end use(s)

Specific use(s) : For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
chlorantraniliprole	500008-45-7	TWA	10 mg/m3 (Total dust)	Supplier
	500008-45-7	TWA	5 mg/m3 (Respirable dust)	Supplier
	500008-45-7	TWA	5 mg/m3	Syngenta
lambda-cyhalothrin (ISO)	91465-08-6	TWA	0.04 mg/m3 (Skin)	Syngenta
solvent naphtha (petroleum), heavy arom.	64742-94-5	TWA	20 ppm 100 mg/m3	Supplier

8.2 Exposure controls

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

Eye protection : No special protective equipment required.

Hand protection
- Material : Nitrile rubber
- Break through time : > 480 min
- Glove thickness : 0.5 mm

Remarks : 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 on 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.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Suitable respiratory equipment:
Respirator with a half face mask
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Use only respiratory protection equipment with CE-symbol including four digit test number.

Filter type : Combined particulates and organic vapour type (A-P)

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	suspension
Colour	:	light beige to brown
Odour	:	aromatic
pH	:	4 - 8, Concentration: 1 % w/v
Flash point	:	> 101 °C Method: Pensky-Martens c.c.
Density	:	1.08 g/cm3
Auto-ignition temperature	:	> 650 °C
Viscosity		
Viscosity, dynamic	:	41.7 - 286 mPa.s (40 °C)
		56.1 - 349 mPa.s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Surface tension	:	37.3 mN/m, 100 % w/v

SECTION 10: Stability and reactivity

10.1 Reactivity

See section 10.3 "Possibility of hazardous reactions".

10.2 Chemical stability

The product is stable when used in normal conditions

10.3 Possibility of hazardous reactions

Hazardous reactions	:	No hazardous reactions by normal handling and storage ac-

cording to provisions.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : No substances are known which lead to the formation of hazardous substances or thermal reactions.

10.6 Hazardous decomposition products

Combustion or thermal decomposition will evolve toxic and irritant vapors.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, female): 550 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.91 mg/l
Exposure time: 4 h
Assessment: The component/mixture is moderately toxic after short term inhalation.

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

Components:

chlorantraniliprole:

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

Acute inhalation toxicity : LC50 (Rat): > 5.2 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): > 5,000 mg/kg

lambda-cyhalothrin (ISO):

Acute oral toxicity : LD50 (Rat, female): 56 mg/kg

LD50 (Rat, male): 79 mg/kg

Acute toxicity estimate: 100 mg/kg
Method: Converted acute toxicity point estimate

Acute inhalation toxicity : LC50 (Rat, male and female): 0.06 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, female): 696 mg/kg

LD50 (Rat, male): 632 mg/kg

Acute toxicity estimate: 1,100 mg/kg
Method: Converted acute toxicity point estimate

poly(oxy-1,2-ethanediyl), alpha-phosphono-omega-[2,4,6-tris(1-phenylethyl)phenoxy]-:
Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

1,2-benzisothiazol-3(2H)-one:
Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

Skin corrosion/irritation

Product:
Species: Rabbit
Result: No skin irritation

Components:
chlorantraniliprole:
Species: Rabbit
Result: No skin irritation

lambda-cyhalothrin (ISO):
Species: Rabbit
Result: No skin irritation
Remarks: May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

poly(oxy-1,2-ethanediyl), alpha-phosphono-omega-[2,4,6-tris(1-phenylethyl)phenoxy]-:
Species: Rabbit
Result: No skin irritation

1,2-benzisothiazol-3(2H)-one:
Result: Irritating to skin.

Serious eye damage/eye irritation

Product:
Species: Rabbit
Result: No eye irritation

Components:
chlorantraniliprole:
Species: Rabbit
Result: No eye irritation

lambda-cyhalothrin (ISO):

Species: Rabbit
Result: Mild eye irritation

poly(oxy-1,2-ethanediyl), alpha-phosphono-omega-[2,4,6-tris(1-phenylethyl)phenoxy]-:
Species: Rabbit
Result: Eye irritation

1,2-benzisothiazol-3(2H)-one:
Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Test Type: Buehler Test
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

Components:

chlorantraniliprole:
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

lambda-cyhalothrin (ISO):
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

1,2-benzisothiazol-3(2H)-one:
Result: Probability or evidence of skin sensitisation in humans

Germ cell mutagenicity

Components:

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

lambda-cyhalothrin (ISO):
Germ cell mutagenicity- Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

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

lambda-cyhalothrin (ISO):
Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Components:

chlorantraniliprole:
Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.

lambda-cyhalothrin (ISO):
Reproductive toxicity - Assessment : No toxicity to reproduction

STOT - single exposure

Components:

chlorantraniliprole:
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Components:

chlorantraniliprole:
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

chlorantraniliprole:
Remarks: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

lambda-cyhalothrin (ISO):
Remarks: No adverse effect has been observed in chronic toxicity tests.

Aspiration toxicity

Components:

chlorantraniliprole:
No aspiration toxicity classification

solvent naphtha (petroleum), heavy arom.:
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.025 mg/l
Exposure time: 96 h

Remarks: Based on test results obtained with similar product.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.00086 mg/l
Exposure time: 48 h
Remarks: Based on test results obtained with similar product.

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 75 mg/l
Exposure time: 72 h
Remarks: Based on test results obtained with similar product.

EbC50 (Pseudokirchneriella subcapitata (green algae)): 27 mg/l
Exposure time: 72 h
Remarks: Based on test results obtained with similar product.

Components:

chlorantraniliprole:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 13.8 mg/l
Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): > 15.1 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0116 mg/l
Exposure time: 48 h

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l
Exposure time: 96 h

EC50 (Lemna gibba (duckweed)): > 2 mg/l
Exposure time: 14 d

M-Factor (Acute aquatic toxicity) : 10

Toxicity to fish (Chronic toxicity) : NOEC: 0.11 mg/l
Exposure time: 90 d
Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.00447 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

NOEC: 0.0025 mg/l
Exposure time: 28 d
Species: Chironomus riparius (harlequin fly)

M-Factor (Chronic aquatic toxicity) : 10

lambda-cyhalothrin (ISO):

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 0.21 µg/l
Exposure time: 96 h

		LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.078 µg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.36 µg/l Exposure time: 48 h
Toxicity to algae	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l Exposure time: 96 h
M-Factor (Acute aquatic toxicity)	:	10,000
	:	10,000
Toxicity to bacteria	:	EC50 (activated sewage sludge): > 100 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.031 µg/l Exposure time: 300 d Species: Pimephales promelas (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0.002 µg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
		NOEC: 0.00022 µg/l Exposure time: 28 d Species: Americamysis
M-Factor (Chronic aquatic toxicity)	:	100,000
		10,000

poly(oxy-1,2-ethanediyl), alpha-phosphono-omega-[2,4,6-tris(1-phenylethyl)phenoxy]-:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 100 - 500 mg/l Exposure time: 96 h
Toxicity to bacteria	:	EC50 (Pseudomonas putida): > 1,000 mg/l
Ecotoxicology Assessment		
Acute aquatic toxicity	:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity	:	This product has no known ecotoxicological effects.

solvent naphtha (petroleum), heavy arom.:

Ecotoxicology Assessment		
Chronic aquatic toxicity	:	Toxic to aquatic life with long lasting effects.

1,2-benzisothiazol-3(2H)-one:

Ecotoxicology Assessment		
Acute aquatic toxicity	:	Very toxic to aquatic life.

12.2 Persistence and degradability

Components:

chlorantraniliprole:

Biodegradability : Result: Not readily biodegradable.

lambda-cyhalothrin (ISO):

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life (DT50): 7 d
Remarks: Not persistent in water.

12.3 Bioaccumulative potential

Components:

chlorantraniliprole:

Bioaccumulation : Remarks: Does not bioaccumulate.

lambda-cyhalothrin (ISO):

Bioaccumulation : Remarks: Lambda-cyhalothrin bioaccumulates.

12.4 Mobility in soil

Components:

chlorantraniliprole:

Distribution among environmental compartments : Remarks: The product is not expected to be mobile in soil.

lambda-cyhalothrin (ISO):

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Percentage dissipation: 50 % (DT50: 56 d)
Remarks: Not persistent in soil.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

Components:

chlorantraniliprole:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB)..

lambda-cyhalothrin (ISO):

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB)..

12.6 Other adverse effects

Product:

Additional ecological information : Remarks: Classification of the product is based on the summation of the concentrations of classified components.

Components:

chlorantraniliprole:

Additional ecological information : Remarks: No data available

lambda-cyhalothrin (ISO):

Additional ecological information : Remarks: No data available

poly(oxy-1,2-ethanediyl), alpha-phosphono-omega-[2,4,6-tris(1-phenylethyl)phenoxy]-:

Additional ecological information : Remarks: No data available

solvent naphtha (petroleum), heavy arom.:

Additional ecological information : Remarks: No data available

1,2-benzisothiazol-3(2H)-one:

Additional ecological information : Remarks: No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : 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.
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 to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

ADN : UN 3082

ADR : UN 3082

RID : UN 3082

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLORANTRANILIPROLE AND LAMBDA-CYHALOTHRIN)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLORANTRANILIPROLE AND LAMBDA-CYHALOTHRIN)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLORANTRANILIPROLE AND LAMBDA-CYHALOTHRIN)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CHLORANTRANILIPROLE AND LAMBDA-CYHALOTHRIN)

IATA : Environmentally hazardous substance, liquid, n.o.s. (CHLORANTRANILIPROLE AND LAMBDA-CYHALOTHRIN)

14.3 Transport hazard class(es)

ADN : 9

ADR : 9

RID : 9

IMDG : 9

IATA : 9

14.4 Packing group

ADN

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

ADR

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (E)

RID

Packing group	:	III
Classification Code	:	M6
Hazard Identification Number	:	90
Labels	:	9

IMDG

Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F

IATA

Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Packing instruction (LQ)	:	Y964
Packing group	:	III
Labels	:	Miscellaneous

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Other regulations : Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: Other information

Full text of H-Statements

H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H311	:	Toxic in contact with skin.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H319	:	Causes serious eye irritation.
H330	:	Fatal if inhaled.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Acute aquatic toxicity
Aquatic Chronic	:	Chronic aquatic toxicity
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; 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; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; 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; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Sub-

stances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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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