

DEMAND CS INSECTICIDE

Version 1.1 Revision Date: 04/04/2023 SDS Number: S00030636291 This version replaces all previous versions.

SECTION 1. IDENTIFICATION

Product name : DEMAND CS INSECTICIDE
Design code. : A12690A
Product Registration number : 100-1066

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 : Insecticide

Restrictions on use : General Use Pesticide

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Acute toxicity (Inhalation) : Category 4

Skin sensitization : Category 1

GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.

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Precautionary Statements : **Prevention:**
 P261 Avoid breathing mist or vapors.
 P271 Use only outdoors or in a well-ventilated area.
 P272 Contaminated work clothing must not be allowed out of the workplace.
 P280 Wear protective gloves.

Response:
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P363 Wash contaminated clothing before reuse.

Disposal:
 P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
lambda-cyhalothrin	91465-08-6	9.5511
Hydrocarbons, C9, Aromatics	128601-23-0	>= 5 - < 10
propane-1,2-diol	57-55-6	>= 1 - < 5
orthophosphoric acid	7664-38-2	>= 1 - < 5
dioxosilane	14808-60-7	>= 0.1 - < 1
1,2-benzisothiazol-3(2H)-one	2634-33-5	>= 0.1 - < 1

Actual concentration 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.

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- 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 : Aspiration may cause pulmonary edema and pneumonitis.
Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours.
- Notes to physician : Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.
Treat symptomatically.

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.
- 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.

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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.

Further information on storage stability : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
lambda-cyhalothrin	91465-08-6	TWA	0.04 mg/m ³ (Skin)	Syngenta
Hydrocarbons, C9, Aromatics	128601-23-0	TWA	19 ppm 100 mg/m ³	Supplier
propane-1,2-diol	57-55-6	TWA	10 mg/m ³	US WEEL
orthophosphoric acid	7664-38-2	TWA	1 mg/m ³	ACGIH
		STEL	3 mg/m ³	ACGIH
		TWA	1 mg/m ³	NIOSH REL
		ST	3 mg/m ³	NIOSH REL
		TWA	1 mg/m ³	OSHA Z-1
		TWA	1 mg/m ³	OSHA P0
		STEL	3 mg/m ³	OSHA P0
dioxosilane	14808-60-7	TWA (respirable)	10 mg/m ³ / %SiO ₂ +2	OSHA Z-3
		TWA (respirable)	250 mppcf / %SiO ₂ +5	OSHA Z-3
		TWA (respirable dust fraction)	0.1 mg/m ³	OSHA P0
		TWA (Respirable par-	0.025 mg/m ³ (Silica)	ACGIH

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		ticulate matter)		
		TWA (Respirable dust)	0.05 mg/m ³ (Silica)	NIOSH REL
		TWA (Respirable dust)	0.05 mg/m ³	OSHA Z-1

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. Where necessary, 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 breakthrough 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

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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 : white to light brown

Odor : aromatic, like solvent

Odor Threshold : No data available

pH : 4 - 8
 Concentration: 1 %w/v

Melting point/range : No data available

Boiling point/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 : 1.047 g/cm³

Solubility(ies)
 Water solubility : completely miscible

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short term inhalation., The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat, male and female): > 4,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Components:

lambda-cyhalothrin:

Acute oral toxicity : LD50 (Rat, female): 56 mg/kg
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, male): 632 mg/kg

Hydrocarbons, C9, Aromatics:

Acute oral toxicity : LD50 (Rat, female): 3,492 mg/kg

orthophosphoric acid:

Acute oral toxicity : LD50 (Rat): 301 mg/kg
Acute dermal toxicity : LD50 (Rabbit): 2,750 mg/kg

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

Acute oral toxicity : LD50 (Rat, male): 670 mg/kg
Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Species : Rabbit
Result : No skin irritation
Remarks : May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

Components:

lambda-cyhalothrin:

Species : Rabbit
Result : No skin irritation
Remarks : May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

Hydrocarbons, C9, Aromatics:

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Result : Repeated exposure may cause skin dryness or cracking.

Species : Rabbit
Result : Mild skin irritation

orthophosphoric acid:

Result : Corrosive after 3 minutes to 1 hour of exposure

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

Species : Rabbit
Result : Mild skin irritation

Serious eye damage/eye irritation**Product:**

Species : Rabbit
Result : No eye irritation

Components:**lambda-cyhalothrin:**

Species : Rabbit
Result : No eye irritation

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

Species : Rabbit
Result : Risk of serious damage to eyes.

Respiratory or skin sensitization**Product:**

Test Type : Maximization Test
Species : Guinea pig
Result : Did not cause sensitization on laboratory animals.

Species : Humans
Result : Probability or evidence of skin sensitization in humans

Components:**lambda-cyhalothrin:**

Test Type : Maximization Test
Species : Guinea pig
Result : Does not cause skin sensitization.

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Result : Does not cause skin sensitization.

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

Result : Probability or evidence of skin sensitization in humans

Germ cell mutagenicity

Components:

lambda-cyhalothrin:

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

orthophosphoric acid:

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

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

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

Carcinogenicity

Components:

lambda-cyhalothrin:

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

dioxosilane:

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

IARC has concluded that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources and in experimental animals from quartz and cristobalite (Group 1). It was noted however, that carcinogenicity was not detected in all industrial circumstances and may be dependent on inherent characteristics of the crystalline silica or external factors affecting its biological activity.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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 No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Reproductive toxicity**Components:****lambda-cyhalothrin:**

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

orthophosphoric acid:

Reproductive toxicity - Assessment : No toxicity to reproduction

STOT-single exposure**Components:****lambda-cyhalothrin:**

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

Hydrocarbons, C9, Aromatics:

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.,
The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT-repeated exposure**Components:****lambda-cyhalothrin:**

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

dioxosilane:

Routes of exposure : Inhalation
Target Organs : Lungs
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Aspiration toxicity**Components:****Hydrocarbons, C9, Aromatics:**

May be fatal if swallowed and enters airways.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

lambda-cyhalothrin:

- | | | |
|--|---|--|
| Toxicity to fish | : | LC50 (Leuciscus idus (Golden orfe)): 0.000078 mg/l
Exposure time: 96 h |
| | | LC50 (Ictalurus punctatus (channel catfish)): 0.00016 mg/l
Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 0.00036 mg/l
Exposure time: 48 h |
| | | LC50 (Americamysis): 0.000007 mg/l
Exposure time: 48 h |
| | | EC50 (Hyalella azteca (Amphipod)): 0.000002 mg/l
Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 0.31 mg/l
Exposure time: 96 h |
| M-Factor (Acute aquatic toxicity) | : | 100,000 |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Pimephales promelas (fathead minnow)): 0.000031 mg/l
Exposure time: 300 d |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 0.000002 mg/l
Exposure time: 21 d |
| | | NOEC (Americamysis): 0.00022 µg/l
Exposure time: 28 d |
| M-Factor (Chronic aquatic toxicity) | : | 100,000 |
| Toxicity to microorganisms | : | EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h |
|
 | | |
| Hydrocarbons, C9, Aromatics: | | |
| Toxicity to fish | : | LL50 (Oncorhynchus mykiss (rainbow trout)): 9.2 mg/l
Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Daphnia magna (Water flea)): 3.2 mg/l
Exposure time: 48 h |
| Toxicity to algae/aquatic | : | ErC50 (Raphidocelis subcapitata (freshwater green alga)): 2.9 |

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plants mg/l
 Exposure time: 72 h
 NOELR (Raphidocelis subcapitata (freshwater green alga)):
 1.0 mg/l
 End point: Growth rate
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOELR (Oncorhynchus mykiss (rainbow trout)): 1.228 mg/l
 Exposure time: 28 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 2.144 mg/l
 Exposure time: 21 d

Ecotoxicology Assessment

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

orthophosphoric acid:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 3 - 3.25 mg/l
 Exposure time: 96 h

Ecotoxicology Assessment

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

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

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2.18 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.94 mg/l
 Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)):
 0.15 mg/l
 Exposure time: 72 h
 EC10 (Raphidocelis subcapitata (freshwater green alga)):
 0.04 mg/l
 End point: Growth rate
 Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.3 mg/l
 Exposure time: 28 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia): 1.7 mg/l
 Exposure time: 21 d

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Persistence and degradability**Components:****lambda-cyhalothrin:**

Biodegradability : Result: Not readily biodegradable.
Stability in water : Degradation half life (DT50): 7 d
Remarks: Product is not persistent.

Hydrocarbons, C9, Aromatics:

Biodegradability : Result: Readily biodegradable.

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

Biodegradability : Result: rapidly degradable

Bioaccumulative potential**Components:****lambda-cyhalothrin:**

Bioaccumulation : Remarks: Bioaccumulates

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

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Mobility in soil**Components:****lambda-cyhalothrin:**

Distribution among environmental compartments : Remarks: immobile
Stability in soil : Dissipation time: 56 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

Other adverse effects**Components:****lambda-cyhalothrin:**

Results of PBT and vPvB 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).

orthophosphoric acid:

Results of PBT and vPvB 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).

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

Results of PBT and vPvB 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).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : 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

International Regulations

UNRTDG

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(LAMBDA-CYHALOTHRIN)
Class : 9
Packing group : III
Labels : 9

IATA-DGR

UN/ID No. : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(LAMBDA-CYHALOTHRIN)
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 964
Packing instruction (passenger aircraft) : 964
Environmentally hazardous : yes

IMDG-Code

UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(LAMBDA-CYHALOTHRIN)
Class : 9

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

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Remarks : Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

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:

Caution

Harmful if absorbed through skin.

Avoid breathing spray mist.

Avoid contact with skin, eyes or clothing.

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

Remove and wash contaminated clothing before re-use.

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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)
 Respiratory or skin sensitization

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

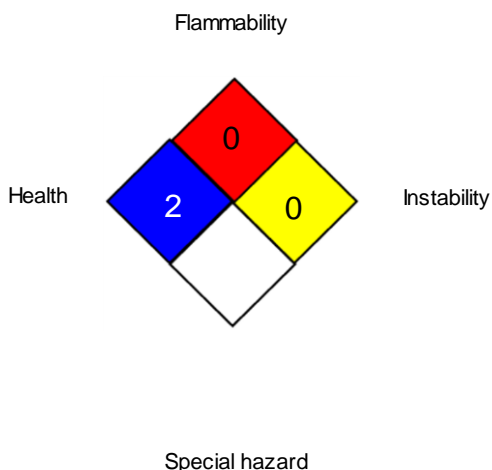
SECTION 16. OTHER INFORMATION

Further information

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NFPA 704:**HMIS® IV:**

HEALTH	/	2
FLAMMABILITY		0
PHYSICAL HAZARD		0

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
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
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
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA P0 / TWA	:	8-hour time weighted average
OSHA P0 / STEL	:	Short-term exposure limit
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-3 / TWA	:	8-hour 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; IECS - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dan-

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gerous 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; TECl - 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 : 04/04/2023

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.

US / Z8

ARCHER® Insect Growth Regulator

Date: 12/8/2015
 Replaces: 5/8/2015

1. PRODUCT IDENTIFICATION

Product identifier on label: **ARCHER® Insect Growth Regulator**

Product No.: A12861A
 Use: Insect Growth Regulator
 Manufacturer: Syngenta Crop Protection, LLC
 Post Office Box 18300
 Greensboro NC 27419

Manufacturer Phone: 1-800-334-9481

Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

Classifications: Skin Corrosion/Irritation: Category 2
 Specific Target Organ Toxicity: Drowsiness Category 3
 Specific Target Organ Toxicity: Respiratory Irritation Category 3
 Aspiration Hazard: Category 1
 Flammable Liquid: Category 4
 Eye Damage/Irritation: Category 2B

Signal Word (OSHA): Danger

Hazard Statements: Combustible liquid
 May be fatal if swallowed and enters airways
 Causes skin irritation
 Causes eye irritation
 May cause respiratory irritation
 May cause drowsiness or dizziness

Hazard Symbols:



Precautionary Statements: Keep away from heat, sparks, open flames, hot surfaces. No smoking.
 Avoid breathing mist, vapors, spray.
 Wash hands and face thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves, protective clothing, eye protection.
 If swallowed: Immediately call a poison center, doctor or Syngenta.
 If on skin: Wash with plenty of soap and water.
 If skin irritation occurs: Get medical advice.

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If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice.
Call a poison center, doctor or Syngenta if you feel unwell.
See Section 4 First Aid Measures.
Do NOT induce vomiting.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use dry chemical, foam or CO2 for extinction.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Petroleum Solvent	Petroleum Solvent	Trade Secret	Trade Secret
Other ingredients	Other ingredients	Trade Secret	98.7%
2-[1-Methyl-2-(4-phenoxyphenoxy)ethoxy] pyridine	Pyriproxifen	95737-68-1	1.3%

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Most important symptoms/effects:

- Eye irritation
- Skin irritation
- Drowsiness or dizziness
- Respiratory irritation

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Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.
 Treat symptomatically.
 Contains petroleum distillate - vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

Combustible liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back.

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Special protective equipment and precautions for firefighters:

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Precautions for safe handling:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Conditions for safe storage, including any incompatibilities:

Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
Petroleum Solvent	Not Established	Not Established	50 mg/m ³ TWA	Manufacturer

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Other ingredients	Not Established	Not Established	Not Established	Not Applicable
Pyriproxifen	Not Established	Not Established	Not Established	Manufacturer

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

Ingestion:

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact:

Where eye contact is likely, use chemical splash goggles.

Skin Contact:

Where contact is likely, wear chemical-resistant gloves (such as barrier laminate or Viton), coveralls, socks and chemical-resistant footwear.

Inhalation:

A combination particulate/organic vapor respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH certified respirator with an organic vapor (OV) cartridge or canister with any R, P or HE filter.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless liquid
 Odor: Petroleum solvent
 Odor Threshold: Not Available
 pH: Not Available
 Melting point/freezing point: Not Applicable
 Initial boiling point and boiling range: Not Available
 Flash Point (Test Method): 153°F (Setaflash)
 Flammable Limits (% in Air): Not Available
 Flammability: Combustible liquid.
 Vapor Pressure: Pyriproxifen < 1.0 x 10⁻⁷ mmHg @ 73.06°F (22.81°C)
 Vapor Density: Not Available
 Relative Density: 0.847 g/ml @ 68°F (20°C)
 Solubility (ies): Pyriproxifen 0.367 +/- 0.004 mg/l
 Partition coefficient: n-octanol/water: Not Available
 Autoignition Temperature: Not Available
 Decomposition Temperature: Not Available
 Viscosity: Not Available
 Other: None

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10. STABILITY AND REACTIVITY

Reactivity: Not reactive.
Chemical stability: Stable under normal use and storage conditions.
Possibility of hazardous reactions: Will not occur.
Conditions to Avoid: Heat and acidic or alkaline conditions may cause this product to break down.
Incompatible materials: None known.
Hazardous Decomposition Products: None known.

11. TOXICOLOGICAL INFORMATIONHealth effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Eye irritation, Drowsiness or dizziness, Skin irritation, Respiratory irritation

Delayed, immediate and chronic effects of exposure: Eye irritation, Skin irritation, Drowsiness or dizziness, Respiratory irritation

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion:	Oral (LD50 Rabbit) :	> 5000 mg/kg body weight
Dermal:	Dermal (LD50 Rabbit) :	> 2000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 7.6 mg/l air - 4 hours
Eye Contact:	See "Other Toxicity Information", Sec. 11	
Skin Contact:	See "Other Toxicity Information", Sec. 11	
Skin Sensitization:	Not a skin sensitizer.	

Reproductive/Developmental Effects

Pyriproxifen: No test article related reproductive effects were observed.
NOEL for systemic toxicity was 1000 ppm. The NOEL for reproductive effects was 5000 ppm.

No test article related teratogenic effects were observed.

Teratology (rat): No Observable Effect Level (NOEL), Dams-100 mg/kg/day, Fetuses-100 mg/kg/day, Offspring-1000 mg/kg/day. Not a reproductive toxin.

Teratology (rabbit): No Observable Effect Level (NOEL), Dams-100 mg/kg/day, Fetuses-100 mg/kg/day. Not a reproductive toxin.

Gene Mutation: Negative.

Chromosomal Aberration: Negative.

Unscheduled DNA synthesis: Negative.

Chronic/Subchronic Toxicity Studies

Pyriproxifen: None available.

Carcinogenicity

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Pyriproxifen: No test article related carcinogenic effects were observed. The No Observable Effect Level was 30 mg/kg/day. No evidence of increased tumor incidence when fed in the diet at 0, 120, 600 & 6000 ppm/day. The NOEL for systemic effects was 120 ppm/day.

No test article related oncogenic effects were observed. No evidence of increased tumor incidence when fed in the diet at 0, 120, 600 & 6000 ppm/day. The NOEL for systemic effects was 600 ppm/day for males, 120 ppm/day for females.

Chemical Name	NTP/IARC/OSHA Carcinogen
Petroleum Solvent	No
Other ingredients	No
2-[1-Methyl-2-(4-phenoxyphenoxy) ethoxyl] pyridine	No

Other Toxicity Information

Eye contact can cause temporary irritation, tearing and blurred vision.
Repeated and/or prolonged skin contact may cause irritation and dermatitis.

Toxicity of Other Components

Other ingredients
Not Established

Petroleum Solvent
Inhalation of vapors at high concentrations can cause central nervous system effects (dizziness, headache), irritation to eyes or respiratory tract.

Target Organs

Active Ingredients

Pyriproxifen: Not available

Inert Ingredients

Other ingredients: Not Established

Petroleum Solvent: Respiratory tract, stomach, liver, thyroid, urinary bladder, CNS, skin

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

Pyriproxifen:
Fish (Rainbow Trout) 96-hour LC50 >0.325 mg/L
Bird (Bobwhite Quail) LD50 Oral >2000 mg/kg
Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 0.40 mg/L
Algae 72-hour EC50 0.064 mg/L

Environmental Fate

Pyriproxifen:
Not available

13. DISPOSAL CONSIDERATIONS

Disposal:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

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Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA

< 119 gallons: Not regulated

> 119 gallons:

Proper Shipping Name: Combustible Liquid, N.O.S. (Petroleum Distillates)

Hazard Class: Combustible Liquid

Identification Number: NA 1993

Packing Group: PG III

Comments

Water Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Pyriproxifen), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Air Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Pyriproxifen)

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

15. REGULATORY INFORMATION

Pesticide Registration:

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:

Caution: Causes moderate eye irritation. Harmful if absorbed through skin, swallowed, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before

EPA Registration Number(s):

100-1111

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard
Fire Hazard

Section 313 Toxic Chemicals: None

CERCLA/SARA 304 Reportable Quantity (RQ):

None

RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

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TSCA Status:

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 2
Instability: 0

HMIS Hazard Ratings

Health: 1
Flammability: 2
Reactivity: 0

Syngenta Hazard Category: B

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 8/19/1998

Revision Date: 12/8/2015

Replaces: 5/8/2015

Section(s) Revised: 15

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.