

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 1/11
(30713467/SDS_CPA_CA/EN)

1. Identification

Product identifier used on the label

Titan Insecticide

Recommended use of the chemical and restriction on use

Recommended use*: crop protection active ingredient

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF Canada Inc.
5025 Creekbank Road
Building A, Floor 2
Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300
BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

PCP # 27449
Synonyms: Clothianidin

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Acute Tox.	4 (Inhalation - mist)	Acute toxicity
Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	1	Hazardous to the aquatic environment - chronic

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 2/11
(30713467/SDS_CPA_CA/EN)

Label elements

Pictogram:



Signal Word:
Warning

Hazard Statement:

H302 + H332	Harmful if swallowed or if inhaled
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P260	Do not breathe mist or vapour.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P312	Call a POISON CENTER or physician if you feel unwell.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P330	Rinse mouth
P391	Collect spillage.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.
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Hazards not otherwise classified

Labeling of special preparations (GHS):

Product contains the following components and may cause an allergic skin reaction: 5-chloro-2-methyl-2H-isothiazol-3-one

The substance may cause sensitization of the skin in particularly sensitive individuals. Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Clothianidin

CAS Number: 210880-92-5
Content (W/W): 47.5 %
Synonym: Guanidine, N-[(2-chloro-5-thiazolyl)methyl]-N'-methyl-N''-nitro-, [C(E)]-

glycerol

CAS Number: 56-81-5
Content (W/W): 5.0 - 10.0%
Synonym: Glycerol

5-chloro-2-methyl-2H-isothiazol-3-one

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 3/11
(30713467/SDS_CPA_CA/EN)

CAS Number: 26172-55-4
Content (W/W): < 0.1%
Synonym: 5-Chloro-2-methyl-4-isothiazolin-3-one; 5-Chloro-2-methyl-2H-isothiazol-3-one

4. First-Aid Measures

Description of first aid measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. In case of intoxication, call a poison control center or physician for treatment advice, taking the packaging or the label of the product.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

If swallowed:

Immediate medical attention required. Do not give solids or liquids. Do not induce vomiting unless told to by a poison control center or doctor. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, dry powder, foam, carbon dioxide

Special hazards arising from the substance or mixture

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 4/11
(30713467/SDS_CPA_CA/EN)

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, Hydrogen chloride, nitrogen oxides, silica compounds,
halogenated compounds, sulfur oxides
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Protect product from freezing temperatures. Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination.

Storage stability:

Storage temperature: > -10 - < 40 °C

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 5/11
(30713467/SDS_CPA_CA/EN)

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Components with occupational exposure limits

glycerol	OSHA Z1:	PEL 15 mg/m ³ Total dust ;
	OSHA Z1:	PEL 5 mg/m ³ Respirable fraction ;

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Wear face shield or tightly fitting safety goggles (chemical goggles) if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Remove contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Form:	liquid
Odour:	characteristic
Odour threshold:	Not determined since harmful by inhalation.
Colour:	white to light beige
pH value:	approx. 5.0 - 7.0 (100 %(m), 23 °C)
Melting point:	The product has not been tested.
Boiling point:	The product has not been tested.

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 6/11
(30713467/SDS_CPA_CA/EN)

Flash point:	> 100 °C
Flammability:	not applicable
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Autoignition:	Based on the water content the product does not ignite.
Vapour pressure:	approx. < 0.0000001 hPa (25 °C) The data given are those of the active ingredient.
Density:	approx. 1.25 g/cm ³ (20 °C)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	400 - 650 mPa.s (20 °C)
Solubility in water:	miscible
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

See SDS section 7 - Handling and storage.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 7/11
(30713467/SDS_CPA_CA/EN)

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Of moderate toxicity after single ingestion. Of moderate toxicity after short-term inhalation. Of low toxicity after short-term skin contact.

Oral

Type of value: LD50
Species: rat (female)
Value: 2,000 mg/kg

Inhalation

Type of value: LC50
Species: rat (male/female)
Value: > 2.6 mg/l
Exposure time: 4 h
An aerosol was tested.

Type of value: LC50
Species: rat (male/female)
Value: > 10.4 mg/l
Exposure time: 1 h
An aerosol was tested.

Dermal

Type of value: LD50
Species: rat (male/female)
Value: > 4,000 mg/kg

Assessment other acute effects

Assessment of STOT single:
Based on available data, the classification criteria are not met.

The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion

Assessment of irritating effects: Not irritating to the eyes. Not irritating to the skin.

Skin

Species: rabbit
Result: non-irritant

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 8/11
(30713467/SDS_CPA_CA/EN)

Eye

Species: rabbit
Result: non-irritant

Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

Aspiration Hazard

No aspiration hazard expected. The product has not been tested. The statement has been derived from the properties of the individual components.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Clothianidin

Assessment of teratogenicity: Causes developmental effects in animals at high, maternally toxic doses.

Other Information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish

Information on: Clothianidin

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 9/11
(30713467/SDS_CPA_CA/EN)

LC50 (96 h) > 104.2 mg/l, *Oncorhynchus mykiss* (OECD Guideline 203, static)
LC50 (96 h) > 117 mg/l, *Lepomis macrochirus* (EPA 72-1, static)

Aquatic invertebrates

Information on: Clothianidin
EC50 (48 h) 40 mg/l, *Daphnia magna* (OPP 72-2 (EPA-guideline), static)
EC50 (48 h) 0.029 mg/l, *Chironomus riparius* (static)

Aquatic plants

Information on: Clothianidin
EC50 (72 h) > 120 mg/l (growth rate), *Pseudokirchneriella subcapitata* (static)
No observed effect concentration (72 h) 15 mg/l (growth rate), *Pseudokirchneriella subcapitata* (static)
EC50 (14 d) > 121 mg/l, *Lemna gibba* (other, semistatic)
No observed effect concentration (14 d) 59 mg/l, *Lemna gibba* (other, semistatic)

Chronic toxicity to aquatic invertebrates

Information on: Clothianidin
No observed effect concentration (21 d) 0.12 mg/l, *Daphnia magna* (OECD Guideline 211, semistatic)
EC10 (28 d) 0.00072 mg/l, *Chironomus riparius* (other, static)

Persistence and degradability

Assessment biodegradation and elimination (H2O)

The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment biodegradation and elimination (H2O)

Information on: Clothianidin

Not readily biodegradable (by OECD criteria).

Bioaccumulative potential

Assessment bioaccumulation potential

The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment bioaccumulation potential

Information on: Clothianidin

Mobility in soil

Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 10/11
(30713467/SDS_CPA_CA/EN)

Information on: Clothianidin

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:

See product label for disposal and recycling instructions.

Container disposal:

Rinse the container or liner as needed for disposal. Add rinsate to spray tank. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers. Consult the product label for additional details.

14. Transport Information

Land transport

TDG

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains CLOTHIANIDINE SOLUTION)

Air transport

IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains CLOTHIANIDINE SOLUTION)

Further information

Exempt from regulation when transported by road or rail, in accordance with TDG Regulations 1.45.1. This exemption provides that this product does not require dangerous goods shipping documentation or safety marks when transported on land by road or rail.

Safety Data Sheet

Titan Insecticide

Revision date : 2022/04/05
Version: 5.0

Page: 11/11
(30713467/SDS_CPA_CA/EN)

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection DSL, CA released / exempt

Labeling requirements under Pest Control Products Act

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:

WARNING:

POISON.

KEEP OUT OF REACH OF CHILDREN.

HARMFUL IF SWALLOWED.

HARMFUL IF ABSORBED THROUGH SKIN.

May be fatal if swallowed.

Avoid contact with the skin, eyes and clothing.

Wash thoroughly after handling.

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2022/04/05

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET