



Safety Data Sheet

TOPSTAR - Reg.No L8375 (act 36 of 1947) Namibian Reg. No. N-AR 2143

Date of issue: 23/06/2009

Date revised: 25/06/2019

1) IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER	
Product name:	TOPSTAR
Other means of identification:	Thiacloprid 480 g/L SC
UN Number:	2902
Recommended use:	Crop protection product, insecticide.
Restrictions on use:	For use as an Agricultural remedy only.
Distributed by:	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 0834006056 www.agritech.co.za
Emergency Number:	POISON CENTRE (UNITAS HOSPITAL) 012 664 1100 WESTERN CAPE POISONS TELEPHONE SERVICE (OR POISONS HELPLINE): 0861 555 777 RAPID SPILL RESPONSE 0800 775 3305 GRIFFON POISON CENTRE: 082 446 8946
Chemical Name:	Thiacloprid: (Z)-3-(6-chloro-3-pyridylmethyl)-1,3-thiazolidin-2-ylidencyanamide
2) Classification of the substance / mixture:	
Classification of the product:	According to Directive 67/548/EEC or 1999/45/EC Hazardous N: R20/22 R40 R43 R48/22 R63 Full text of R and S-phrases: see section 15.
Label elements	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>N – Dangerous for the environment</p> </div> <div style="text-align: center;">  <p>Danger</p> </div> </div> <p>Hazard statements: H301 H332 H336 H351 H360FD H410</p> <p>Precautionary statements: P201 P261 P280 P301 + P330 + P331 + P310</p>

					P308 + P313
					Full text of Precautionary and Hazard statements: see section 15.
Health effects: eyes:					No specific effects or symptoms have been reported
Health effects: skin:					No specific effects or symptoms have been reported
Health effects: ingestion					Harmful if owed
Health effects: inhalation					Harmful if inhaled
Health effects: Other					No data available
3) COMPOSITION / INFORMATION ON INGREDIENTS:					
Mixture: preparation based on Thiachloprid					
Chemical name	% composition	CAS No.	EC No.	Classification according to Regulation EC 1272/2008 (CLP)	
Thiachloprid	48	111988-49-9	218-962-7	Acute Toxicity, Oral (Category 3), H301 Acute Toxicity, Inhalation (Category 4), H322 Carcinogenicity (Category 2), H351 Reproductive toxicity (Category 1B), H360FD Specific Target Organ Toxicity – single exposure (Category 3), Central Nervous system, H336 Acute aquatic toxicity (Category 1), H400 Chronic aquatic toxicity (Category 1), H410 M factor – Aquatic Acute: 100	
Other ingredients (non-hazardous) to 100%				.	
Full text of R and S-phrases: see section 15.					
4) First Aid Measures:					
Eye contact:			In case of eye contact, immediately flush the eyes with clean, gently flowing lukewarm water for at least 20 minutes, while holding the eyelid(s) open. Seek medical attention immediately if irritation develops and persists.		
Skin contact:			Remove all contaminated clothing, shoes leather goods immediately. Gently wipe off any excess chemical. Wash skin thoroughly and gently with plenty of water and soap. If available, rinse skin with polyethyleneglycol 400, subsequently rinse with water. Do not rub the skin. Seek medical advice if needed.		
Ingestion			Have the victim rinse their mouth out with water if the patient is alert and able. Never give anything by mouth to an unconscious person. Treat respiratory difficulty using artificial respiration and oxygen. Treat symptomatically and supportively. Do not induce vomiting. Seek medical assistance immediately.		
Inhalation:			Remove affected person to fresh air until recovered. If symptoms develop or persist, seek medical advice. If breathing is difficult, give oxygen. If not breathing stops, apply artificial respiration. Seek medical assistance immediately.		
Most important symptoms and effects, acute and delayed:			Ingestion of large amounts: Breathing difficulties, Tremors, Blood disorders, Hyperthermia.		
Indication of immediate medical attention and special treatment needed: Advice to physician			No specific antidote known. Treat symptomatically and supportively. This product contains a neonicotinoid. In case of ingestion, gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the administration of activated charcoal and sodium sulphate is advisable.		
5) Fire-Fighting Measures:					

<p>Suitable extinguishing media:</p> <p>Unsuitable extinguishing media:</p> <p>Fire Fighting:</p>	<p>Water fog, foam, carbon dioxide or dry chemical. Avoid strong water jets - airborne dusts may be an explosion hazard.</p> <p>Do not use high volume water jet, due to contamination risk.</p> <p>Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Water can be used to cool unaffected containers but must be contained for later disposal. Do not scatter the material. Avoid pollution of waterways.</p> <p>UNUSUAL FIRE OR EXPLOSION HAZARDS: Generating poisonous and corrosive fumes. High temperatures of fire may produce irritating gasses and vapours (CO₂ CO and NO_x)</p>
<p>Protective clothing:</p>	<p>Full protective clothing and self-contained breathing apparatus</p>
<p>6) Accidental Release Measures:</p>	
<p>Personal precautions:</p> <p>Environmental precautions:</p> <p>Cleaning procedure:</p> <p>Disposal:</p>	<p>It is good practice to wear suitable personal protective equipment (PPE). When preparing and using the product wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield. Wear the appropriate safety clothing and eye / face protection. For personal protection see Section 8. Keep people away from, and upwind of, the spill or leak.</p> <p>Dike spill area and collect washings to avoid any contamination of surface and ground water, water supplies and drains. Heavily contaminated soil layers should be removed and disposed of in an approved way. Notify regulatory authorities if necessary.</p> <p>Wear protective clothing. Clear area of unprotected personnel. Prevent product from spreading and collect into specially marked, tightly closing containers. Treat contaminated areas with water containing soda or detergent. Rinse the spill area and any tools or implements several times with soapy water. Contain and adsorb the rinsate with inert absorbents and place into the same disposal container as the spill material.</p> <p>Collect spilled material and waste in sealable open-top type containers for disposal. Recover the product by sweeping up or vacuuming without raising dust. If spill does enter waterways contact the local authority. Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility. If containers cannot be recycled, they should be disposed of together with the waste chemical.</p>
<p>7) Handling & Storage:</p>	
<p>Handling:</p>	<p>Use good personal hygiene. Avoid contact with skin and eyes. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Wash contaminated clothing before re-use. APPROVED HANDLER: This product must be under the control of an approved handler when applied in a wide dispersive manner; or used by a commercial contractor. Do NOT contaminate dams, rivers or streams, or any other water bodies</p>

Storage:	with pesticide or used containers. Do not apply if heavy rains are imminent. Store in the closed, original container in a dry, cool well ventilated area out of direct sunlight. Protect from temperatures above 40°C. Properties of the product may change if stored above this temperature for extended periods. Store in compliance with local regulations. Protect from excessive heat and cold. Keep away from children or uninformed persons. Keep away from combustible material. No smoking. Keep away from sources of ignition.
8) Exposure Control / Personal Protection:	
<p>It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.</p> <p>Components with workplace control parameters</p> <p><u>PERSONAL PROTECTIVE EQUIPMENT:</u></p> <p>Clothing:</p> <p>Gloves:</p> <p>Eye protection:</p> <p>Respiratory protection</p> <p>Emergency eye wash:</p>	<p>Consult supplier to confirm that the equipment is suitable.</p> <p>It is good practice to wear suitable personal protective equipment (PPE). When preparing and using the product wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield</p> <p>Elbow-length PVC or nitrile gloves. Gloves should be certified to an appropriate standard. Gloves should have a minimum break-through time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.</p> <p>Chemical goggles or face shield.</p> <p>Protective mask.</p> <p>Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.</p>
9) Physical & Chemical Properties:	
<p>Form:</p> <p>Colour:</p> <p>Odour:</p> <p>Odour threshold</p> <p>Solubility:</p> <p>pH:</p> <p>Melting point / Freezing point</p> <p>Initial boiling point and boiling range</p> <p>Flash point:</p> <p>Evaporation rate:</p> <p>Flammability (solid, gas)</p> <p>Upper/ lower flammability or explosive limits:</p> <p>Vapour pressure:</p> <p>Vapour density:</p> <p>Relative density:</p>	<p>Liquid</p> <p>White to beige</p> <p>Characteristic</p> <p>Not determined</p> <p>Disperses in water</p> <p>5.5</p> <p>No data available</p> <p>No data available</p> <p>Not flammable</p> <p>Not applicable</p> <p>Not flammable</p> <p>No hazard is expected as long as the product is used appropriately and in accordance with the intended use.</p> <p>No data available</p> <p>No data available</p> <p>Approximately 1.2 g/L</p>

Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature:	No data available
Viscosity:	No data available
10) Stability & Reactivity:	
Reactivity:	No hazardous reactions known. Hazardous polymerisation does not occur. Combustion or thermal decomposition will evolve toxic and irritating vapours.
Chemical stability:	When stored appropriately this product should show no significant deterioration for 2 years from the date of manufacture. Avoid strong basic, acidic or oxidising materials.
Hazardous decomposition product(s):	None under normal conditions of storage and of use. When heated to decomposition, irritant or dangerous fumes may be emitted. High temperatures of fire may produce irritating gasses and vapours (CO ₂ CO and NO _x)
Conditions to avoid:	Avoid extreme heat and cold. Decomposes at elevated temperatures. Keep out of reach of children.
Incompatible materials:	No data available
11) Toxicological Information: Based on data for active ingredient	
Acute:	
Oral : LD50: 620-840 mg/kg, male rat; 400-450 mg/kg, female rats.	
Dermal : LD50 > 2000 mg/kg.	
Inhalation : LD50 (4h) > 2500 mg/m ³ air, male rat; >1200 mg/m ³ air, female rat.	
Aspiration toxicity: N/A	
Skin irritation: Rabbit: Non-irritant.	
Eye irritation : Rabbit: Non-irritant.	
Sensitization : Guinea pig: Not a sensitiser	
Mutagenicity: The statement has been derived from the properties of the active ingredient. Tests revealed no genotoxic potential.	
Carcinogenicity: The statement has been derived from the properties of the active. Thiacloprid at high dosages caused an increased incidence of tumours in rats in the following organs: Uterus, thyroid. Thiacloprid at high dosages caused an increased incidence of tumours in mice in the following organs: Ovaries. The tumours seen with Thiacloprid were caused through a non-genotoxic mechanism, which is not relevant at low doses. The mechanism that triggers tumours in rodents is not relevant for the low exposures encountered under normal use conditions.	
Reproductive toxicity: The statement has been derived from the properties of the active. Thiacloprid caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. Thiacloprid caused difficulty in parturition in rats. The mechanism of action for this effect is not considered to be relevant to humans.	
Teratogenicity: The statement has been derived from the properties of the active. Thiacloprid caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Thiacloprid are related to maternal toxicity.	
Repeated dose toxicity: No data available.	
12) Ecological Information:	

Information below based on active ingredient:

Bees: Oral LD50 > 17 ug/bee, Contact LD50 > 36 ug/bee.
Birds: Oral LD50 Japanese quail > 47 mg/kg, Bobwhite quail > 2700 mg/kg.
LC50 (8d) Bobwhite quail > 5400ppm, Japanese quail 2500 ppm.
Fish : LC50 (96h) Rainbow trout 30.5mg/L, Bluegill sunfish 25.2 mg/L.
Daphnia: EC50 (48h, 20 °C) >=85.1 mg/l.
Algae : ErC₅₀ (72h, 20 °C) *Scenedesmus subspicatus* 97 mg/l; *Pseudokirchneriella subcapitata* >100 mg/l.
Worms : N/A
Soil micro-organisms: N/A

Persistence and degradability:

Average soil half life, 7 – 21 days. Soil mobility is low to medium. Mean K_{oc} 615

Biodegradability: N/A

Bioaccumulation: Active ingredient: Does not bioaccumulate.

Other adverse effects:

Marine pollutant. Toxic to aquatic organisms.

13) Disposal Considerations:

Waste Disposal : Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal : Refer to the product label for instructions.

Container Refilling and Disposal:

If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product.

DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE.

Do not transport if this container is damaged or leaking.

14) Transportation Information:

ADG

U.N. Number: 2902

Class: 6.1

Classified as hazardous according to criteria of NOHS

Packing Group: III

Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S (THIACLOPRID SOLUTION)

Hazchem code: 2X

IMDG

U.N. Number: 2902

Class: 6.1

Classified as hazardous according to criteria of NOHS

Packing Group: III

Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S (THIACLOPRID SOLUTION)

Marine pollutant: Yes

IATA

U.N. Number: 2902

Class: 6.1

Classified as hazardous according to criteria of NOHS

Packing Group: III

Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, N.O.S (THIACLOPRID SOLUTION)

Environmental Hazardous Mark: NO

15) Regulatory Information:

Labelling according to EC directives:

Hazardous components which must be listed on the label: Thiachloprid

Hazard:

N: Dangerous to the environment

Risk Phrases:

R20/22: Harmful by inhalation and if swallowed

R40: Limited evidence of carcinogenic effect.

R48/22: Harmful: Danger of serious damage to health by prolonged exposure if swallowed.

R50/53: Very toxic to aquatic organisms, may cause long term adverse effects in aquatic environments.

R63: Possible risk of harm to the unborn child.

Safety Phrases:

S57: Use appropriate containment to avoid environmental contamination.

S2: Keep out of reach of children.

S60: This material and its container must be disposed of as hazardous waste.

Hazard statements:

H301: Toxic if swallowed.

H332: Harmful if inhaled.

H336: May cause drowsiness or dizziness.

H351: Suspected of causing cancer.

H360FD: May damage fertility. May damage the unborn child.

H400: Very toxic to aquatic life

H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P20: Obtain special instructions before use.

P261: Avoid breathing dust / fume / gas / mist / vapours / spray.

P280: Wear protective gloves / protective clothing / eye protection / face protection.

P301 + P330 + P331 + P310: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor / physician.

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

National Road Traffic Act, 1996 (Act 93 of 1996).

Fire Brigade Service Act, 1987 (Act 99 of 1987).

Occupational Health and Safety Act, 1993 (Act 85 of 1993)

16. Other Information

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

It is the responsibility of persons in receipt of this SDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with this product. If the recipient subsequently produces formulation(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this SDS to their own SDS. The information contained herein is provided in good faith but makes no representation as to its comprehensiveness or accuracy. A properly trained person using this product intends this document only as a guide to the appropriate handling of the material. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

MERIDIAN AGRITECH MAKES NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSES OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANT ABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MERIDIAN AGRITECH (PTY) LTD WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.