SAFETY DATA SHEET

Section 1: IDENTIFICATION

Product Name:	**MINECTO STAR**
Design Code:	A16890B
Recommended Use:	**Insecticide**
Company Details:	**Syngenta Crop Protection Limited**
Address:	Level 4, 60 Parnell Road, Parnell **AUCKLAND 1052** **NEW ZEALAND**
Telephone number:	**(weekdays) 09 306 1500**
Emergency Telephone number:	**(24 Hours) 0800 734 607**
National Poisons & Hazchem Information Centre :	**0800 POISON (0800 764 766)**

Section 2: HAZARDS IDENTIFICATION

GHS classification:

Carcinogenicity:	Category 2
Specific target organ toxicity, repeat exposure:	Category 2
Hazardous to the aquatic environment, acute:	Category 1
Hazardous to the aquatic environment, chronic:	Category 1
Hazardous to terrestrial invertebrates	

GHS label elements:

Hazard pictogram:

Signal word: Warning

Hazard statements:
H351 Suspected of causing cancer.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:
Prevention:
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification: May form combustible dust concentrations in air.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Mixture:

Chemical Identity of ingredients:

Ingredient	CAS no.	Content (% w/w)
Pymetrozine	123312-89-0	50
Cyantraniliprole	736994-63-1	10
Sodium dibutylnaphthalenesulphonate	25417-20-3	>=1-<2.5
other ingredients determined not to be hazardous	-	to 100

Section 4: FIRST AID MEASURES

Description of First Aid measures:

General Advice: For advice contact the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Obtain medical attention.

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 Doctor or the National Poisons 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 doctor.
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 (if present).
Immediate medical attention is required.

If swallowed: If swallowed seek medical advice immediately and show the container or label.
DO NOT induce vomiting.

Important symptoms and effects, both acute and delayed:

Symptoms: No symptoms known or expected.

Indication of any immediate medical attention and special treatment needed:

Treatment: There is no specific antidote available.
Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Small fires:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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.

Special hazards arising from the substance or mixture:

Specific hazards during fire-fighting: 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.

Advice for firefighters:

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

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.

Section 6: ACCIDENTIAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Refer to protective measures listed in Sections 7 and 8.
Avoid dust formation.

Environmental Precautions:

Prevent further leakage or spillage if safe to do so.
Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and material for containment and cleaning up:

Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).
Do not create a powder cloud by using a brush or compressed air.
Clean contaminated surface thoroughly.
Clean with detergents. Avoid solvents.
Retain and dispose of contaminated wash water.

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

Precautions for Safe handling:

Advice on safe handling: This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.
This material can become readily charged in most operations.
When using do not eat, drink or smoke.
For personal protection see section 8.

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 reach of children. Keep away from food, drink and animal feeding stuffs.

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 CONTROL / PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits:

Components	CAS No	Exposure limit	Type of exposure limit	Source
Pymetrozine	123312-89-0	0.8 mg/m^3	TWA	Syngenta
Cyantraniliprole	736994-63-1	5 mg/m^3	TWA	Syngenta
Silica	61790-53-2	10 mg/m^3	TWA (inhalable dust)	WES

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 dust is generated, use local exhaust ventilation controls. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.
Personal Protective Protection:	
Eye protection:	No special protective equipment required.
Hand protection:	
Remarks:	No special protective equipment required. Select protection based on the physical job requirements.
Skin and body protection:	No special protective equipment required. Select skin and body protection based on the physical job requirements.
Respiratory protection:	No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Protective measures:	The use 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

Information on basic physical and chemical properties:	
Appearance:	Granules
Colour:	Beige to brown
Odour:	No data
Odour threshold:	No data
pH value	7-11, concentration: 1% w/v
Melting point / freezing point:	No data
Initial boiling point and boiling range:	No data
Flash point:	No data
Flammability:	No data
Burning number:	3 (20°C) 5 (100°)
Upper / lower flammability / explosive limits:	No data
Vapour pressure:	No data
Vapour Density:	No data
Density:	0.540 g/mL
Solubility:	No data
Partition co-efficient: n-octanol / water:	Pymetrozine: log Pow: -0.18 (25°C)
Autoignition temperature	>400°C
Decomposition temperature:	No data
Dynamic viscosity:	43.9-358 mPa.s (40°C) 57.8-409 mPa.s (20°C)
Explosive properties:	Not explosive
Oxidising properties:	Not oxidising
Minimum ignition energy:	300 – 1000 mJ

Section 10: STABILITY AND REACTIVITY

Reactivity:
None reasonably foreseeable

Chemical Stability:
The product is stable when used in normal conditions.

Possibility of Hazardous Reactions:
No dangerous reaction known under conditions of normal use.

Conditions to Avoid
No decomposition if used as directed.

Incompatible Materials:
None known

Hazardous Decomposition Products:
Combustion or thermal decomposition will evolve toxic and irritant vapours.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity *(product)*	
Swallowed:	LD_{50} >5000 mg/kg (rat, female)
Dermal absorption:	LD_{50} >5000 mg/kg (rat, male and female)
Inhaled:	LC_{50} (4 h) 5.03 mg/L (rat)
Aspiration hazard:	**Not classified**
Respiratory irritation:	**Not classified**
Skin corrosion / irritation:	**NON-IRRITANT** (rabbit)
Eye damage / irritation:	**NON-IRRITANT** (rabbit)
Respiratory or Skin Sensitisation:	**NOT A SENSITISER** (skin - guinea pig)
Chronic / Long Term Effects *(active ingredient)*	
Germ cell mutagenicity:	Animal testing did not show any mutagenic effects.
Carcinogenicity:	Pymetrozine: Increased levels of liver tumours were observed at high doses in rats and mice. The relevance of these findings to humans is questionable. Limited evidence of carcinogenicity in animal studies. Cyantraniliprole: No evidence of carcinogenicity in animal studies.
Reproductive toxicity:	No toxicity to reproduction.
Specific Organ toxicity:	*Single exposure:* The substance or mixture is not classified as specific target organ toxicant, single exposure. *Repeated exposure:* The substance or mixture is classified as specific target organ toxicant, repeated exposure, Class 6.9B
Narcotic Effects:	Not classified

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity Effects – aquatic (product)	
Acute toxicity to fish:	LC_{50} (96 h) = >100 mg/L (*Cyprinus carpio* (Carp))
Toxicity to daphnia and other aquatic invertebrates:	EC_{50} (48h) = 0.18 mg/L (*Daphnia magna* (water flea))
Toxicity to algae:	E_rC_{50} (72 h) = >100 mg/L (*Pseudokirchneriella subcapitata* [green algae])
Ecotoxicity Effects – terrestrial (active ingredient unless otherwise specified)	
Toxicity to Birds:	Product: LD_{50} (8 d) = >2000 mg/kg (bobwhite quail)
Toxicity to soil dwelling organisms:	Pymetrozine: LC_{50} (14 d) = 1098 mg/kg soil (earthworms) Cyantraniliprole: LC_{50} (14 d) = > 1000 mg/kg soil (earthworms)
Toxicity to Bees:	Product: LD_{50} (48 h, oral) = 3.8 µg/bee Product: LD_{50} (48 h, contact) = 4.89 µg/bee
Persistence and degradability:	
Biodegradability:	Pymetrozine: Not readily biodegradable Cyantraliniliprole: Not readily biodegradable
Stability in water:	Pymetrozine: Degradation half-life: 4.8 – 6.3 d. Pymetrozine: Not persistent in water. Cyantraniliprole: Degradation half-life: 1.7 – 42.9 d. Cyantraniliprole: Not persistent in water.
Bioaccumulative potential:	
Bioaccumulation:	Pymetrozine: Low potential for bioaccumulation Cyantraniliprole: Bioconcentration factor (BCF): <1. Does not bioaccumulate.
Partition coefficient: n-octanol/water:	Pymetrozine: Log Pow: -0.18 (25°C)
Mobility in soil:	
Distribution among environmental compartments:	Pymetrozine: slightly mobile in soils. Cyantraniliprole: immobile

Stability in soil:	Pymetrozine: Dissipation time: 7.9-30 d Percentage dissipation: 50% Cyantraniliprole:.no data available
Other adverse effects:	
Results of PBT and vPvB assessment (product):	This substance 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.

Section 13: DISPOSAL CONSIDERATIONS

Product Disposal:	DO NOT contaminate ponds, waterways or ditches with chemical or used containers. DO NOT dispose of waste into sewer. Dispose of this product only by using according to the label. Otherwise, dispose of waste at an approved landfill or other approved facility that will ensure the substance does not exceed the tolerable exposure limit (TEL) or environmental exposure limit (EEL), where relevant, or will treat the substance so that it is rendered no longer hazardous.
Container Disposal:	Ensure the container is empty. Triple rinse empty container and add rinsate to the spray tank. Recycle empty container through Agrecovery (0800 247 326, www.agrecovery.co.nz). Otherwise crush and bury in a suitable landfill. DO NOT reuse this container for any other purpose.

Section 14: TRANSPORT INFORMATION

Rail / Road (NZS 5433)	UN-No:	3077
	Class:	9
	Packing Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cyantraniliprole)
Sea (IMDG-Code)	UN-No:	3077
	Class:	9
	Packing Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cyantraniliprole)
	EmS Code:	F-A, S-F
	MARINE POLLUTANT:	Yes
Air (IATA)	UN-No:	3077
	Class:	9
	Packing Group:	III
	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cyantraniliprole)
	Packing instruction:	Y956 (cargo and passenger aircraft)

Section 15: REGULATORY INFORMATION

HSNO Approval Number:	HSR101205
Tolerable Exposure Limit or Environmental Exposure Limit:	TEL : none set at this time. EEL: 0.1 micrograms of substance per litre of water.
Required Regulatory Controls:	
Certified handler:	No
Tracking:	No
Record Keeping:	Yes, 9.1A substance
ACVM Registration:	P 9417
ACVM Controls:	See www.foodsafety.govt.nz for registration conditions.
International Agreements related to the substance (eg, Montreal Protocol, Stockholm Convention or Rotterdam Convention):	Not applicable

Section 16: OTHER INFORMATION

Date of SDS Preparation / Review:	11 August 2023
Version number of SDS:	4.0

Key / Legend to abbreviations and acronyms used:

AICS - Australian Inventory of Chemical Substances;
ANTT - National Agency for Transport by Land of Brazil;
ASTM - American Society for the Testing of Materials;
bw - Body weight;
CMR -Carcinogen, Mutagen or Reproductive Toxicant;
CPR - Controlled Products Regulations;
DIN - Standard of the German Institute for Standardisation;
DSL - Domestic Substances List (Canada);
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;
ERG - Emergency Response Guide;
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;
Nch - Chilean Norm;
NO(A)EC - No Observed (Adverse) Effect Concentration;
NO(A)EL - No Observed (Adverse) Effect Level;
NOELR - No Observable Effect Loading Rate;
NOM - Official Mexican Norm;
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 ActivityRelationship;
REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals;
SADT - Self-Accelerating Decomposition Temperature;
SDS - Safety Data Sheet;
TCSI - Taiwan Chemical Substance Inventory;
TDG - Transportation of Dangerous Goods;
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;
WES – Workplace Exposure Standard (Worksafe NZ)
WHMIS - Workplace Hazardous Materials Information System

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 test.

This version replaces all previous versions.