

SAFETY DATA SHEET

Section 1: IDENTIFICATION

Product Name:	SOLVIGO
Design Code:	A15193C
Recommended Use:	Insecticide
Company Details:	Syngenta Crop Protection Limited
Address:	Tower 2, Level 7, 110 Symonds Street Private Bag 92618 Symonds Street AUCKLAND 1010 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

Hazard classification:	6.1B, 6.1D, 6.8B, 6.8C, 6.9B, 9.1A, 9.3B, 9.4A
Priority Identifier:	DANGER KEEP OUT OF REACH OF CHILDREN
Secondary Identifiers:	6.1B = Fatal if inhaled 6.1D = Harmful if swallowed 6.8B = Suspected of damaging fertility or the unborn child 6.8C = May cause harm to breast-fed children 6.9B = May cause organ damage from repeated oral exposure at high doses. 9.1A = Very toxic to aquatic life. 9.3C = Toxic to terrestrial vertebrates. 9.4A = Very toxic to terrestrial invertebrates.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

<i>Pure Substance – Abamectin:</i>		
Chemical Identity of pure substance:	5-O-demethylavermectin A _{1a} mixture with 5-O-demethyl-25-de(1-methylpropyl)-25-(1-methylethyl)avermectin A _{1a} (4:1)	
Common Name:	Abamectin	
Synonyms:	MK 936	
CAS number:	71751-41-2	
<i>Pure Substance - Thiamethoxam:</i>		
Chemical Identity of pure substance:	3-[(2-chloro-5-thiazolyl)methyl]tetrahydro-5-methyl-N-nitro-4H-1,3,5-oxadiazin-4-imine	
Common Name:	Thiamethoxam	
Synonyms:	CGA293343	
CAS number:	153719-23-4	
<i>Mixture:</i>		
Chemical Identity of ingredients:		
Ingredient	CAS no.	Content (% w/w)
Thiamethoxam	153719-23-4	<10%
Abamectin	71751-41-2	<5%
1,2-benzisothiazol-3-one	2634-33-5	0.05 - 1%
Propane-1,2-diol	57-55-6	1 - 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:	If inhaled move the victim to fresh air immediately and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Immediately call a POISON CENTRE or doctor.
In case of skin contact:	If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with running water.
In case of eye contact:	Wash out immediately with water. 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/attention.
If swallowed:	If swallowed seek medical advice immediately and show container or label DO NOT induce vomiting. Rinse mouth
Important symptoms and effects, both acute and delayed:	
Symptoms:	Lack of coordination Tremors Dilatation of the pupil
Indication of any immediate medical attention and special treatment needed:	
Treatment:	This material is believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic mectin exposure. Toxicity can be minimized by early administration of chemical absorbents(e.g. activated charcoal). If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements. DO NOT induce vomiting

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:	When fighting a major fire 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: 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.

Methods and material 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 regulations (see section 13).
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:

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, 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
Abamectin	71751-41-2	0.02 mg/m ³	TWA	Syngenta
Thiamethoxam	153719-23-4	3 mg/m ³	TWA	Syngenta
propane-1,2-diol	57-55-6	10 mg/m ³ (Particulates) 150 ppm, 470 mg/m ³ (Total (vapour & particulates))	TWA	Supplier

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. Maintain air concentrations below occupational exposure standards. Seek additional occupational hygiene advice.
Follow precaution statements on the label and the use and safety directions in Code of Practice for the Management of Agrichemical NZS8409.

Personal Protective Protection:

Eye protection:

No special protective equipment required.

Hand protection:

Material:

Chemical resistant gloves, such as nitrile rubber

Break through time:

>480 min

Glove thickness:

0.5 mm

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 on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin and body protection:	Choose body protection in relation to its type, to the 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
Respiratory protection:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Suitable respiratory equipment: Respirator with a particle filter The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas, vapour, aerosol, particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used. Filter type: Particulates type (P)
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. Personal protective equipment should be certified to appropriate standards.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance:	Liquid
Colour:	Light beige to brownish
Odour:	Sweetish
Odour threshold:	No data available
pH value	>4.0 - 8.0 at 1% w/v (25°C)
Melting point / freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash Point:	>100°C
Flammability:	No data available
Upper / lower flammability / explosive limits:	No data available
Vapour pressure:	No data available
Vapour Density:	No data available
Density:	1.05 g/mL (25°C)
Solubility:	No data available
Partition co-efficient: n-octanol / water:	No data available
Autoignition temperature	445°C
Decomposition temperature:	No data available
Dynamic viscosity:	45.1 - 231 mPa.s at 20 °C 38.5 - 205 mPa.s at 40 °C
Explosive properties:	Not explosive
Oxidising properties:	Not oxidising

Section 10: STABILITY AND REACTIVITY

Reactivity: None reasonably foreseeable.
Chemical Stability: Stable under 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: No hazardous decomposition products are known.

Section 11: TOXICOLOGICAL INFORMATION

HSNO Classifications:

- 6.1B = Fatal if inhaled.
- 6.1D = Harmful if swallowed
- 6.8B = Suspected of damaging fertility or the unborn child.
- 6.8C = May cause harm to breast-fed children.
- 6.9B = May cause organ damage from repeated oral exposure at high doses.

Acute toxicity (similar composition)

Swallowed:	LD ₅₀ <550 mg/kg (rat)
Dermal absorption:	LD ₅₀ > 5000 mg/kg (rat)
Inhaled:	LC50 male Rat, > 0.26 mg/L, 4 h LC50 female Rat, 0.052 - 0.26 mg/L, 4 h
Aspiration hazard:	Not classified
Respiratory irritation:	Not classified
Skin corrosion / irritation:	NON IRRITANT (rabbit/HSNO Classification)
Eye damage / irritation:	NON IRRITANT (rabbit/HSNO Classification)
Respiratory or Skin Sensitisation:	NOT A SENSITISER (guinea pig/HSNO Classification)

Chronic / Long Term Effects (active ingredients)

Germ cell mutagenicity:	Animal testing did not show any mutagenic effects (thiamethoxam and abamectin)
Carcinogenicity:	Liver tumours noted in mice that are not relevant to humans (thiamethoxam) No evidence of carcinogenicity in animal studies (abamectin)
Reproductive toxicity:	No toxicity to reproduction (thiamethoxam) Some evidence of adverse effects on development, based on animal experiments (abamectin)
Specific Organ toxicity:	<i>Single exposure:</i> The substance or mixture is not classified as specific target organ toxicant, single exposure <i>Repeated exposure:</i> The substance or mixture is classified as specific target organ toxicant, repeated exposure, Class 6.9B
Narcotic Effects:	Not classified

Section 12: ECOLOGICAL INFORMATION

HSNO Classifications:	
9.1A =	Very toxic to aquatic life.
9.3B =	Toxic to terrestrial vertebrates.
9.4A =	Very toxic to terrestrial invertebrates.
Ecotoxicity Effects – aquatic (product)	
Acute toxicity to fish:	LC ₅₀ = 0.52 mg/L (fat head minnow); 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC ₅₀ < 0.0105 µg/L (Daphnia magna (water flea)); 48 h
Toxicity to algae:	ErC ₅₀ = >81.8 mg/L (<i>Pseudokirchneriella subcapitata</i> (green algae)); 72 h
Ecotoxicity Effects – terrestrial (active ingredients unless otherwise specified)	
Toxicity to Birds:	LD ₅₀ = 85 mg/kg (Mallard duck)
Toxicity to soil dwelling organisms:	LC ₅₀ > 1991.8 mL/kg soil d.w. (<i>Eisenia foetida</i>) (14 day)
Toxicity to Bees:	LD ₅₀ (contact – 24 hr) = 0..18 µg product /bee LD50 (oral – 72 hr) =0.03 µg product/bee
Persistence and degradability:	
Biodegradability:	Not readily biodegradable (thiamethoxam and abamectin)
Stability in water:	Degradation half-life: 11 d (thiamethoxam) Degradation half-life: 1.7 d (abamectin) Not persistent in water
Bioaccumulative potential:	
Bioaccumulation:	Low bioaccumulation potential (thiamethoxam) Does not bioaccumulate (abamectin)
Partition coefficient: n-octanol/water:	log Pow: -0.13 (25 °C) (thiamethoxam) log Pow: 4.4 (abamectin)
Mobility in soil:	
Distribution among environmental compartments:	Moderately mobile in soils (thiamethoxam) Slightly mobile in soils (abamectin)
Stability in soil:	Dissipation time: 51 d (thiamethoxam) Dissipation time: 12 - 52 d (abamectin) Not persistent in soil
Other adverse effects:	
Results of PBT and vPvB assessment (product):	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher (Product).

Section 13: DISPOSAL CONSIDERATIONS

Product Disposal:	Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.
Container Disposal:	Ensure the container is empty. Triple rinse empty container and add rinsate to the 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 (NZS5433)	UN-No: 3082
	Class: 9
	Packaging Group: III
	Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (thiamethoxam and abamectin)
Sea (IMDG-Code)	UN-No: 3082
	Class: 9
	Packaging Group: III
	Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (thiamethoxam and abamectin)
	MARINE POLLUTANT: Marine pollutant
Air (IATA)	UN-No: 3082
	Class: 9
	Packaging Group: III
	Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID (thiamethoxam and abamectin)

Section 15: REGULATORY INFORMATION

HSNO Approval Number:	HSR101003
Tolerable Exposure Limit or Environmental Exposure Limit:	None set at this time.
Required Regulatory Controls:	
Certified handler:	Yes
Tracking:	Yes
Record Keeping:	Yes
ACVM Registration:	P9133
ACVM Controls:	See www.foodsafety.govt.nz/industry/acvm for registration conditions.

Section 16: OTHER INFORMATION

Date of SDS Preparation / Review:	21 September 2020
Version number of SDS:	2
Key / Legend to abbreviations and acronyms used:	
<p>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; KECl - 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);</p>	<p>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 Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; 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</p>
<p>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.</p> <p>This version replaces all previous versions. PRODUCT NAMES are a trademark or registered trademark of a Syngenta Group Company.</p>	