

SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product Name:	SOLVIGO
Design Code:	A15193C
Recommended Use:	For the control of thrips on onions.
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)
Date of Preparation:	15 September, 2015

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 organisms. 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

Necessary First Aid measures:	<p>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.</p> <p>Swallowed: If swallowed seek medical advice immediately and show container or label DO NOT induce vomiting. Rinse mouth</p> <p>Eye: If concentrate or spray solution enters the eyes wash it out immediately with water. Remove contact lenses.</p> <p>Skin: If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with running water.</p> <p>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.</p>
Poisoning symptoms:	<p>Lack of coordination Tremors Dilatation of the pupil.</p>
Workplace facilities:	<p>No specific facilities required. Standard emergency equipment must be available.</p>
Hygiene Practices:	<p>Avoid contact with skin and eyes and inhalation of concentrate or spray mist. When mixing or applying, wear protective clothing, including face shield, impervious gloves and footwear. If clothing becomes contaminated with product, remove clothing immediately. Contaminated clothing should not be allowed out of the workplace. DO NOT eat, drink or smoke while using. Wash hands and exposed skin thoroughly with soap and water before meals and after work. Wash protective clothing daily after work.</p>
Notes for Medical Personnel:	<p>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.</p> <p>Toxicity can be minimized by early administration of chemical absorbents(e.g. activated charcoal).</p> <p>If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged.</p> <p>Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.</p> <p>DO NOT induce vomiting</p>

Section 5: FIRE-FIGHTING MEASURES

Type of Hazard:	Does not flash.
Fire Hazard Properties:	As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion.
Regulatory Requirements:	Not required
Extinguishing Media and methods:	Extinguish warehouse and factory fires using dry chemical extinguisher, foam, carbon dioxide or fine-water spray. DO NOT use a solid water stream as it may scatter and spread fire.
Hazchem Code:	2X
Recommended Protective Clothing:	When fighting a major fire wear full protective clothing and self-contained breathing apparatus.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Emergency Procedures: Ensure suitable personal protection during removal of spillages. This means wearing eye protection, chemically resistant gloves, boots and overalls.
Environmental Precautions:	Washings must be prevented from entering surface water drains or waterways. DO NOT allow run-off from fire fighting to enter drains or water courses.
Procedure for spill:	<ol style="list-style-type: none"> (1) Keep all bystanders away. (2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves. (3) Reposition any leaking containers so as to minimise further leakage. (4) Dam and absorb spill with an absorbent material (e.g. sand or soil). (5) Shovel the absorbed spill into drums. (6) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.
Procedure for Disposal:	<p>Disposal of the absorbed material will depend upon the extent of the spill. Contaminated material must be disposed of in accordance with all local authority requirements.</p> <p>It is suggested:</p> <ul style="list-style-type: none"> • For quantities up to 50 litres of product bury in a secure approved landfill site. • For quantities greater than 50 litres seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.

Section 7: HANDLING AND STORAGE

Precautions for safe handling:	Handling: No special technical protective measures required. No special handling advice required.
Regulatory Requirements:	This product must under the control of an Approved Handler during use. Records of use must be kept.
Handling practices:	Avoid contact with skin and eyes and inhalation of concentrate or spray mist. When using, do not eat, drink or smoke. Wash face and hands before eating, drinking or smoking.

Approved Handlers:	This product must be under the control of an Approved Handler.
Conditions for Safe Storage:	<p style="text-align: center;">Storage:</p> <p>Keep out of reach of children. Keep in original containers and tightly closed. Keep away from food, drink and animal feeding stuffs. Store in a cool, dry, well ventilated place and protect from sunlight. Avoid temperatures above 35°C.</p>
Store Site Requirements:	<p>Signage will be required at sites holding 100 litres or more of any product classified as 9.1A, Secondary containment will be required at sites holding 100 litres or more of any product classified as 6.1B, or 9.1A, (eg SOLVIGO).</p>
Packaging:	Store in original container, tightly closed, away from foodstuffs.

Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

Workplace Exposure Guidelines:	
Workplace Exposure Standards:	<p>Abamectin 8 h TWA: 0.02 mg/m³</p> <p>Thiamethoxam 8 h TWA: 3 mg/m³</p> <p>propane-1,2-diol 8 h TWA 10 mg/m³ (Particulates) 150 ppm, 470 mg/m³ (Total (vapour & particulates))</p>
Application in the workplace:	not required
Exposure standards outside the workplace:	not required
Engineering controls:	<p>No special requirements. Product is used outdoors. 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 mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.</p> <p>Follow precaution statements on the label and the use and safety directions in Code of Practice for the Management of Agrichemical NZS8409.</p>
Personal Protection:	When mixing, loading and applying wear full protective clothing such as impervious gloves, respirator, waterproof hat, coat and trousers (worn outside rubber boots). Contaminated clothing should not be allowed out of the workplace. Use only protective equipment bearing the mark of the Standards Association with Australia/ New Zealand. In case of heavy exposure, wear half face-piece respirator with combined dust and vapour cartridge, chemical resistant gloves and heavy duty cotton overalls.
General Hygiene:	Change work clothes daily. May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale spray mist. If product gets on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light beige to brownish liquid
Odour	Sweetish
pH value	>4.0 - 8.0 at 1% w/v
Flash Point:	>100°C
Auto-ignition temperature	445°C
Viscosity, dynamic	45.1 - 231 mPa.s at 20 °C 38.5 - 205 mPa.s at 40 °C
Oxidising Properties:	Not oxidising
Explosive Properties:	Not explosive
Specific Gravity / Density:	1.05 g/ml

Section 10: STABILITY AND REACTIVITY

Stability of the Substance:	Stable under standard conditions.
Conditions to Avoid:	none known
Material to Avoid:	none known
Hazardous decomposition products:	Combustion or thermal decomposition will evolve toxic and irritant vapours.
Hazardous polymerisation:	Does not occur
Specific Data:	not applicable

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 target organ damage from repeated oral exposure at high doses.

Acute Effects (Undiluted product)

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
Irritation	
Eye:	NON IRRITANT (rabbit/HSNO Classification)
Skin:	NON IRRITANT (rabbit/HSNO Classification)
Sensitization	NOT A SENSITISER (guinea pig/HSNO Classification)

Chronic / Long Term Effects (Active Ingredient)

Abamectin technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of mutagenic, teratogenic or reproductive effects was obtained.

Thiamethoxam technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of carcinogenic, neurotoxic, mutagenic, teratogenic or reproductive effects was obtained.

Section 12: ENVIRONMENTAL INFORMATION

HSNO Classifications:

9.1A = Very toxic to aquatic organisms.
9.3B = Toxic to terrestrial vertebrates.
9.4A = Very toxic to terrestrial invertebrates.

The information presented in the table is for the product and active ingredients, abamectin and thiamethoxam. It is marked as such. A thorough review of environmental information is not possible in this document.

Ecotoxicity Effects

Acute toxicity to birds: LD₅₀ = 85 mg/kg (Mallard duck)
Acute toxicity to fish: LC₅₀ = 0.52 mg/L (fat head minnow); 96 h
Toxicity to aquatic Invertebrates: EC₅₀ < 0.0105 µg/L (Daphnia magna (water flea))

Ecotoxicity Effects continued

Toxicity to algae: ErC₅₀ = >81.8 mg/L (*Pseudokirchneriella subcapitata* (green algae)); 72 h
Toxicity to soil dwelling organisms: LC₅₀ > 1991.8 mL/kg soil d.w. (*Eisenia foetida*) (14 day)
Toxicity to Bees: LD₅₀ (contact – 24 hr) = 0.18 µg product /bee
LD50 (oral – 72 hr) = 0.03 µg product/bee

Environmental Fate

The information provided here is for the active ingredients, **Thiamethoxam and Abamectin**.

Persistence and degradability

Biodegradability

abamectin : Not readily biodegradable.
thiamethoxam : not readily biodegradable

Stability in water

abamectin : Degradation half life: 1.7 d. Not persistent in water.
thiamethoxam: Degradation half life: 11 d. Not persistent in water..

Stability in soil

abamectin : Degradation half life: 12 - 52 d. Not persistent in soil.
thiamethoxam : Degradation half life : 51 d. Not persistent in soil.

Bioaccumulative potential

thiamethoxam : Low potential for bioaccumulation.
abamectin : Does not bioaccumulate.

Mobility in soil

abamectin : Slight mobility in soil.
thiamethoxam : Medium mobility in soil

Results of PBT and vPvB assessment

thiamethoxam : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

abamectin : This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

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

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

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 (RID/ADR)	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 (ICAO/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
HSNO Controls (inc. Tracking and Record Keeping):	See http://www.epa.govt.nz/search/registers.html for controls.
ACVM Registration:	P9133
ACVM Controls:	See www.nzfsa.govt.nz/acvm for registration conditions.

Section 16: OTHER INFORMATION

Note: This product is a registered agricultural chemical and must therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

CONTACT POINT: Business Manager - Crop Protection: (09) 306 1503
24 HOURS EMERGENCY CONTACT: 0800 734 607

This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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DISCLAIMER

This product complies with the specifications in its statutory registration. Implied terms and warranties are excluded. Syngenta's liability for breach of the express or any non-excludable implied warranty is limited to product replacement or purchase price refund. The purchaser must determine suitability for intended purpose and take all proper precautions in the handling, storage and use of the product including those on the label and/or safety data sheet failing which Syngenta shall have no liability.