

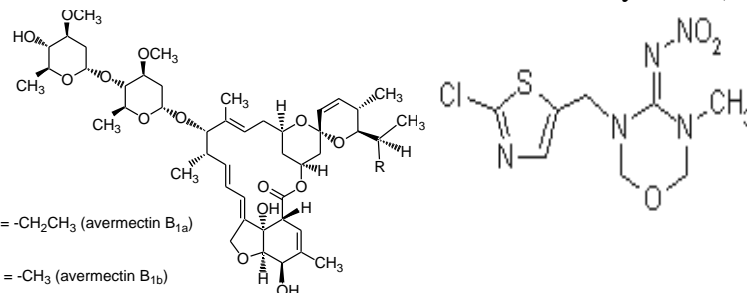


Material Safety Data Sheet (MSDS) Dynamic18.6 SC

IDENTIFICATION OF THE SUPPLIER:

AGRO CHEMICALS INDUSTRIES LTD
P.O. BOX 183020 AMMAN 11118 JORDAN
Fax. +962 6 5548220
Tel: +962 6 5548224
E-mail : info@aci.com.jo

PRODUCT IDENTIFICATION:

Common name :	Abamectin	Thiamethoxam
Trade name	Dynamic18.6 SC	
Uses category	Insecticide and miticide	
Type of formulation	Suspension concentrate	
Chemical name	A mixture of avermectins containing primarily Avermectin B1a and Avermectin B1b	3-(2-chloro-1,3-thiazol-5ylmethyl)-5-methyl-1,3,5-oxadiazinan-4 ylidene(nitro)amine
Chemical formula	 <p>(i) R = -CH₂CH₃ (avermectin B_{1a}) (ii) R = -CH₃ (avermectin B_{1b})</p>	
Molecular weight	873.1 (avermectin B1a); 859.1 (avermectin B1b)	291.7

PRODUCT COMPOSITION:

Active ingredient	% w/v	CAS#
Abamectin	3.3	[71751-41-2]
Thiamethoxam	15.3%	[153719-23-4]

Inert materials: up to 1 liter





HAZARDS IDENTIFICATION:

Health and Environmental	Fatal if inhaled. Toxic in contact with skin. Irritating to eyes and skin
Hazardous Decomposition Products	None known.
Physical Properties	Appearance: Light beige liquid Odor: Weak; uncharacteristic
Unusual Fire, Explosion and Reactivity Hazards	During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

FIRE-FIGHTING MEASURES: -

Fire and Explosion

Flash Point (Test Method):	Not available
Flammable Limits (% in Air):	Lower: Not Applicable Upper: Not Applicable
Autoignition Temperature:	Not available
Flammability:	Not available
Unusual Fire, Explosion and Reactivity Hazards	During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
In Case of Fire	Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

FIRST-AID MEASURES:

Ingestion:	If swallowed: Call a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to
------------	----------------------------------------------------------------------------------------------------------------------------------------





swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Eye Contact:

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact:

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation:

If inhaled: Move person to fresh air. If person is not breathing give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Notes to Physician

Early signs of intoxication include dilation of pupils, muscular incoordination and muscular tremors. Toxicity following accidental ingestion of abamectin can be minimized by early administration of chemical adsorbents (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 parenteral fluid replacement therapy should be given, along with other required supportive measures (such as maintenance of blood pressure levels and proper respiratory functionality) as indicated by clinical signs, symptoms and measurements. In severe cases, observations should continue for at least several days until clinical condition is stable and normal. Since abamectin 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 abamectin exposure.

Medical Condition

None known.

**Likely to be Aggravated
by Exposure**

ACCIDENTAL RELEASE:

In Case of Spill or Leak:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions in Protective Equipment Section. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.



PHYSICAL-CHEMICAL DATA:

Appearance:	Light beige liquid
Odor:	Weak; uncharacteristic
Melting Point:	Not Applicable
Boiling Point:	Not Available
Specific Gravity/Density:	1.034 g/cm ³
pH:	6.4 (1% solution in deionized H ₂ O @ 77°F [25°C])
Solubility in H ₂ O	
Abamectin	0.007 - 0.01 mg/l @ 68°F (20°C)
Thiamethoxam	4.1 g/l @ 77°F (25°C)
Vapor Pressure	
Abamectin	7.5 x 10 ⁽⁻⁸⁾ mmHg @ 77°F (25°C)
Thiamethoxam	2 x 10 ⁽⁻¹¹⁾ mmHg @ 68°F (20°C)

STABILITY AND REACTIVITY

Stable under normal use and storage conditions.

Stability:	
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	None known
Materials to Avoid:	None known
Hazardous Decomposition Products:	None known

PERSONAL PROTECTION/SAFETY:

Ingestion:	Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
Eye Contact:	Where eye contact is likely, use chemical splash goggles.
Skin Contact:	Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear.
Inhalation:	A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits. In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter

HANDLING AND STORAGE:

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking,





tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

ACUTE TOXICITY (IRRITATION, SENSITISATION ETC.)

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral (LD50 Rabbit) : 550 mg/kg body weight
dermal	Dermal (LD50 Rabbit) : > 5,000 mg/kg body weight
Inhalation	Inhalation (LC50 Rat) : 0.052-0.25 mg/l air - 4 hours
Eye contact	Mildly Irritating (Rabbit)
Skin contact	Moderately Irritating (Rabbit)
Skin sensitization	Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects

Abamectin : Reproductive toxin in animal studies only at doses acutely toxic to the maternal animal.

Thiamethoxam: Developmental: Not teratogenic in rats or rabbits

Reproductive: No effects on reproduction. Minor increase in a common testis effect in rats at high doses, which did not affect reproduction. When used in accordance with label directions and recommendations in this MSDS, no effects would be expected in humans.

Chronic/Subchronic Toxicity Studies:

Abamectin: Central nervous system effects in animals.

Thiamethoxam: Subchronic: Liver effects occurred in rodents only at high dose levels. Not neurotoxic after high acute and subchronic exposure in rats.

Carcinogenicity

Abamectin: None observed.

Thiamethoxam: Classified as "not likely to be carcinogenic in humans" based on lifetime studies in mice and rats.

Other Toxicity Information:

None

Toxicity of Other Components

Attapulgate Clay

May cause eye irritation.

Target Organs

Active Ingredients

Abamectin: Skin, eye, CNS

Thiamethoxam: Liver



Inert Ingredients

Attapulgite Clay: Eye

ECOLOGICAL INFORMATION: -

Ecotoxicity Effects

Abamectin:

Fish (Rainbow Trout) 96-hour LC50 3.6 ppb
Bird (Bobwhite Quail) LD50 Oral > 2000 mg/kg
Invertebrate (Water Flea) 48-hour EC50 0.34 ppb
Green Algae 9-day EC50 > 100 ppm
Bee (Contact) 48-hour LD50 0.41 ug/bee

Thiamethoxam :

Fish (Rainbow Trout) 96-hour LC50 > 100 ppm
Bird (Mallard Duck) LD50 Oral 576 mg/kg
Invertebrate (Daphnia Magna) 48-hour EC50 > 106 ppm
Green Algae 4-day EC50 > 97 ppm

Environmental Fate

Abamectin :

The information presented here is for the active ingredient, abamectin.
Low bioaccumulation potential. Not persistent in soil. Stable in water. Low mobility in soil.
Mixes in water (after 24h).

Thiamethoxam:

The information presented here is for the active ingredient, thiamethoxam.
Not persistent in soil. Stable in water. Moderate mobility in soil. Floats in water (after 24 h).

DISPOSAL CONSIDERATIONS:

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable