

# SAFETY DATA SHEET

According to Safe Work Australia

Printing date 02.11.2016

Revision: 02.11.2016

## 1. IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

**Product Name: ABAMECTIN 18 INSECTICIDE / MITICIDE by TITAN****Other Means of Identification:** Mixture**Recommended Use of the Chemical and Restriction on Use:** Agricultural miticide and insecticide**Details of Manufacturer or Importer:**Titan Ag Pty Ltd  
15/16 Princes Street  
Newport NSW 2106**Phone Number:** 02 9999 6655**Emergency telephone number:** 02 9999 6655

## 2. HAZARDS IDENTIFICATION

**Hazardous Nature:**

Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



skull and crossbones

Acute Toxicity (Oral) 2

H300 Fatal if swallowed.

Acute Toxicity (Inhalation) 3

H331 Toxic if inhaled.



health hazard

Toxic To Reproduction 1A  
STOT RE 2

H360 May damage fertility or the unborn child.

H373 May cause damage to the central nervous system and the peripheral nervous system through prolonged or repeated exposure.



environment

Aquatic Acute 1

H400 Very toxic to aquatic life.

Aquatic Chronic 1

H410 Very toxic to aquatic life with long lasting effects.



Skin Corrosion/Irritation 2

H315 Causes skin irritation.

Serious Eye Damage/Irritation 2A

H319 Causes serious eye irritation.

STOT SE 3

H335 May cause respiratory irritation.

**Signal Word** Danger**Hazard Statements**

H300 Fatal if swallowed.

H331 Toxic if inhaled.

H315 Causes skin irritation.

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H319 Causes serious eye irritation.

H360 May damage fertility or the unborn child.

H335 May cause respiratory irritation.

H373 May cause damage to the central nervous system and the peripheral nervous system through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

**Precautionary Statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

P273 Avoid release to the environment.

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

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

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water.

P391 Collect spillage.

P362+P364 Take off contaminated clothing and wash it before reuse.












P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national regulations.

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

**Chemical Characterization: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Hazardous Components:**

872-50-4	N-methyl-2-pyrrolidone  Toxic To Reproduction 1A, H360;  Skin Corrosion/Irritation 2, H315;  Serious Eye Damage/Irritation 2, H319;  STOT SE 3, H335;  Flammable Liquids 4, H227	28%
71751-41-2	Abamectin (combination of avermectin B1a and avermectin B1b) (ISO)  Acute Toxicity (Oral) 1, H300;  Acute Toxicity (Inhalation) 1, H330;  Toxic To Reproduction 2, H361;  STOT RE 1, H372;  Aquatic Acute 1, H400;  Aquatic Chronic 1, H410	1.8%

**Additional information:** Aromatic hydrocarbons - No CAS provided - 5.8%

### 4. FIRST AID MEASURES

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical attention.

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**Skin Contact:**

In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

**Eye Contact:**

In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Seek medical attention if symptoms occur.

**Ingestion:**

If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give a glass of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

**Symptoms Caused by Exposure:**

Inhalation: Toxic if inhaled. Symptoms include pupil dilation, vomiting, convulsions, tremors, coma, nervous system depression, incoordination, lethargy, respiratory failure and death.

Skin Contact: Causes skin irritation, itchiness and reddening.

Eye Contact: Causes serious eye irritation, stinging, redness and watering.

Ingestion: Toxic if swallowed. Symptoms include pupil dilation, vomiting, convulsions, tremors, coma, nervous system depression, incoordination, lethargy, respiratory failure and death.

## 5 . FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:** Water fog or fine spray

**Specific Hazards Arising from the Chemical:**

Hazardous combustion products include oxides of carbon and nitrogen, other nitrogen compounds, nitrogen, hydrogen cyanide and water.

This product is combustible.

Closed containers may explode when exposed to extreme heat. Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

**Special Protective Equipment and Precautions for Fire Fighters:**

When fighting a major fire wear self-contained breathing apparatus and protective equipment.

## 6 . ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures:**

Wear approved self-contained breathing apparatus and full protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.

**Environmental Precautions:**

In the event of a major spill, prevent spillage from entering drains or water courses.

**Methods and Materials for Containment and Cleaning Up:**

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable labelled container for disposal. Provide adequate ventilation.

## 7 . HANDLING AND STORAGE

**Precautions for Safe Handling:**

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area.

Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

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**Conditions for Safe Storage:**

Store in a cool, dry and well ventilated area. Keep in original container, tightly closed when not in use. Protect from direct sunlight, heat, sparks, open flames and other sources of ignition. Keep away from strong oxidising agents, acids, bases and combustible materials

### 8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Standards:****872-50-4 N-methyl-2-pyrrolidone**

NES	STEL: 309 mg/m <sup>3</sup> , 75 ppm TWA: 103 mg/m <sup>3</sup> , 25 ppm Sk
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**Engineering Controls:**

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below the limits.

**Respiratory Protection:**

Use an approved vapour respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

**Skin Protection:**

PVC or rubber gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

**Eye and Face Protection:**

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

### 9 . PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Clear, colourless
<b>Odour:</b>	Characteristic
<b>Odour Threshold:</b>	No information available
<b>pH-Value:</b>	No information available
<b>Melting point/Melting range:</b>	No information available
<b>Initial Boiling Point/Boiling Range:</b>	No information available
<b>Flash Point:</b>	~70 °C
<b>Flammability:</b>	Combustible Liquid Class 1
<b>Auto-ignition Temperature:</b>	No information available
<b>Decomposition Temperature:</b>	No information available
<b>Explosion Limits:</b>	
<b>Lower:</b>	No information available
<b>Upper:</b>	No information available
<b>Vapour Pressure:</b>	No information available
<b>Relative Density:</b>	1.01
<b>Vapour Density:</b>	No information available

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**Evaporation Rate:** No information available  
**Solubility in Water:** Soluble

## 10 . STABILITY AND REACTIVITY

**Possibility of Hazardous Reactions:** Hazardous polymerisation will not occur.

**Chemical Stability:** Stable at ambient temperature and under normal conditions of use.

**Conditions to Avoid:** Heat, sparks, open flames, hot surfaces and direct sunlight.

**Incompatible Materials:** Strong oxidising agents, acids, bases and combustible materials.

**Hazardous Decomposition Products:**  
 Oxides of carbon and nitrogen, other nitrogen compounds, nitrogen, hydrogen cyanide and water.

## 11 . TOXICOLOGICAL INFORMATION

### Toxicity:

#### LD<sub>50</sub>/LC<sub>50</sub> Values Relevant for Classification:

#### 71751-41-2 Abamectin (combination of avermectin B1a and avermectin B1b) (ISO)

Oral	LD <sub>50</sub>	10 mg/kg (rat) 13 - >80 mg/kg (mouse)
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Dermal	LD <sub>50</sub>	>330 mg/kg (rat) >330 mg/kg (rabbit)
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#### 872-50-4 N-methyl-2-pyrrolidone

Oral	LD <sub>50</sub>	3914 mg/kg (rat)
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Dermal	LD <sub>50</sub>	8000 mg/kg (rabbit)
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### Acute Health Effects

#### Inhalation:

Toxic if inhaled. Symptoms include pupil dilation, vomiting, convulsions, tremors, coma, nervous system depression, incoordination, lethargy, respiratory failure and death. May cause respiratory irritation.

**Skin:** Causes skin irritation, itchiness and reddening.

**Eye:** Causes serious eye irritation, stinging, redness and watering.

#### Ingestion:

Toxic if swallowed. Symptoms include pupil dilation, vomiting, convulsions, tremors, coma, nervous system depression, incoordination, lethargy, respiratory failure and death.

**Skin Corrosion / Irritation:** Causes skin irritation.

**Serious Eye Damage / Irritation:** Causes serious eye irritation.

**Respiratory or Skin Sensitisation:** Based on classification principles, the classification criteria are not met.

**Germ Cell Mutagenicity:** Based on classification principles, the classification criteria are not met.

**Carcinogenicity:** This product does NOT contain any IARC listed chemicals.

### Reproductive Toxicity:

May damage fertility or the unborn child.

2-pyrrolidone, 1-methyl- is classified by Safe Work Australia as Toxic to Reproduction Category 2.

Abamectin is classified by Safe Work Australia as Toxic to Reproduction Category 3.

**Specific Target Organ Toxicity (STOT) - Single Exposure:** May cause respiratory irritation.

### Specific Target Organ Toxicity (STOT) - Repeated Exposure:

May cause damage to organs through prolonged or repeated exposure.

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**Aspiration Hazard:** Based on classification principles, the classification criteria are not met.**Chronic Health Effects:**

Repeated or prolonged exposure may cause pupil dilation, weight loss, lethargy, tremors, dermatitis and changes in blood formation. Prolonged exposure may cause permanent eye damage.

**Existing Conditions Aggravated by Exposure:** No information available**Additional toxicological information:**

The Australian Acceptable Daily Intake (ADI) for abamectin for a human is 0.0005 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.5 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', March 2016).

## 12 . ECOLOGICAL INFORMATION

**Ecotoxicity:**

Highly toxic to bees, and practically non-toxic to birds.

LD50 (bobwhite quail) &gt;2000 mg/kg

LC50 (bobwhite quail) 3120 ppm

LC50/24 h (bees) 0.002 µg/bee

LD50 (bees) 0.009 µg/bee

**Aquatic toxicity:****71751-41-2 Abamectin (combination of avermectin B1a and avermectin B1b) (ISO)**LC<sub>50</sub>/48 h 0.003 mg/L (daphnia)LC<sub>50</sub>/96 h 0.0016 mg/L (shrimp)

0.003 mg/L (rainbow trout)

0.0096 mg/L (bluegill)

0.015 mg/L (minnows)

0.024 mg/L (fish)

0.042 mg/L (carp)

153 mg/L (crustacea)

430 mg/L (invertebrata)

Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**Persistence and Degradability:**

Easily biodegradable. Half-life range from 8 hours at soil surface to 2 months in dark aerobic environments.

**Bioaccumulative Potential:** No information available**Mobility in Soil:**

Due to the product's low solubility, it has low mobility in soil, and is not expected to leach or contaminate groundwater.

## 13 . DISPOSAL CONSIDERATIONS

**Disposal Methods and Containers:** Dispose according to applicable local and state government regulations.**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

## 14 . TRANSPORT INFORMATION

**UN Number**  
ADG, IMDG, IATA

UN2902

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<b>Proper Shipping Name ADG</b>	PESTICIDE, LIQUID, TOXIC, N.O.S. (Abamectin (combination of avermectin B1a and avermectin B1b) (ISO)), ENVIRONMENTALLY HAZARDOUS
<b>IMDG</b>	PESTICIDE, LIQUID, TOXIC, N.O.S. (Abamectin (combination of avermectin B1a and avermectin B1b) (ISO)), MARINE POLLUTANT
<b>IATA</b>	PESTICIDE, LIQUID, TOXIC, N.O.S. (Abamectin (combination of avermectin B1a and avermectin B1b) (ISO))
<b>Dangerous Goods Class ADG Class:</b>	6.1 Toxic substances.
<b>Packing Group: ADG, IMDG, IATA</b>	III
<b>Marine pollutant:</b>	Yes Symbol (fish and tree)
<b>EMS Number:</b>	F-A,S-A
<b>Hazchem Code:</b>	2X
<b>Special Provisions:</b>	61, 223, 274
<b>Limited Quantities:</b>	5L
<b>Packagings &amp; IBCs - Packing Instruction:</b>	P001, IBC03, LP01
<b>Portable Tanks &amp; Bulk Containers - Instructions:</b>	T7
<b>Portable Tanks &amp; Bulk Containers - Special Provisions:</b>	TP2, TP28

## 15 . REGULATORY INFORMATION

### Australian Inventory of Chemical Substances:

71751-41-2	Abamectin (combination of avermectin B1a and avermectin B1b) (ISO)
872-50-4	N-methyl-2-pyrrolidone

**Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:**  
Poisons Schedule: 6

## 16 . OTHER INFORMATION

**Date of Preparation or Last Revision:** 02.11.2016

### Abbreviations and acronyms:

ADG: Australian Dangerous Goods  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 LC<sub>50</sub>: Lethal concentration, 50 percent  
 LD<sub>50</sub>: Lethal dose, 50 percent  
 IARC: International Agency for Research on Cancer  
 STEL: Short Term Exposure Limit  
 TWA: Time Weighted Average  
 NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)  
 Flammable Liquids 4: Flammable liquids – Category 4  
 Acute Toxicity (Oral) 1: Acute toxicity – Category 1

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Acute Toxicity (Oral) 2: Acute toxicity – Category 2  
Acute Toxicity (Inhalation) 3: Acute toxicity – Category 3  
Skin Corrosion/Irritation 2: Skin corrosion/irritation – Category 2  
Serious Eye Damage/Irritation 2: Serious eye damage/eye irritation – Category 2  
Serious Eye Damage/Irritation 2A: Serious eye damage/eye irritation – Category 2A  
Toxic To Reproduction 1A: Reproductive toxicity – Category 1A  
Toxic To Reproduction 2: Reproductive toxicity – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2  
Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1

**Disclaimer**

This SDS is prepared in accord with the Safe Work Australia document “Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - December 2011”

The information contained in this safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. Titan Ag Pty Ltd makes no representation of the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. The user is cautioned to make their own determinations as to the suitability of the information provided to the particular circumstances in which the product is used.