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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name : VOLIAM TARGO 063 SC (AINO)

Design code : A15893A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use : Insecticide

1.3 Details of the supplier of the safety data sheet

Company : Syngenta Crop Protection AG

Postfach CH-4002 Basel Switzerland

Telephone : +41 61 323 11 11

Telefax : +41 61 323 12 12

E-mail address : sds.ch@syngenta.com

1.4 Emergency telephone number

Emergency tele- : +4

phone number

: +44 1484 538444

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

Acute toxicity (Oral)	Category 4	H302
Acute toxicity (Inhalation)	Category 4	H332
Specific target organ toxicity - repeated exposure	Category 2	H373
Acute aquatic toxicity	Category 1	H400
Chronic aquatic toxicity	Category 1	H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn, Harmful

N, Dangerous for the environment

R20/22: Harmful by inhalation and if swallowed.

R48/20/22: Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms







Signal word : Warning

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled

H373 May cause damage to the nervous system through

prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements: P102 Keep out of reach of children.

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

P264 Wash skin thoroughly after handling. P273 Avoid release to the environment.

P314 Get medical advice/ attention if you feel unwell.

P391 Collect spillage.

P501 Dispose of contents/ container to an approved waste

disposal plant.

Supplemental information: EUH401 To avoid risks to human health and the environment,

comply with the instructions for use.

Contains 1,2-benzisothiazol-3-one. May produce an

allergic reaction.

Hazardous components which must be listed on the label:

abamectin

Labelling: EU Directives 67/548/EEC or 1999/45/EC

Symbol(s)





Dangerous for the envi-

Harmful

R-phrase(s) : R20/22 Harmful by inhalation and if swallowed.

R50/53

R48/20/22 Harmful: danger of serious damage to health by pro-

longed exposure through inhalation and if swallowed.

Very toxic to aquatic organisms, may cause long-term

adverse effects in the aquatic environment.

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S-phrase(s) : S 2 Keep out of the reach of children.

S13 Keep away from food, drink and animal feedingstuffs.

S20/21 When using do not eat, drink or smoke.

S35 This material and its container must be disposed of in

a safe way.

S57 Use appropriate container to avoid environmental

contamination.

Additional Labelling : To avoid risks to man and the environment, comply with the instructions

for use.

Contains 1,2-benzisothiazol-3-one. May produce an allergic reaction.

Hazardous components which must be listed on the label:

abamectin

2.3 Other hazards

None known.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Registration num- ber	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration
propane-1,2-diol	57-55-6 200-338-0	-	-	8.8 - 13 % W/W
chlorantraniliprol e	500008-45-7	N R50/53	Aquatic Acute1; H400 Aquatic Chronic1; H410	4.29 % W/W
poly(oxy-1,2-eth anediyl), al- pha-[tris(1-phen ylethyl)phenyl]-o mega-hydroxy-	99734-09-5 70559-25-0	R52/53	Aquatic Chronic3; H412	0.33 - 5.4 % W/W
abamectin	71751-41-2 65195-56-4 65195-55-3	T+, N R63 R21 R26/28 R48/23/25 R50/53	Repr.2; H361d Acute Tox.2; H300 Acute Tox.3; H311 STOT RE1; H372 Acute Tox.1; H330 Aquatic Acute1; H400 Aquatic Chronic1; H410	1.71 % W/W
diphosphoric acid, tetrasodi- um salt	7722-88-5 231-767-1 01-2119489794-17-0 000	Xn R22 R41	Acute Tox.4; H302 Eye Dam.1; H318	0.1 - 4.2 % W/W
quartz (SiO2)	14808-60-7 7631-86-9 238-878-4		STOT RE2; H373	0.1 - 4.2 % W/W
1,2-benzisothiaz ol-3(2H)-one	2634-33-5 220-120-9	Xn, N R22 R38 R41 R43 R50	Acute Tox.4; H302 Skin Irrit.2; H315 Eye Dam.1; H318 Skin Sens.1; H317 Aquatic Acute1; H400	0.1 - 2.1 % W/W

Substances for which there are Community workplace exposure limits.

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice : Have the product container, label or Material Safety Data Sheet with you

when calling the Syngenta emergency number, a poison control center or

physician, or going for treatment.

Inhalation : Move the victim to fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Keep patient warm and at rest.

Call a physician or poison control centre immediately.

Skin contact: Take off all contaminated clothing immediately.

Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least

15 minutes.

Remove contact lenses.

Immediate medical attention is required.

Ingestion : If swallowed, seek medical advice immediately and show this container or

label.

Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Lack of coordination

Tremors

Dilatation of the pupil

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice : This material is believed to enhance GABA activity in animals. It is

probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiaziphines, 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.

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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam

or

Water spray

Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

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.

5.3 Advice for firefighters

Wear full protective clothing and self-contained breathing apparatus.

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

6.1 Personal precautions, protective equipment and emergency procedures

Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials 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 / national regulations (see section 13).

If the product contaminates rivers and lakes or drains inform respective authorities.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8. Refer to disposal considerations listed in section 13.

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for 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.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required.

Keep containers tightly closed in a dry, cool and well-ventilated place.

Keep out of the reach of children.

Keep away from food, drink and animal feedingstuffs.

: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

7.3 Specific end use(s)

Registered Crop Protection products: For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	Exposure limit(s)	Type of expo- sure limit	Source
abamectin	0.02 mg/m3	8 h TWA	SYNGENTA
propane-1,2-diol	10 mg/m3 (Particulates) 150 ppm, 470 mg/m3 (Total (vapour & particulates))	8 h TWA 8 h TWA	UK HSE UK HSE
chlorantraniliprole	10 mg/m3 (Total dust) 5 mg/m3 (Respirable dust)	8 h TWA 8 h TWA	SUPPLIER SUPPLIER
quartz (SiO2)	0.05 mg/m3 0.15 mg/m3 0.3 mg/m3	8 h TWA 8 h TWA 8 h TWA	ACGIH SUVA UK HSE

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

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8.2 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 mists or vapors are generated, use local exhaust ventilation

controls.

Assess exposure and use any additional measures to keep airborne

levels below any relevant exposure limit.

Where necessary, seek additional occupational hygiene advice.

Protective measures

The use of technical measures should always have priority over the use of

personal protective equipment.

When selecting personal protective equipment, seek appropriate profes-

sional advice.

Personal protective equipment should be certified to appropriate stand-

ards.

Respiratory protection

A particulate filter respirator may be necessary until effective technical

measures are installed.

Protection provided by air-purifying respirators is limited.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where

air-purifying respirators may not provide adequate protection.

Hand protection

Suitable material:Nitrile rubber

Break through time: > 480 min

Glove thickness: 0.5 mm

Chemical resistant gloves should be used.

Gloves should be certified to an appropriate standard.

Gloves should have a minimum breakthrough time that is appropriate to

the duration of exposure.

The breakthrough time of gloves varies according to the thickness, mate-

rial and manufacturer.

Gloves should be discarded and replaced if there is any indication of

degradation or chemical breakthrough.

Eye protection

Eye protection is not usually required.

Follow any site specific eye protection policies.

Skin and body protection

Assess the exposure and select chemical resistant clothing based on the

potential for contact and the permeation / penetration characteristics of

the clothing material.

Wash with soap and water after removing protective clothing.

Decontaminate clothing before re-use, or use disposable equipment

(suits, aprons, sleeves, boots, etc.)

Wear as appropriate: impervious protective suit

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state liauid Form liquid liquid Colour white

Odour like soap, weak **Odour Threshold** No data available 6.6 at 1 % w/v (25 °C) Hq Melting point/range No data available Boiling point/boiling range No data available

Flash point > 102 °C

Evaporation rate No data available Flammability (solid, gas) : No data available Lower explosion limit : No data available Upper explosion limit : No data available Vapour pressure : No data available Relative vapour density : No data available

Density

: 1.05 g/ml Solubility in other solvents : No data available Partition coefficient: : No data available

n-octanol/water

: 535 °C Auto-ignition temperature

Thermal decomposition : No data available Viscosity, dynamic 38 - 259 mPa.s at 20 °C : 31 - 219 mPa.s at 40 °C

Viscosity, kinematic No data available **Explosive properties** Not explosive Oxidizing properties not oxidizing

9.2 Other information

: 41.0 mN/m Surface tension

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No information available.

10.2 Chemical stability

No information available.

10.3 Possibility of hazardous reactions

No hazardous reactions by normal handling and storage according to

provisions.

10.4 Conditions to avoid

No decomposition if used as directed.

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10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

Combustion or thermal decomposition will evolve toxic and irritant vapors.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity : LD50 female Rat, 550 mg/kg

Acute inhalation toxicity : LC50 male and female Rat, > 3.394 mg/l, 4 h

Acute dermal toxicity : LD50 male and female Rat, > 5,000 mg/kg

Skin corrosion/irritation : Rabbit: Non-irritating

Serious eye damage/eye

irritation

: Rabbit: Non-irritating

Respiratory or skin sensi-

tisation

: Buehler Test Guinea pig: Not a skin sensitizer in animal tests.

Germ cell mutagenicity

chlorantraniliprole : Did not show mutagenic effects in animal experiments.

abamectin : Did not show mutagenic effects in animal experiments.

Carcinogenicity

chlorantraniliprole : Did not show carcinogenic effects in animal experiments.

abamectin : Did not show carcinogenic effects in animal experiments.

Teratogenicity

chlorantraniliprole : Did not show teratogenic effects in animal experiments.

Reproductive toxicity

chlorantraniliprole : Animal testing did not show any effects on fertility.

abamectin : Experiments have shown reproductive toxicity effects on laboratory ani-

mals.

STOT - single exposure

chlorantraniliprole : The substance or mixture is not classified as specific target organ toxicant,

single exposure.

STOT - repeated exposure

chlorantraniliprole : The substance or mixture is not classified as specific target organ toxicant,

repeated exposure.

abamectin : Central nervous system effects in chronic/subchronic animal tests.

Aspiration toxicity

chlorantraniliprole : No aspiration toxicity classification

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SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish : LC50 Oncorhynchus mykiss (rainbow trout), 0.21 mg/l , 96 h

Toxicity to aquatic inver-

tebrates

: EC50 Daphnia magna (Water flea), 0.006 mg/l , 48 h

Toxicity to aquatic plants : EbC50 Pseudokirchneriella subcapitata (green algae), 36 mg/l, 96 h

: ErC50 Pseudokirchneriella subcapitata (green algae), > 100 mg/l, 96 h

12.2 Persistence and degradability

Biodegradability

chlorantraniliprole : Not readily biodegradable.

abamectin : Not readily biodegradable.

Stability in water

abamectin : Degradation half life: 1.7 d

Not persistent in water.

Stability in soil

abamectin : Degradation half life: 12 - 52 d

Not persistent in soil.

12.3 Bioaccumulative potential

chlorantraniliprole : Does not bioaccumulate.

abamectin : Does not bioaccumulate.

12.4 Mobility in soil

chlorantraniliprole : The product is not expected to be mobile in soil.

abamectin : Abamectin has slight mobility in soil.

12.5 Results of PBT and vPvB assessment

chlorantraniliprole : This substance is not considered to be persistent, bioaccumulating and

toxic (PBT).

This substance is not considered to be very persistent and very bioac-

cumulating (vPvB).

abamectin : This substance is not considered to be persistent, bioaccumulating and

toxic (PBT).

This substance is not considered to be very persistent and very bioac-

cumulating (vPvB).

12.6 Other adverse effects

Other information : Classification of the product is based on the summation of the concentra-

tions of classified components.

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemical or used

container.

Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or incineration.

If recycling is not practicable, dispose of in compliance with local regula-

tions.

Contaminated packaging : Empty remaining contents.

Triple rinse containers.

Empty containers should be taken to an approved waste handling site for

recycling or disposal.

Do not re-use empty containers.

SECTION 14: TRANSPORT INFORMATION

Land transport (ADR/RID)

14.1 UN number: UN 3082

14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(ABAMECTIN AND CHLORANTRANILIPROLE)

14.3 Transport hazard class(es): 9 **14.4 Packing group:** III
Labels: 9

14.5 Environmental hazards : Environmentally hazardous

Tunnel restriction code:

Sea transport(IMDG)

14.1 UN number: UN 3082

14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(ABAMECTIN AND CHLORANTRANILIPROLE)

14.3 Transport hazard class(es): 9
14.4 Packing group: III
Labels: 9

14.5 Environmental hazards : Marine pollutant

Air transport (IATA-DGR)

14.1 UN number: UN 3082

14.2 UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(ABAMECTIN AND CHLORANTRANILIPROLE)

14.3 Transport hazard class(es): 9

14.4 Packing group: III Labels: 9

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14.6 Special precautions for user

none

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

GHS-Labelling

Hazard pictograms







Signal word : Warning

Hazard statements : H302 + H332 Harmful if swallowed or if inhaled

H361d Suspected of damaging the unborn child.

H373 May cause damage to the nervous system through

prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements: P102 Keep out of reach of children.

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

sprav

P264 Wash skin thoroughly after handling. P273 Avoid release to the environment.

P314 Get medical advice/ attention if you feel unwell.

P391 Collect spillage.

P501 Dispose of contents/ container to an approved

waste disposal plant.

Supplemental information: Contains 1,2-benzisothiazol-3-one. May produce

an allergic reaction.

Remarks : Classified using all GHS hazard classes and categories.

Where the GHS contains options, the most conservative option has

been chosen.

Regional or national implementations of GHS may not implement all

hazard classes and categories.

Hazardous components which must be listed on the label:

abamectin

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15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: OTHER INFORMATION

Further information

Full text of R-phrases referred to under sections 2 and 3:

R21 Harmful in contact with skin. R22 Harmful if swallowed.

R26/28 Very toxic by inhalation and if swallowed.

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R43 May cause sensitisation by skin contact.

R48/23/25 Toxic: danger of serious damage to health by prolonged exposure through

inhalation and if swallowed.

R50 Very toxic to aquatic organisms.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the

aquatic environment.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the

aquatic environment.

R63 Possible risk of harm to the unborn child.

Full text of H-Statements referred to under sections 2 and 3.

H300 Fatal if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

H330 Fatal if inhaled.
H332 Harmful if inhaled.

H361d Suspected of damaging the unborn child.

H372 Causes damage to the nervous system through prolonged or repeated

exposure.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects.

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Full text of other abbreviations

ADR: European Agreement Concerning the International

Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods IATA-DGR: International Air Transport Association Danger-

ous Goods Regulations

Regulations concerning the International Car-

LC50: Lethal concentration, 50% I D50: Lethal dose, 50%

EC50: Effective dose, 50%

Globally Harmonized System of Classification GHS:

and Labelling of Chemicals (GHS)

riage of Dangerous Goods by Rail

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