SAFETY DATA SHEET

Agadi 800 WG

Revision Date 10-Aug-2023 Version 5.0

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

Product identifier

Agadi 800 WG

Synonyms	Fipronil 800 WG
Pure substance/mixture	Mixture
Formula	WG

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

Recommended use	Insecticide
Uses advised against	Do not use for any other purpose than described on the label

Details of the supplier of the substance or mixture and of the safety data sheet

Supplier's name and address

ADAMA SOUTH AFRICA (PTY) LTD
Ground Floor, Simeka House
The Vineyards Office Estate
99 Jip De Jager Drive
Bellville 7530, South Africa
+ 27 21 982 1460

For further information please contact

Email address SDS@ADAMA.COM

Emergency telephone numbers

+ 27 82 446 8946 (Griffon Poison Information Centre)
+ 27 86 155 5777 (Tygerberg Poison Information Centre)
+27(0)86 100 0366 and/or; (SPILL TECH®)
+27 (0)83 253 6618

Section 2: HAZARDS IDENTIFICATION

Classification of the mixture

Acute toxicity – oral	Category 3 (H301)
Acute toxicity – inhalation	Category 4 (H332)
Specific target organ toxicity, repeated exposure	Category 1 (H372)
Acute aquatic hazard	Category 1 (H400)
Chronic aquatic hazard	Category 1 (H410)

Signal word DANGER

Hazard statement

H301 – Toxic if swallowed.
H332 – Harmful if inhaled.
H372 – Causes damage to organs through prolonged or repeated exposure.
H410 – Very toxic to aquatic life with long-lasting effects.

Other hazards Although the product is not explosive, it might form explosive dust clouds.
The product may be harmful in contact with skin.
The product may cause skin or eye irritation in sensitive individuals.

Precautionary statements

P405 – Store locked up.
P102 – Keep out of reach of children.
P270 – Do not eat, drink, or smoke when using this product.
P280 – Wear protective gloves/face protection/protective clothing.
P260 – Do not breathe dust/mist/spray.
P271 – Use only outdoors or in a well-ventilated area.
P264 – Wash hands and face thoroughly after handling.
P301+P330+P316 – IF SWALLOWED: Rinse mouth. Get emergency medical help immediately.
P304+P340+P317 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
P319 – Get medical help if you feel unwell.
P273 – Avoid release to the environment apart from the intended use.
P391 – Collect spillage.
P501 – Dispose of contents and/or container to an approved waste disposal plant.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	Weight%	CAS Number	EC Number	GHS classification	M-Factor
Fipronil	78 – 82	120068-37-3	424-610-5	Acute oral toxicity 3 (H301) Acute dermal toxicity 3 (H311) Acute inhalation toxicity 3 (H331) STOT RE 1 (H372) Aquatic acute 1 (H400) Aquatic chronic 1 (H410)	 1 000 10 000
Other ingredients	18 – 22	–	–	Not relevant for classification	

Section 4: FIRST AID MEASURES

General advice In case of an accident or unwellness, seek medical help immediately. If possible, show the label (directions for use) or this SDS.

Ingestion Most important acute symptoms/effects: sweating, vomiting, diarrhoea, irritation of the gastrointestinal tract, abdominal pain, agitation, convulsions, seizures and other neurological symptoms.
IF SWALLOWED: Rinse mouth well with clean water.
Get emergency medical help immediately.

Inhalation Most important acute symptoms/effects: irritation of the airway, coughing, agitation, convulsions, seizures, other neurological symptoms and feeling unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If breathing is irregular or stop, administer artificial respiration.
Get medical help.

Skin contact Most important acute symptoms/effects: irritation, redness and itching.
IF ON SKIN: Wash with plenty of soapy water.
Take off contaminated clothing and wash it before reuse.
Get medical help.

Eye contact Most important acute symptoms/effects: eye irritation, redness and tearing may occur.
IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, get medical help.

Most important delayed symptoms/effects after exposure	Prolonged or repeated exposure causes agitation, convulsions, seizures, other neurological symptoms, and damage to organs such as the liver and thyroid.
Indication of immediate medical attention	Get medical help immediately. There is no known specific antidote. Treat symptomatically and give supportive therapy. If ingested perform gastric lavage and administer activated charcoal. If skin irritation or rash occurs, or if eye irritation persists, or if a burning sensation in the upper airways persists, get medical help. Pre-existing conditions may be aggravated, such as eye, skin, or respiratory disorders.
Protection of first responders	Avoid contact with the mixture. Wear gloves and a mask to prevent transmission of pathogens.

Section 5: FIREFIGHTING MEASURES

Appropriate/suitable extinguishing media	Water spray, foam, carbon dioxide (CO_2) or dry powder may be used but select extinguishing media that is appropriate for local circumstances and the surroundings.
Inappropriate extinguishing media	Water jet. Do not scatter spilled material with high pressure water streams.
Nature of hazardous combustion products	Suffocating, irritating and toxic fumes of carbon oxides (CO and CO_2), oxides of nitrogen, hydrochloric acid, hydrofluoric acid and other unknown hazardous substances may form.
Other hazards arising from the mixture	None known. There is no sensitivity to mechanical impact or to static discharge for this mixture, and no direct explosion hazard (but dust clouds may be explosive).
Special protective equipment	Avoid breathing vapours and combustion by-products. Use self-contained breathing apparatus and complete protective clothing. Do not attempt to act without suitable protective equipment.
Precautions and/or protective actions	Move containers from the fire area if it can be done without risk. Avoid contact with oxidising agents. Use water spray to cool down closed containers, but only after considering other material in the vicinity that may pose a hazard. Stay upwind and keep out of low areas. Take precautions to prevent extinguishing media contaminating surface water or ground water.

Section 6: ACCIDENTAL RELEASE MEASURES

Distinguish between large or small spills or releases.

Personal precautions	Avoid skin and eye contact with spilled material. Avoid the creation of dust. Do not inhale dust, spray, or mist. Wash hands thoroughly after handling. Do not touch eyes. Do not eat, drink, or smoke during clean-up operations.
Protective equipment	Wear protective gloves/protective clothing/face protection/eye protection/respiratory protection.

Emergency actions and procedures	Remove all non-essential persons from the spill area. No other special emergency actions or procedures are required.
Environmental precautions	The product is for terrestrial use only and not intended for aquatic applications. Do not apply directly to areas where surface water is present, or to aquatic habitats, estuaries, or marine habitats. Do not mix and load within 15 m of boreholes, streams, rivers or dams. Prevent spray drift onto other crops, grazing, rivers, dams or areas not under treatment. Ensure spray drift does not contaminate beehives. Avoid contamination of food, feedstuffs, drinking water and eating utensils. Do not contaminate surface or ground water when disposing of rinsate or water used to wash equipment. Report a large release to the appropriate authorities.
Methods and materials for containment/cleaning up	Move intact containers from the spill area. The product is a water dispersible solid. The spill area may be slippery when wet. Small spills: Sweep up without creating dust clouds and place in an appropriate waste disposal container. Rinse the spill area with soapy water and mop up. Large spills: Ensure adequate ventilation. If possible, recover the product. Alternatively contain and collect the spillage by sweeping up and transfer to suitable containers for use or disposal (prevent the formation of dust clouds). Then flush the area with water if appropriate. Prevent release to the environment or entry into sewers, water courses, basements, or confined areas. Dispose of via a licensed waste disposal contractor.

Section 7: HANDLING AND STORAGE

Precautions for safe handling	Wear protective gloves, protective clothing, respiratory protection, face and eye protection, such as nitrile rubber gloves, face shield, a dust mask and long-sleeved clothing. Do not eat, drink, or smoke when using this product. Avoid vigorous shaking of the bag when emptying the contents. Do not breath dust, mist, or spray. Avoid contact of the product and its dilutions with eyes, skin, and clothing. Wash hands and face thoroughly after handling. Do not touch eyes. Wash contaminated clothing before reuse.
Conditions for safe storage	Store locked up. Store in the original container in a cool, dry and well-ventilated area. Keep containers tightly closed and out of direct sunlight. Protect them from sources of heat and open flames. Store separately from any food, feed, or drinks. Keep out of reach of children and uninformed persons.
Any incompatibilities	Prevent exposure to moisture during storage. Avoid excessive heat. Avoid contact with strong bases, acids, or oxidising agents.
Risk Management Methods (RMM)	The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure limits	The permissible exposure limit (PEL) set as a time-weighted average (TWA) for fipronil is generally 10 mg/m^3 (dust, inhalable fraction) or 4 mg/m^3 (dust, respirable fraction).

Biological limit values	The acceptable daily intake (ADI) of fipronil is 0 to 0.0002 mg/kg bodyweight per day and the acute reference dose (RfD) is 0.003 mg/kg bodyweight.
Engineering controls	Ensure adequate ventilation, especially in confined areas. Safety showers and eye wash stations should be provided.
Respiratory protection	Use only with adequate ventilation. If dust clouds or mist is present, a dust/mist filtering respirator must be used.
Eye protection	Wear a face shield or safety glasses. When dust clouds are present, protect the eyes with tight sealing safety goggles (EN 166).
Hand protection	Wear suitable chemical resistant gloves (EN 374) made from nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm) or butyl rubber (0.7 mm).
Body protection	Wear a water repellent woven overall (65% polyester and 35% cotton) with long sleeves. Wear protective boots (EB13832).
General hygiene	Do not eat, drink, or smoke when using this product. Wash hands and face after handling. Wash clothes before reuse.
Environmental protection	Do not contaminate surface or ground water when disposing of rinsate or water used to wash equipment.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Value	Method	Remark
Physical state	solid (granular)		
Clarity	not applicable		not a liquid
Colour	brown		
Odour			
Odour threshold	not determined		
Melting point/freezing point	203 to 205 °C (fipronil)		
Boiling point (or initial point and range)	not applicable		not a liquid
Flammability (gases, liquids, solids)	not flammable		
Lower and upper explosion limits			
Lower and upper flammability limits			
Flash point	> 180 °C		
Autoignition temperature			
Decomposition temperature			
pH, neat	not applicable		not a liquid
pH, aqueous dilution	8.47 at 20 °C		1% dilution
Dissociation in water, pKa	fipronil does not dissociate		
Kinematic viscosity (of liquids) in mm^2/s	not applicable		not a liquid
Solubility in water	disperses in water		

Solubility in a specified non-polar solvent	not miscible with non-polar solvents	
Partition coefficient (n-octanol/water), K_{ow}	1 x 10^4 (fipronil)	
Vapour pressure	2.8 x 10^{-9} mmHg at 25 °C	
Density and/or relative density	not applicable	not a liquid
Bulk density, g/ml	0.83 before compaction, 0.945 after	
Relative vapour density	not applicable	non-volatile
Particle characteristics	granular, no further data available	
Evaporation rate	not applicable	not volatile
Surface tension	not applicable	not a liquid

Note: blank cells indicate that no information is available or was provided.

Section 10: STABILITY AND REACTIVITY

Chemical stability	Stable when handled and stored under normal conditions.
Reactivity	Non-corrosive to metals. No other data available.
Safety significance of any change in physical appearance	The mixture is not expected to change in physical appearance over time when kept dry. Moisture could cause caking of the granules.
Possibility of hazardous reactions	No known hazardous reactions and no polymerisation under normal handling conditions.
Conditions to avoid	Keep out of direct sunlight, away from excessive heat and flames. Avoid exposure to moisture. Pressure, shock, static discharge, and vibrations have no known effect.
Incompatible materials	Strong bases, acids, oxidising agents and moisture.
Hazardous decomposition products	The mixture is not expected to produce hazardous decomposition products when used and stored properly.

Section 11: TOXICOLOGICAL INFORMATION

Toxicological effect	**Agadi WG (mixture)**	**Fipronil (active ingredient)**
Acute oral toxicity	LD_{50} (rat) 300 mg/kg	LD_{50} (rat) 66 mg/kg
Acute dermal toxicity	LD_{50} (rat) > 2 000 mg/kg	LD_{50} (rat) > 2 000 mg/kg LD_{50} (rabbit) 354 mg/kg
Acute inhalation toxicity	LC_{50} (rat, 4 hours) > 1.74 mg/kg	LC_{50} (4 hours) 0.39 mg/ℓ
Skin corrosion/irritation	not a skin irritant	not a skin irritant (rabbit)
Serious eye damage/ eye irritation	not an eye irritant	not an eye irritant (rabbit)
Respiratory or skin sensitisation	not a skin sensitiser	not a skin sensitiser (guinea pig)

Germ cell mutagenicity	not mutagenic	not mutagenic or genotoxic
Carcinogenicity		no carcinogenic potential for humans
Reproductive toxicity		not a reproductive toxicant
STOT, single exposure		
STOT, repeated exposure		cause damage to the central nervous system and organs such as the liver and thyroid
Aspiration hazard		not classified

Note: blank cells indicate that no information is available or was provided

Section 12: ECOLOGICAL INFORMATION

Ecotoxicological effect	Agadi WG (mixture)	Fipronil (active ingredient)
Acute aquatic toxicity: fish	96-hour LC_{50} 0.62 mg/ℓ	*Lepomis macrochirus* (bluegill sunfish) 96-hour LC_{50} 0.085 mg/ℓ
crustacea	*Daphnia magna* 48-hour EC_{50} 0.25 mg/ℓ	*Mysidopsis bahia* (mysid shrimp) 96-hour EC_{50} 0.00014 mg/ℓ
algae	72-hour EC_{50} 8.27 mg/ℓ	
Chronic aquatic toxicity: fish		*Oncorhynchus mykiss* (rainbow trout) 90-day NOEC 0.015 mg/ℓ
crustacea		*Mysidopsis bahia* (mysid shrimp) 28-day NOEC 0.0000077 mg/ℓ
algae		*Scenedesmus subspicatus* (green algae) 96-hour E_bC_{50} 0.068 mg/ℓ
Acute terrestrial toxicity: birds	96-hour LC_{50} 285 mg/kg	mallard duck practically non-toxic bobwhite quail oral LD_{50} 11.3 mg/kg
honeybees	Acute contact LD_{50} 0.00274 µg/bee	Acute oral LD_{50} 0.00417 µg/bee Acute contact LD_{50} 0.00593 µg/bee
earthworm		non-toxic
soil		field DT_{50} 96 to 135 days
water		abiotic DT_{50} 4 to 12 hours
biodegradation		
Bioaccumulative potential: Partition coefficient		Log Pow > 3
Bioconcentration factor, BCF		321
Mobility in soil		Koc is 427 to 1248 ℓ/kg

Other adverse effects

PBT and vPvB assessment The components of this mixture do not meet the criteria for classification

Note: blank cells indicate that no information is available or was provided

Section 13: DISPOSAL CONSIDERATIONS

Dispose of waste residues responsibly as hazardous chemical waste through a licensed waste removal company.

Waste from unused product or residues must be classified, labelled, handled, and treated in accordance with the regional, national, and local laws and regulations. Refer to the manufacturer or supplier for information on recovery or recycling, for options on reclamation, and on disposal of unused material.

During incineration, hazardous gases (oxides of carbon, nitrogen and sulphur, hydrochloric acid, hydrofluoric acid, etcetera) may be produced.

Avoid release of waste into the environment.

Dispose of the container by rinsing it properly. Do not re-use. Destroy it mechanically and dispose of to an approved recycling facility.

Section 14: TRANSPORT INFORMATION

IMDG/IMO	**UN number**	2588
	UN proper shipping name	PESTICIDE, SOLID, TOXIC, N.O.S (fipronil)
	Transport hazard class or division	6.1
	UN packing group number	III
	Marine pollutant	Yes
	Special precautions for users	EmS F-A S-A
RID/ADR	**UN number** (see Note below)	2588
	UN proper shipping name	PESTICIDE, SOLID, TOXIC, N.O.S (fipronil)
	Transport hazard class	6.1
	UN packing group number	III
	Environmental hazard	Yes
	Special precautions for users	
ICAO/IATA	**UN number** (see Note below)	2588
	UN proper shipping name	PESTICIDE, SOLID, TOXIC, N.O.S (fipronil)
	Transport hazard class	6.1
	UN packing group number	III
	Environmental hazard	Yes
	Special precautions for users	

Section 15: REGULATORY INFORMATION

Relevant safety regulations	Regulations for Hazardous Chemical Agents 2021, Department of Employment and Labour (March 2021).
Relevant health regulations	Occupational Health and Safety Act, Act 85 of 1993, Department of Employment and Labour.
Relevant environmental regulations	Guidelines on the administration of incidents, as described in section 30 of the National Environmental Management Act, Act 107 of 1998 (NEMA), Department of Environmental Affairs (2019). Waste Classification and Management Regulations 2013, National Environmental Management Waste Act, Act 59 of 2008, Department of Water and Environmental Affairs.
Relevant transport regulations	The National Road Traffic Act 93 of 1996, Department of Transport. SANS 10228: The identification and classification of dangerous goods for transport by road and rail modes (2012).
Other relevant regulations	Regulations to Domesticate the Requirements of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, 2023, Department of Forestry, Fisheries and the Environment (February 2023).
Subject to the Montreal Protocol	No
Subject to the Stockholm Convention	No
Subject to the Rotterdam Convention	No
Subject to any prohibitions	No
Subject to any restrictions	No

Section 16: OTHER INFORMATION

Revision notes

This is a complete revision of Revised edition No. 4 dated 11 April 2013 to comply with the Globally Harmonised System of Classification and Labelling of Chemicals and with the South African Regulations for Hazardous Chemical Agents 2021.

Full text of hazard statements referred to in Sections 2 and 3

H301 – Toxic if swallowed
H311 – Toxic in contact with skin
H331 – Toxic if inhaled
H332 – Harmful if inhaled
H372 – Causes damage to organs through prolonged or repeated exposure
H400 – Very toxic to aquatic life
H410 – Very toxic to aquatic life with long-lasting effects

Abbreviations used

ADI means acceptable daily intake.
ADR means Agreement Concerning the International Carriage of Dangerous Goods by Road.
AOEL means Acceptable Operator Exposure Level.
CAS Number means Chemical Abstract Service number.

EC Number means European Inventory of Existing Commercial Substances (EINECS) or European List of Notified Chemical Substances (ELINCS) number.
EC_{50} means the concentration at which 50% of the test organisms are affected.
GHS means Globally Harmonised System of Classification and Labelling of Chemicals.
ICAO means International Civil Aviation Organisation
IATA means International Air Transport Association.
IMDG means International Maritime Dangerous Goods.
IMO means International Maritime Organisation.
LC_{50} means the lethal concentration to 50% of a test population (the median lethal concentration).
LD_{50} means the lethal dose to 50% of a test population (the median lethal dose).
NEMA means National Environmental Management Act.
NOEC means no observed effect concentration.
PBT means persistent, bioaccumulative and toxic
PEL means permissible exposure limit.
RE means repeated exposure.
RID means Regulations Concerning the International Carriage of Dangerous Goods by Rail.
SE means single exposure.
SDS means safety data sheet.
STOT means specific target organ toxicity.
TWA means time-weighted average.
UN means United Nations.
vPvB means very persistent and very bioaccumulative
WG means water dispersible granules.

Reviser's code: KQ-kn-1147

Disclaimer

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 text.

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