

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
The Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

## SHAVIT 15 FS

Revision date: 7 March 2022

Version: 3

Supersedes Date: 15 June 2014

Print date: 7 March 2022

## 1. Product and Company Identification

### Identification of the product/preparation

Product Name	SHAVIT 15 FS
Trade Name/Synonyms	None
Registration Number	L5493
Product Description and Formulation Type	A flowable fungicidal seed dressing concentrate

### Active Ingredient

Triadimenol (triazole)

Formula	C <sub>14</sub> H <sub>18</sub> ClN <sub>3</sub> O <sub>2</sub>
CAS Number	55219-65-3

### Supplier, Manufacturer, and/or Importer

Supplier

Company Name	ADAMA SOUTH AFRICA (PTY) LTD
Address	Ground Floor, Simeka House The Vineyards Office Estate 99 Jip de Jager Drive Belville 7530
Phone Number	+27 21 982 1460
Web-Address	www.adama.com

### Emergency Phone Numbers

Nature of Emergency	Emergency Operator	Telephone Number
24 Hour Poisoning Emergency Helplines – National Advisory Bodies	Griffon Poison Information Centre	+27(0)82 446 8946
	Tygerberg Poison Information Centre:	+27(0)861 155 5777
Spill Response and Transport Incidents	SPILL TECH®	+27(0)86 100 0366 +27(0)83 253 6618
Product Properties and Hazards	ADAMA South Africa (Pty) Ltd	+27(0)21 982 1460

### Relevant identified uses of the product and uses advised against

SHAVIT 15 FS is a demethylation inhibiting (DMI) fungicide for cereals, and other crops and is used to control a range of diseases including powdery mildew, rusts, bunts and smuts. The product must be used to only treat seed that is to be used for planting purposes, and must never be used for treating seed for feeding.

## 2. Hazard(s) Identification

### Classification of the substance or mixture

According to the criteria in South Africa - GHS classification and labelling of chemicals – SANS10234 and the Regulations for Hazardous Chemical Agents – 2021.

### GHS Classification:

Hazard Class	Category	Hazard Statement Number
Reproductive Toxicity	1B	H360
Effects on or via lactation		H362

### Label Elements

#### Pictograms:



### Signal Word:

Danger

### Hazard Statements:

Statement Number	Hazard Statement
H360	May damage fertility or the unborn child.
H362	May cause harm to breast-fed children.

### Precautionary Statements:

#### General -

Statement Number	Precautionary Statement
P101	If medical advice is needed, have product label or container at hand.
P102	Keep out of reach of children.
P103	Read label carefully, and follow all instructions.

## Prevention -

Statement Number	Precautionary Statement
P203	Obtain, read and follow all safety instructions before use.
P260	Do not breathe dust or mists.
P263	Avoid contact during pregnancy and while nursing.
P264	Wash hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves, protective clothing, and eye and face protection.

## Response -

Statement Number	Precautionary Statement
P318	If exposed or concerned, get medical advice.

## Storage -

Statement Number	Precautionary Statement
P405	Store locked up.

## Disposal -

Statement Number	Precautionary Statement
P501	Dispose of contents/container to a licensed waste facility and in accordance with local and national regulatory requirements.

## Other Hazards

Could emit irritating or toxic fumes (or gases) in a fire.

## 3. Composition/Information on Ingredients

### Mixture

<b>Common Name:</b>	SHAVIT 15 FS
<b>IUPAC/Chemical Name-Active ingredient:</b>	1-(4-chlorophenoxy)-3,3-dimethyl-1-(1,2,4-triazol-1-yl)butan-2-ol
<b>Chemical Family:</b>	Triazole fungicide
<b>Formulation:</b>	Shavit 153g/L – Flowable concentrate

## Ingredients with Hazard Concerns (GHS)

According to UN GHS criteria (9<sup>th</sup> Edition of the Purple Book).

Hazardous Component – Chemical Name	CAS Number	Weight - %	International GHS Classification
Triadimenol	55219-65-3	14%	Acute Toxicity Oral, Category 4. Reproductive Toxicity, Category 1B. Aquatic Toxicity, Chronic, Category 2.

**NOTE:** The other ingredients do not cause or contribute toward the correct GHS classification of SHAVIT 15 FS and are therefore, in terms of the South African Regulations for Hazardous Chemical Agents - 2021; Regulation 14(b), not listed in the table above.

## 4. First-Aid Measures

### Description of First-aid Measures

#### General Advice

Provide this SDS to medical personnel for treatment. Emergency personnel should wear protective clothing appropriate to the type and degree of contamination.

Remove contaminated clothing and move the affected person away from the contamination area. Keep the person warm, calm and comfortable. First Aid personnel should pay attention to their own safety.

#### Eye Contact

Rinse/flush the eyes gently with water from the eye wash fountain for several minutes (at least 15 minutes), while holding the eyelids apart. Check for and remove contact lenses if easy to do so. Continue rinsing. Obtain medical attention if irritation occurs and persists.

#### Skin Contact

Remove all contaminated clothing and shoes. Rinse the skin with plenty of water for 15 to 20 minutes under the safety shower. Obtain medical attention if irritation occurs and persists. Wash contaminated clothing before re-use.

#### Inhalation

If breathing is difficult, remove the affected victim from exposure to an area with fresh air. Keep at rest in a position comfortable for breathing. Obtain medical attention if concerned or unwell.

#### Ingestion

Obtain immediate medical attention or call a poison control centre for treatment advice. If conscious, rinse mouth thoroughly with water. Never give anything by mouth to an unconscious or convulsing person. Do not induce vomiting unless directed to do so by a medical professional. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits.

#### Emergency Responders

Use Personal Protective equipment as required.

### Most important symptoms/effects, acute and delayed

Irritation effects (including rash and erythema) to skin, mouth, throat, and eyes. Headache, cough, nausea, sneezing and congestion is possible.

## Indication of any immediate medical attention and special treatment needed

### Notes to physician:

No specific antidote. Treat symptomatically and supportively.

## 5. Fire-Fighting Measures

### Suitable (and unsuitable) extinguishing media

For small fires use dry chemical or carbon dioxide. For large fires use water spray, water fog or foam. Contain fire control water for later disposal.

Do not use high volume water jets due to potential contamination.

### Specific hazards arising from the chemical including thermal decomposition products

Fires involving the product may produce irritating or poisonous vapours: carbon dioxide, carbon monoxide, nitrogen oxides, chlorides and hydrogen chloride.

### Special protective equipment and precautions for fire-fighters

Firefighters must wear emergency equipment including positive pressure self-contained breathing apparatus with a full-face mask. Remove unaffected containers from fire area if possible.

### Additional provisions

Stay at maximum distance. Act in accordance with the site's Internal Emergency Plan and the Workplace Specific Procedures for actions to be taken after an accident or other emergencies.

Keep container cool by spraying with water.

## 6. Accidental Release Measures

### Personal precautions, protective equipment, and emergency procedures

Do not breathe in dust/fumes/vapour and avoid contact with eyes, skin and clothes. Do not touch or walk through spilled material as it could be slippery when spilt.

Contain spills if it can be done without risk and clean-up immediately.

Wear appropriate protective clothing recommended in Section 8 of the SDS.

### Environmental precautions

Prevent spillage or further leakage if safe to do so.

Do not allow the spilt product to enter water courses and drains and avoid contact with soil.

Do not allow the spilt product to spread to other areas - keep the spilt material contained and isolated.

Report spills and releases as required to appropriate authorities if the spilt product has caused environmental pollution (sewers, water ways, soil or air).

### Methods for cleaning up

**For small spills**, sweep up with damp absorbent material. Place into a labelled waste container with a shovel and cover for subsequent disposal. Dispose of collected spilt material as hazardous waste. Clean the contaminated surface with water to remove any residues of the spilt product. Keep the wash water out of drains, sewers and waterways.

**For large spills**, do not wash away into sewers. Contain and collect spilt product in suitable containers for proper disposal.

**Reference to other SDS sections** See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## 7. Handling and Storage

**Precautions for safe handling** Always provide good ventilation in the work area. Prevent contact with eyes and prolonged contact with skin and clothing. Do not breathe in vapours.  
Wear protective clothing and equipment during handling as described in Section 8 of the SDS. Do not eat or drink during use. Wash the hands and face thoroughly with soap after handling. Keep containers closed when not in use.  
Do not permit smoking in use or storage areas.  
Locate emergency showers and eye-rinsing facility near the work/handling area. Maintain good normal industrial hygiene and housekeeping practices in areas where the product is used/handled.  
Remove contaminated clothing immediately if the product gets inside. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of work area and work clothing is recommended.  
Keep unprotected persons away from the area where the product is being applied.

**Conditions for safe storage, including any incompatibilities** The entrance to storage facilities should be granted only to appropriately trained personnel. Always store locked up and keep containers tightly closed when not in use. Store only in properly labelled containers. Check storage containers regularly for leaks.  
The formulation is stable if stored well ventilated, out of direct sunlight, cool and free of moisture and high humidity. Avoid temperatures above 50°C. Keep out of reach of children, uninformed persons and animals. Protect containers from physical damage. Do not contaminate water, food, or feed by storage or disposal.  
Avoid cross contamination with other agricultural products.  
Store away from incompatible materials like strong acids or bases. It is recommended to have appropriate spill control kits equipped with absorbent material in close proximity to storage areas (see Section 6).  
Store in accordance with national and local regulations.

## 8. Exposure Controls and Personal Protection

### Components with workplace control parameters – National Occupational Exposure Limits

No occupational exposure limit for the active ingredient has been established in South Africa. This substance may however pose a health risk.

**Appropriate engineering controls**

Use with general or adequate local exhaust ventilation to maintain airborne concentrations and exposure as low as possible. General ventilation is normally adequate to control worker exposure to airborne contaminants when spray mist or aerosols are generated.

**Personal Protective Equipment**

**Respiratory protection:**

Wear suitable approved respiratory protection if ventilation and other engineering controls and work practices are not effective in controlling the exposure to mist/spray of the product. In operations where exposure levels are expected to be high, an approved respirator (full face mask) with a particulate filter and an organic vapour cartridge or supplied air respirator should be used. Institute a respiratory protection program in such workplaces that includes the selection, fit testing, training, maintenance and inspection of the respiratory equipment. Consult with respirator manufacturer to determine respirator selection, use and limitations. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

**Skin and hand protection:**

Select skin and hand protection based on the task being performed and the risks involved with the task. Impervious chemical resistant gloves recommended for hand protection (e.g. butyl rubber, nitrile rubber, etc.). The gloves should be replaced immediately in case of damage or signs of wear. Prevent skin contact and contamination of personal clothing by wearing impervious work coveralls, shoes and socks as required.

**Eye/face protection:**

Safety eyewear compliant with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or vapour. Wear safety glasses when needed to prevent contact with eyes from liquid and spray.

**General safety and hygiene measures:**

The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Handle the product in accordance with good industrial hygiene and safety practice. An eye wash fountains and safety showers should be available and easily accessible. Keep the product away from food, drink and animal feeding stuffs. Wash the hands and/or face before breaks, eating, smoking or using the lavatory and at the end of the shift/working period.

**Environmental exposure controls**

In accordance with the local legislation for the protection of the environment, it is recommended to avoid environmental spillage or releases of both the product and its container.

## 9. Physical and Chemical Properties

Unless otherwise stated, the data is applicable to the formulated product.

Physical or Chemical Property		Value	Test Method or Remarks
<b>Appearance</b>	Appearance/physical state	Liquid	
	Odour characteristics	Characteristic odour	
	Colour	Blue	
<b>Volatility</b>	Boiling point (°C)	Not determined	
	Vapour pressure (Pa) at 25°C	5.6 x 10 <sup>-7</sup> Pa	
	Evaporation Rate at 20 °C	Not determined	
<b>Product Descriptors</b>	Solubility in water (mg/L at 20 °C )	73.1	
	Decomposition temperature (°C)	Not determined	
	Melting point (°C)	Not applicable (liquid)	
	pH	7 - 8	
	Density (g/cm <sup>3</sup> ) at 20°C	Not determined	
	Bulk Density/relative density (g/L)	Not applicable	
	Specific Gravity	1.02 -1.03	
	Log P octanol / water at 20°C	3.2 (pH = 7)	
<b>Flammability</b>	Flammable (Y/N)	Not flammable	
	Flash point (°C)	150 (Closed Cup)	
	Flammable limits-LEL	Not determined	
	Flammability limits -UEL	Not determined	
	Auto-ignition Temperature (°C)	Not determined	

### Other Hazard Information

None known.



## 10. Stability and Reactivity

<b>Reactivity</b>	The product is not reactive under normal ambient and anticipated storage and handling conditions of temperature and pressure. Decomposes at elevated temperatures.
<b>Chemical Stability</b>	Hazardous polymerization will not occur. Stable under normal ambient conditions of use, storage and transport.
<b>Possibility of Hazardous Reactions</b>	None known under conditions of normal use.
<b>Hazardous Decomposition Products</b>	Does not decompose when used for intended uses. Can decompose under fire or during burning and at high temperatures releasing toxic oxides of nitrogen and carbon as well as toxic corrosive fumes of chloride.

### Conditions to Avoid

Shock and Friction	Contact with Air	Heat and Ignition Sources	Sunlight	Humidity or Moisture Conditions
Not applicable	Avoid storage without ventilation.	Avoid exposing to excessive heat.	Do not store in direct sunlight.	Avoid moisture conditions during storage.

### Incompatible Materials

Incompatible with:

Strong Acids	Water	Combustive Materials	Strong Alkalis	Other Incompatible Substances
Yes	Not applicable	Not applicable	Yes	None known

## 11. Toxicological Information

### Information on likely routes of exposure

The product may be absorbed into the body by inhalation of vapour or spray and/or by ingestion.  
The product may come into contact with the skin or eyes.

### Information on toxicological effects

The product is of low acute toxicity.

**Acute toxicity:**

Product Information	Fatal	Toxic	Harmful	May be Harmful	Not classified
Ingestion - Oral					√
Dermal/Skin Contact					√
Inhalation					√

**Assessment of acute toxicity:**

Test data is not available for the mixture. Assessment of acute toxicity is based on calculation.

Product/ingredient Name	Dose Acute -	Species	Test Result
SHAVIT 15 FS	5 078 mg/kg	Rat	ATE <sub>(MIX)</sub> Oral
SHAVIT 15 FS	>5 000 mg/kg	Rat	ATE <sub>(MIX)</sub> Dermal
SHAVIT 15 FS	>5.2 mg/L	Rat (4h)	ATE <sub>(MIX)</sub> Inhalation (Dust/Mist)

**Irritation – Dermal/Skin and Eyes:**

Assessment of irritation effects (skin/eyes):

Based on available data, the classification criteria are not met.

**Respiratory/Skin Sensitization:**

Assessment of sensitization:

Based on available data, the classification criteria are not met.

**Germ cell mutagenicity:**

Assessment of mutagenicity:

Based on available data, the classification criteria are not met.

**Carcinogenicity:**

Assessment of carcinogenicity:

Based on available data, the classification criteria are not met.

**Reproductive and developmental toxicity:**

Assessment of reproduction toxicity:

Based on available data, the classification criteria are met for reproductive and developmental toxicity.

May damage the unborn child. Studies indicating a hazard to babies during the lactation period. Triadimenol caused reduced fertility and reduced lactation rate. The reproduction toxicity and developmental effects of Triadimenol are related to maternal/parental toxicity. Triadimenol caused developmental toxicity only at dose levels toxic to the dams.

**Specific target organ toxicity (single exposure):**

Assessment of STOT (single):

Based on available data, the classification criteria are not met.

**Repeated dose toxicity and Specific target organ toxicity (repeated exposure):**

Assessment of repeated dose toxicity:

Based on available data, the classification criteria are not met.

**Aspiration hazard:**

Assessment of repeated dose toxicity:

Based on available data, the classification criteria are not met.

**Skin/Respiratory Sensitization:**

Assessment of skin sensitization:

Based on available data, the classification criteria are not met.

**Symptoms related to the physical, chemical and toxicological characteristics**

See Section 4.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

None known for the product.

## 12. Ecological Information

**Ecotoxicity**

No eco-toxicological data is available for the formulated product. This ecological assessment is based on data available for the active ingredient of the product. Triadimenol could be toxic to aquatic life with long lasting effects.

**The information below refers to Triadimenol**

Species and Genus	Exposure (hours/days)	Result in fresh water
Crustacea (Daphnia magna)	48h	Acute EC <sub>50</sub> : 51 mg/L (*PPDB)
Fish (Oncorhynchus mykiss)	96h	Acute LC <sub>50</sub> : 21.3 mg/L (*PPDB)
Algae and aquatic plants (Pseudokirchneriella subcapitata)	72h	Acute EC <sub>50</sub> : 9.6mg/L (*PPDB)

\*PPDB: Pesticide Properties Data Base

**Toxicity to Other Species**

The product is expected to be non-toxic to bees and to have a low toxicity to birds (LD<sub>50</sub> >2000 mg/kg).

### Other Environmental and Adverse Effects:

Environmental effect	Environmental Effect Applicable to Ingredient	Description
<b>Persistence and degradability:</b>	Triadimenol	The half-life value for triadimenol ranges from 3-months to 500 days. It is therefore deemed to be a persistent compound in soil.
<b>Bioaccumulative potential:</b>	Triadimenol	An estimated BCF of 21 suggests the potential for bio-concentration in aquatic organisms is low.
<b>Mobility in soil:</b>	Triadimenol	If released to soil, triadimenol is expected to have moderate to low mobility based upon $K_{oc}$ values from 150 to 992. Volatilization from moist soil surfaces is not expected to be an important fate process. If released into water, triadimenol is expected to adsorb to suspended solids and sediment.
<b>Other adverse effects:</b>	Triadimenol	None known.

## 13. Disposal Considerations

### Waste handling and disposal

Avoid and minimize the generation of waste. Dispose product related waste in accordance with all local regulations and prevent the contamination of water, food, or feed by storage or disposal of the waste. Do not use empty containers for any other purpose. The product or empty containers must not be disposed of as part of general waste. Special help is available for the disposal of Agricultural Chemicals. The product label will supply general advice regarding disposal of small quantities, and how to cleanse containers.

### General container handling

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Empty containers and offer for recycling, if an available option. Recondition if appropriate, or puncture and dispose of in a hazardous waste landfill, or by other procedures approved by the local authorities. Contaminated packaging: Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the product.

### Additional special precautions

The product and its container must always be disposed of in a safe manner. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## 14. Transport Information

Not classified for transport purposes.

## 15. Regulatory Information

### Safety, health and environmental regulations specific for the product in question

#### Symbol

T – Toxic for reproduction.

#### R- Phrase Number

R61  
R62

#### R Phrase

May cause harm to the unborn child.  
Possible risk of impaired fertility.

No known specific country national and/or local regulations applicable to the product (including its ingredients). A summary of country specific general laws/regulations are supplied below.

### Country Specific Registration Requirements

COUNTRY	LEGAL REFERENCE	ASPECTS COVERED
South Africa	Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947)	Registration to manufacture or sell an agricultural remedy.

### Country Specific Pesticide Handling and Storage Safety

COUNTRY	LEGAL REFERENCE	ASPECTS COVERED
South Africa	SANS10206: 2020.	The Handling, Storage and Disposal of Pesticides.

### Country Specific Safety Data Sheet and Occupational Exposure Limit Requirements

COUNTRY	LEGAL REFERENCE	ASPECTS COVERED
South Africa	Regulations for Hazardous Chemical Agents – 2021 – SA Occupational Health and Safety Act.  SANS11014:2010.	Handling, labelling and Safety Data Sheets for hazardous and GHS classified substances and mixtures. Occupational Exposure Limits.  Safety Data Sheet for Chemical Products – Content and Order of Sections.

## Country Specific control of handling of poisonous/hazardous and non-poisonous/non-hazardous substances/chemicals in industry and the workplace

COUNTRY	LEGAL REFERENCE	ASPECTS COVERED
South Africa	<b>Hazardous Substances Act, 1973 (Act No.15 of 1973).</b>	Requirements on the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of <b>hazardous substances</b> .
	Occupational Health and Safety Act No. 85 of 1993.	Occupational Health and Safety Standards for employers and users working with and around hazardous chemical substances.

### 16. Other Information

#### Key to Abbreviations

AND	European Provisions concerning the International Carriage of Dangerous Goods by inland Waterways
ADR	The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
CAS Number	Chemical Abstracts Service Number
COD	Chemical Oxygen Demand
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IMDG	International Maritime Dangerous Goods
Log <sub>Pow</sub>	Logarithm of the octanol/water partition coefficient
LD <sub>50</sub>	Lethal Dose 50
LC <sub>50</sub>	Lethal Concentration 50
RID	The Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STOT	Specific Target Organ Toxicity
TWA	Time Weighted Average
UN	United Nations

#### Document Control

<b>Date of preparation of the SDS</b>	15 June 2014
<b>Revision date</b>	7 March 2022
<b>Revision Note</b>	Changes made to the last version are labelled with the sign ***. NOTE: This revision incorporates the GHS requirements for SHAVIT 15 FS and therefore the total content of the SDS has been revised.

## The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Classification of the Mixture - Classification Procedure

<b>H Statement Number</b>	<b>H Statement</b>	<b>Classification Basis: Test Data/Calculation Method</b>
H360	May damage fertility or the unborn child.	Active ingredient animal studies data.
H362	May cause harm to breast-fed children.	Active ingredient animal studies data.

### 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.

**End of Safety Data Sheet**