

SAFETY DATA SHEET

Issue No: 1.0

First print date: April 2024

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **SULFODFENCE 815 SC**

Other means of identification: Sulphur 700 g/l + Dithianon 115 g/l

Recommended Use: Agricultural Fungicide

Supplier: ICA International Chemicals (Pty) Ltd

Address: 28 Planken Street
Plankenbrug Industrial
STELLENBOSCH · 7600 · SOUTH AFRICA

Telephone No: +27-21 886 9812

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Emergency Tel No: Griffon Poison Information Centre: +27-82 446 8946
Human Poison Helpline: +27-861 555 777

2. HAZARD IDENTIFICATION

GHS Classification of product

Acute Oral Toxicity – Category 5
Skin Irritation – Category 2
Skin Sensitization – Category 1
Acute Aquatic Toxicity – Category 1
Chronic Aquatic Toxicity – Category 1

Label Elements

Classification and Labelling of Chemicals (GHS) Rev 10, 2023; Regulation EC No. 1272/2008 [EU-GHS/CLP]



Signal word

WARNING

Hazard Statements

H303 – May be harmful in swallowed
H315 – Causes skin irritation
H317 – May cause an allergic skin reaction
H400 – Very toxic to aquatic life
H410 – Very toxic to aquatic life with long lasting effects

General Precautionary Statements

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

Prevention Precautionary Statements

P261: Avoid breathing mist/vapours/spray.
P264: Wash hands and exposed skin thoroughly after handling.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves, protective clothing, eye and face protection.

Response Precautionary Statements

P301 + P317: IF SWALLOWED: Get medical help.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P333 + P317: If skin irritation or rash occurs: Get medical help.
P321: For specific treatment; see first aid measures in section 4.
P362 + P364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.

Disposal Precautionary Statements

P501: Dispose of contents and container in accordance with national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT(S)	CAS NO:	CONCENTRATION % (w/v)	CLASSIFICATION EC 1272/2008
Sulphur	7704-34-9	70	Skin Irritation Category 2, H315
Dithianon	3347-22-6	11.5	Acute Oral Toxicity Category 4, H302; Aquatic Acute Category 1, H400; Aquatic Chronic Category 1, H410
1,2-benzisothiazolin-3-one	2634-33-5	< 1	Acute Oral Toxicity Category 4, H302; Skin Irritation Category 2, H315; Eye Damage Category 1, H318; Skin Sensitization Category 1, H317; Aquatic Acute Category 1, H400

There are no additional ingredients present which, within the current knowledge of the provider of this SDS, and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. See section 16 for legend of additional H-phrases not in section 2.

4. FIRST AID MEASURES

Show this SAFETY DATA SHEET to a doctor.

INHALATION:

- Remove the victim from immediate source of exposure. Move victim to fresh air, if it can be done safely, and keep comfortable.
- If victim's breathing has stopped, perform artificial respiration.
- Administer oxygen if victim's breathing is difficult or irregular. Get medical help.

SKIN:

- Remove and isolate contaminated clothing, shoes, and leather goods immediately and take a shower.
- Rinse affected areas (skin) immediately with non-abrasive soap or mild detergent and large amounts of running water. Wash contaminated clothing before reuse.
- Get medical help if irritation develops and persists.

EYES:

- Rinse eyes cautiously with clean running water for at least 15 minutes, while holding eyelids apart. Remove contact lenses after 5 minutes if present and easy to do.
- Continue rinsing while holding eyelids apart. Seek medical help if irritation continues.

INGESTION:

- If swallowed, DO NOT induce vomiting, unless instructed to do so by poison control center or doctor.
- Have person sip a glass of water if able to swallow.
- Never give anything by mouth to an unconscious person.
- If vomiting does occur, keep on giving fluids. Get medical help.

NOTE TO PHYSICIAN:

- There is no specific antidote. All treatments should be based on observed signs and symptoms of distress in the patient.

POTENTIAL HEALTH EFFECTS, ACUTE AND DELAYED:

- Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.

5. FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:

Small fires: Dry chemical powder, carbon dioxide (CO₂), water spray or alcohol-resistant foam

Large fires: Water spray, fog, or alcohol-resistant foam

FIRE INVOLVING TANKS:

Cool containers with flooding quantities of water until well after fire is out. DO NOT get water inside containers. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire.

UNSUITABLE EXTINGUISHING MEDIA:

DO NOT use high volume water jet, due to contamination risk.

SPECIFIC EXTINGUISHING METHODS:

Fight fire from maximum distance. For massive fire, use unmanned hose holder or monitor nozzles. Collect contaminated extinguishing water separately; do not allow contaminated water to reach the sewage or effluent systems.

SPECIFIC HAZARDS ARISING FROM COMBUSTION PRODUCTS:

In case of fire, the formation of Carbon monoxide (CO), Nitrogen oxides (NO_x), Sulphur oxides and Carbon dioxide (CO₂) can be expected.

PRECAUTIONS FOR FIRE FIGHTERS:

Fire fighters should wear full protective gear including self-contained breathing apparatus (SCBA). Fight fire from safe distance. Contact with the fumes and vapours should be avoided by staying upwind. Clean all clothing before reuse. Severely contaminated clothing cannot be adequately decontaminated and must be

disposed as a hazardous waste. Shower with soap and water after contact with chemical product.

FURTHER INFORMATION:

- If possible, safely move undamaged intact containers away from the area around the fire.
- Keep containers cool by spraying with water if exposed to fire.
- Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.
- In case of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK:

PERSONAL PRECAUTIONS:	Avoid contact with skin and eyes. Do not touch or walk through spilled material. Do not inhale spray or fumes.
PROTECTIVE EQUIPMENT:	Wear personal protective clothing and equipment (see section 8).
EMERGENCY PROCEDURES:	Keep people and animals away. Eliminate all ignition sources (no smoking, flares, sparks, or flames) from immediate area. All equipment used when handling the product must be grounded. Use water spray to reduce vapours or divert vapour cloud drift.
ENVIRONMENTAL PRECAUTIONS:	PREVENT spilled material from entering waterway and sewer systems, basements, and confined areas. If the product contaminates rivers and lakes or waterways immediately inform respective authorities.
METHODS AND MATERIALS FOR CONTAINMENT:	Contain and absorb liquid spills with inert material, remove by scoop or vacuum. Use approved industrial vacuum cleaner for removal and place in clearly marked waste containers.
METHODS AND MATERIALS FOR 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). Use clean, non-sparking tools to collect absorbed material.
SECONDARY DISASTER PREVENTION MEASURES:	NA

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:	<ul style="list-style-type: none"> • Always store fungicides in their original containers, which include the label listing ingredients, directions for use, and first aid steps in case of accidental poisoning. • Never transfer fungicides to soft drink bottles or other containers. Children or others may mistake them for something to eat or drink. • Wear suitable protective clothing which include chemical-resistant overalls, footwear, socks, dust mask, eye shields and gloves. • Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Wash hands, arms, and face after application. Wash gloves and contaminated protective clothing daily before reuse.
<ul style="list-style-type: none"> - Suitable Technical Measures - Suitable Precautions - Prevention of contact 	
CONDITIONS FOR SAFE STORAGE:	<ul style="list-style-type: none"> • Keep out of reach of unauthorized persons, children, and animals. Always store fungicides in their original containers, closed with original cap and the original label, in a cool, dry, and well-ventilated area out of direct sunlight. • Segregate from foods and animal feeds. • DO NOT reuse the container for any other purpose.
<ul style="list-style-type: none"> - Suitable Technical Measures - Separation measures from incompatible substances and mixtures 	

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ADI – Acceptable Daily Intake	Sulphur = None allocated
	Dithianon = 0.01 mg kg ⁻¹ bw day ⁻¹
AOEL – Accepted Operator Exposure Level	Sulphur = None allocated
	Dithianon = 0.0135 mg kg ⁻¹ bw day ⁻¹
NATIONAL EXPOSURE STANDARDS:	Not available
BIOLOGICAL LIMIT VALUES:	Not available
ENGINEERING CONTROLS:	Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. If airborne mist/vapours are generated use local exhaust ventilation controls. Facilities should be

PERSONAL PROTECTIVE EQUIPMENT:

equipped with an eyewash station and a safety shower. Where necessary, seek additional occupational hygiene advice.

Respiratory Protection: Where exposure through inhalation may occur when handling and/or when preparing the spray mixture, wear a face mask. If the product is used in confined spaces a respirator suitable for protection from spray and mists of pesticides is adequate.

Hand Protection: Wear chemical-resistant gloves made of any waterproof material such as nitrile rubber. Glove thickness: 0.5 mm

Eye Protection: The use of safety goggles (full-face shield) is recommended.

Skin and Body Protection: Wear suitable protective clothing which includes chemical-resistant overalls, footwear, socks, dust mask, eye shields and gloves. Remove and wash contaminated protective clothing daily.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid
COLOUR:	Brown
ODOUR:	Slight/Mild chemical odour
MELTING POINT / FREEZING POINT °C:	Sulphur = 118 – 120 °C Dithianon = 215 °C
BOILING POINT:	Sulphur = 444.6 °C Dithianon = Not available
DECOMPOSITION TEMPERATURE (a.i):	Sulphur = Decomposes on boiling Dithianon = 222 °C
FLAMMABILITY:	Not available
EXPLOSIVE LIMITS:	Not available
FLASH POINT:	Not available
AUTO-IGNITION TEMPERATURE:	Not available
pH (1% IN WATER):	4.0 – 7.0
KINEMATIC VISCOSITY:	Not available
	$\text{Kinematic viscosity} = \frac{\text{Dynamic viscosity (mPa/s)}}{\text{Density (g/cm}^3\text{)}}$
VISCOSITY:	Not available
DENSITY / RELATIVE DENSITY:	1.44 g/ml
SOLUBILITY - WATER (a.i):	Sulphur = 0.063 mg/l Dithianon : = 0.22 mg/l
N-OCTANOL / WATER PARTITION COEFFICIENT (a.i):	Sulphur : Log P _{ow} = Not available Dithianon : Log P _{ow} = 3.2
VAPOUR PRESSURE (a.i):	Sulphur = 0.098 mPa Dithianon = 1.0 X 10 ⁻⁰⁷ mPa
RELATIVE VAPOUR DENSITY:	Not available

10. STABILITY AND REACTIVITY

REACTIVITY:	Stable under normal conditions no reaction with fire-fighting water.
CHEMICAL STABILITY:	Stable under normal use and storage conditions for at least 2 years.
HAZARDOUS REACTION:	Hazardous polymerization is not expected to occur.
CONDITIONS TO AVOID: (e.g. – heat, pressure, static discharge, shock, or vibration)	Avoid storage in moist or hot conditions, near to heat or ignition sources. Keep away from food, drink and open bodies of water.
INCOMPATIBLE MATERIALS:	None specified
HAZARDOUS DECOMPOSITION PRODUCTS:	When heated to decomposition, irritant or dangerous fumes/vapours may be emitted. See section 5.

11. TOXICOLOGICAL INFORMATION

	ANIMAL ACUTE TOXICITY DATA (ATE)	
ORAL:	LD ₅₀ (rat) = 2608 mg a.i. /kg bw	Category 5
DERMAL:	LD ₅₀ (rat) > 5000 mg a.i. /kg bw	Not Classified

INHALATION:	LC ₅₀ (4h) rat > 5 mg a.i./ℓ	Not Classified
SKIN IRRITATION / CORROSION:	≥ 10%	Category 2
SERIOUS EYE IRRITATION / DAMAGE:		Not Classified
RESPIRATORY OR SKIN SENSITIZATION:	Skin ≥ 0.1%	Category 1
GERM CELL MUTAGENICITY:		Not Classified
CARCINOGENICITY:		Not Classified
REPRODUCTIVE TOXICITY:		Not Classified
SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE:		Not Classified
SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE:		Not Classified
ASPIRATION HAZARD:		Not Classified

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

SULPHUR		
Birds: LD ₅₀ (oral)		<i>Colinus virginianus</i> (Bobwhite Quail) Acute LD ₅₀ > 2000 mg/kg bw/day LC ₅₀ /LD ₅₀ > 1335 mg/kg bw/day diet
Fish: LC ₅₀		<i>Oncorhynchus mykiss</i> (Rainbow trout) Acute (96h) LC ₅₀ > 0.063 mg a.i./ℓ NOEC > 0.063 mg a.i./ℓ (21-day)
Aquatic invertebrates – <i>Daphnia</i>		<i>Daphnia magna</i> (Water flea) Acute (48h) EC ₅₀ > 0.063 mg a.i./ℓ
Algae - EC ₅₀ / NOEC		<i>Selenastrum subspicatus</i> Acute (72h) EC ₅₀ > 0.063 mg a.i./ℓ
Bees		<i>Apis mellifera</i> Acute contact 48-hour LD ₅₀ > 100 (µg.bee ⁻¹) Acute oral 48-hour LD ₅₀ > 106.8 (µg.bee ⁻¹)
Earthworms: LC ₅₀ /NOEC		<i>Eisenia fetida</i> Acute (14-day) LC ₅₀ > 2000 mg a.i./kg d.w. soil Chronic NOEC > 1000 mg a.i./kg d.w. soil
DITHIANON		
Birds: LD ₅₀ (oral)		<i>Colinus virginianus</i> (Bobwhite quail) Acute LD ₅₀ 309 mg/kg bw/day LC ₅₀ /LD ₅₀ >1198.5 mg/kg diet Chronic NOEL = 22.8 mg/kg bw/day
Fish: LC ₅₀		<i>Oncorhynchus mykiss</i> (Rainbow trout) Acute (96h) LC ₅₀ = 0.07 mg a.i./ℓ NOEC = 0.02 mg a.i./ℓ (21-day)
Aquatic invertebrates - <i>Daphnia</i>		<i>Daphnia magna</i> (Water flea) Acute (48h) EC ₅₀ = 0.26 mg a.i./ℓ Chronic (21-day) NOEC =0.05 mg a.i./ℓ
Algae - EC ₅₀ / NOEC		<i>Pseudokirchneriella subcapitata</i> Acute (72h) EC ₅₀ = 0.09 mg a.i./ℓ Chronic (96h) NOEC = 0.025 mg a.i./ℓ
Bees		<i>Apis mellifera</i> Acute contact 48-hour LD ₅₀ > 100 (µg.bee ⁻¹) Acute oral 48-hour LD ₅₀ > 25.4 (µg.bee ⁻¹)
Earthworms: LC ₅₀ /NOEC		<i>Eisenia fetida</i> Acute (14-day) LC ₅₀ = 578 mg a.i./kg d.w. soil Chronic NOEC = 22.3 mg a.i./kg d.w.

AQUATIC TOXICITY:

Summation Method
 Aquatic Acute – **Category 1**
 Aquatic Chronic – **Category 1**

PERSISTENCE, DEGRADABILITY AND MOBILITY:

Sulphur is a naturally occurring substance, non-persistent in the soil and slightly mobile. In soil, elemental sulphur will slowly be converted to sulphate by the action of autotrophic bacteria. Elemental sulphur leaches in soil as sulphate at a slow rate.

DT₅₀ = 25 days

K_{oc} = 1950 (slightly mobile)

Dithianon is moderately to non-persistent in the soil and slightly mobile.

DT₅₀ = 2.6 –33.3 days

K_{oc} = 3627 (slightly mobile)

BIO-ACCUMULATIVE POTENTIAL:

Sulphur: BCF = Low risk LogP < 3.0

Dithianon: BCF = 27 l/kg

SOIL MICRO-ORGANISMS:

Carbon transformation No significant adverse/long-term effect

Nitrogen transformation No significant adverse/long-term effect

13. DISPOSAL CONSIDERATIONS

On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities.

TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS: Containers must be completely emptied before being disposed of. Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

14. TRANSPORT INFORMATION

UN NUMBER:

3082

UN PROPER SHIPPING NAME:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S (70 % sulphur + 15 % dithianon)

TRANSPORT HAZARD CLASS(ES):

Class 9

PACKING GROUP:

III (low danger)

TRANSPORT PICTOGRAMS:



ENVIRONMENTAL HAZARD:

Marine Pollutant: Yes

TRANSPORT IN BULK:

Not applicable, not to be transported in bulk.

SPECIAL PRECAUTIONS FOR USER:

Not applicable

15. REGULATORY INFORMATION

Conform to South African Regulation for Hazardous Chemical Agents, 2021.

Product: South African registration number L11507, Act 36 of 1947.

SDS valid for five years from date of issue.

16. OTHER INFORMATION

Legend: Full text of H-Statements referred to under sections 3:

H302 – Harmful if swallowed.

H318 – Cause serious eye damage.

H411 – Toxic to aquatic life with long lasting effects

Key literature references and sources of data: Occupational Health and Safety Act 1993. Regulation for Hazardous Chemical Agents, 2021. Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 10, 2023. UN Model Regulations Rev. 22 (2023). EU REGULATION (EC) No. 1272/2008.

This Safety Data Sheet (SDS) summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how to prevent accidents in the normal workplace including in conjunction with other products.

The information was obtained from sources which we believe are reliable. However, the information is provided in good faith. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and for these reasons we do not



assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used for this product only.

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END of SDS