

SAFETY DATA SHEET

ACCORDING TO THE SOUTH AFRICAN REGULATIONS FOR HAZARDOUS CHEMICAL AGENTS - 2021

AG-METRIBUZIN 480 SC

Revised on / Version: 01/08/2022 / 0005
 Replaces Revision of / Version: 19/07/2019 / 0004

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SECTION 1: Product and Company Identification

Identification of the product/preparation

Product Name:	Ag-Metribuzin 480 SC
Trade Name/Synonyms:	Ag-Metribuzin 480 SC
Registration Number:	L8063
Product Description and Type:	Suspension Concentration- Herbicides

Active Ingredient

Formula:	$C_8H_{14}N_4OS$
CAS Number:	21087-64-9

Supplier

Company Name: Rolfes Agri (Pty) Ltd
 Address: 288 Mundt Street
 Waltloo
 Pretoria
 South Africa
 Phone Number: +27(0)12 803 0145
 E-mail Address: info@rolfesagri.co.za

Emergency Phone Numbers

Nature of Emergency	Emergency Operator	Telephone Number
Office Hour Poisoning Helpline	Rolfes Agri (Pty) Ltd	+27 (12) 803 0145
Spill Response and Transport Incidents	Spill Tech, Oil and chemical pollution control	+ 27 (0) 86 100 0366 + 27 (0) 83 253 6618 www.spilltech.co.za

Relevant identified uses of the product and uses advised against

For use in Agriculture and use as per the product label.

SECTION 2: Hazards Identification

Classification of the substance or mixture

This product is classified as hazardous according to the criteria in South Africa - GHS classification and labelling of chemicals and the Regulations for Hazardous Chemical Agents 2021.

Classification:

Hazard class	Category	Hazard Statement Number
Acute Toxicity; Oral	Category 4	H302
Specific Target Organ Toxicity, Repeated Exposure	Category 2	H373
Hazardous to the Aquatic Environment, Acute Hazard	Category 1	H400
Hazardous to the Aquatic Environment, Long-term Hazard	Category 1	H410

Label Elements

South Africa. GHS classification and labelling of chemicals and the Regulations for Hazardous Chemical Agents 2021.

Pictograms:



Signal Word: Warning

Hazard Statements:

Statement Number	Hazard Statement
H302	Harmful if swallowed
H373	May cause damage to organs (kidney), (oral) through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Precautionary Statements:

General-

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

Prevention -

Statement Number	Precautionary Statement
P260:	Do not breathe dust/fumes/gas/mist/vapours/spray.
P264:	Wash hands and affected area thoroughly after handling.
P270:	Do not eat, drink or smoke when using this product.
P273:	Avoid release to the environment.

Response -

Statement Number	Precautionary Statement
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P301 + P317:	IF SWALLOWED: Get medical help.
P319:	Get medical help if you feel unwell.
P330:	Rinse mouth.
P391:	Collect spillage.

Disposal -

Statement Number	Precautionary Statement
P501:	Empty all pesticides from the container by placing it upside down over the spray tank and holding it there for at least 30 seconds. Puncture the rinsed container to render it useless and send to a recycler.

Other Hazards

None Known.

SECTION 3: Composition/Information on Ingredients

Common Name:	Ag-Metribuzin 480 SC.
IUPAC/Chemical Name:	4-amino-6- <i>tert</i> -butyl-3-methylsulfanyl-1,2,4-triazin-5-one
Chemical Family:	Triazinone herbicides
Formulation:	Metribuzin 480 g/L

Ingredients with Hazard Concerns (GHS)

According to UN GHS criteria.

Hazardous Component	CAS Number	Weight %	GHS Classification
Metribuzin Tech 95%	21087-64-9	42	Acute Tox. 4; Aquatic Acute 1 M=10; Aquatic Chronic 1
Mono ethylene glycol	107-21-1	<10	Acute Tox. 4, STOT RE 2
(Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-[2,4,6-tris(1-phenylethyl)phenoxy]-, ammonium salt	119432-41-6	<10	Eye Irrit. 2; Aquatic Chronic 3

SECTION 4: First-Aid Measures**Description of First-aid Measures**

General Advice	The symptoms resulting from direct exposure to the product could appear a while after exposure. If persistent discomfort, seek medical attention. Provide this SDS to medical personnel for treatment. Immediately remove contaminated clothing and remove the affected person from the contamination area. Keep the person warm, calm and covered up. First Aid personnel should pay attention to their own safety.
Eye Contact	Flush eyes with water as a precaution.
Skin Contact	Remove all contaminated clothing and shoes. Wash contaminated clothing before re-use. Rinse the skin immediately with plenty of water.
Inhalation	Remove the affected victim from exposure to an area with fresh air as a precaution. If not breathing, administer artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Obtain immediate medical attention.

Ingestion	If swallowed: Get emergency medical help immediately. 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, rinse mouth and administer more water.
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Most important symptoms/effects, acute and delayed

Symptoms of exposure to the product include: nausea, vomiting, abdominal pain, and lassitude.

Indication of any immediate medical attention and special treatment needed

Notes to physician: None

Specific treatments: Treat symptomatically and supportively.

SECTION 5: Firefighting Measures

Suitable (and unsuitable) extinguishing media	For small fires, use carbon dioxide, dry chemical, alcohol resistant foam, or water spray. Do not use water jets.
Specific hazards arising from the chemical including thermal decomposition products	Fires involving the product may produce irritating or poisonous vapours, mists or other products of combustion.
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	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.

SECTION 6: Accidental Release Measures**Personal precautions, protective equipment, and emergency procedures**

Ventilate the area of the spill or leak, especially when in confined areas.

Do not touch or walk through spilled material as 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, soak up with damp earth or sand, or other non-Combustible absorbent material. Place into a labelled waste container ~~with a shovel and cover~~ for subsequent reclamation or disposal. Keep the wash water out of drains, sewers and waterways.

For large spills, contain the spillage with absorbent material (non-combustible for flammable products). Sweep up with absorbent material, contain and collect spilt product in suitable containers for proper disposal. Keep the wash water out of drains, sewers and waterways.

Reference to other 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.

SECTION 7: Handling and Storage**Precautions for safe handling**

Do not return product residues to the storage containers. Always provide good ventilation in the work area. Prevent contact with eyes, skin and clothing. Do not breathe in dust/vapours/spray mists. 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.

Conditions for safe storage, including any incompatibilities

Always store locked up and keep containers tightly closed when not in use. Store in a cool, dry and well ventilated place, out of direct sunlight. Check storage containers regularly for leaks and protect containers from physical damage. Store in the original container, avoid cross contamination with other agricultural products. Keep out of reach of children, uninformed persons and animals. Do not contaminate water, food, or feed by storage or disposal. It is recommended to have appropriate spill control kits equipped with absorbent material in close proximity to storage areas (see Section 6).

Specific end use(s)

Use as directed. Use original container.

SECTION 8: Exposure Controls and Personal Protection**National Occupational Exposure Limits – Restricted limits for hazardous chemical agents:**

Component	Type	Control Parameter	Update	Basis
Ethylene Glycol	OEL-eight hour TWA	50(V) ppm	2021	South African RELs*
	OEL-STEL/C	100(V) ppm	2021	South African RELs*

*REL: Recommended Exposure Limit.

OEL-eight hour TWA: Occupational Exposure Limit- Time Weighted Average. Calculated over an eight-hour working day, for a five-day working week.

OEL-STEL/C: Occupational Exposure Limit – short Term Exposure Limit /Ceiling Limit. Peak airborne concentration determined over the shortest analytically practicable period of time, which does not exceed 15 minutes.

National Biological Exposure Indices (BEIs) for hazardous chemical agents.

Component	Sample Matrix	Sample Time	Value
Not Applicable	Not Applicable	Not Applicable	Not Applicable

Appropriate engineering controls

Use with general or adequate local exhaust ventilation to maintain airborne concentrations and exposure below occupational exposure limits. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal Protective Equipment

Respiratory Protection:	Respiratory protection selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted and well maintained particulate filter respirator, complying with an approved standard. Respirator selection and use should be based on contaminant type, form and concentration. 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. The gloves should be replaced immediately in case of damage or signs of wear. The personal protective clothing must be properly fitted and well maintained.
Eye/Face Protection:	Select safety eye/face protection based on the task being performed and the risks involved with the task. Wear tightly fitted and well maintained safety eyewear compliant with an approved standard.
General Safety and Hygiene Measures:	Wash the hands and/or face before breaks, eating, smoking or using the lavatory and at the end of the shift/working period. Eye wash fountains and safety showers should be available and easily accessible. Wash contaminated clothing before reuse.

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.

SECTION 9: Physical and Chemical Properties

Data applicable to Mixture

Appearance	Appearance/physical state	Liquid (Suspension Concentrate).
	Odour characteristics	Sulfur like.
	Colour	Whitish.
Volatility	Boiling point (°C)	No available data.
	Vapour pressure (Pa)	No significant volatility, aqueous solution.
	Evaporation Rate at 20 °C	No data available.
Product Description	Relative density (kg/m ³ , relative density of water =1)	1.15 g/ml at 25 °C.
	Solubility in water (g/100mL)	Miscible with water.
	Decomposition temperature (°C)	Not applicable.
	Melting point/freezing point (°C)	Not applicable.
	pH	6.0 at 25 °C.

Flammability	Density/relative density (g/cm ³)	1.15 g/ml at 25 °C.
	Particle characteristics	Liquid.
	Flammable (Y/N)	Not flammable.
	Flash point (°C)	Not Applicable.
	Flammable limits-LEL	Not flammable.
	Auto-ignition Temperature (°C)	Not flammable.

Other Hazard Information

None Known.

SECTION 10: STABILITY AND REACTIVITY**Reactivity**

Stable under normal conditions.

Chemical Stability

Stable under normal ambient conditions of use, storage and transport.

Possibility of Hazardous Reactions

None known under conditions of normal use.

Conditions to Avoid

Avoid extreme temperatures (>50°C). Keep away from heat and ignition sources. Quality of water may affect compatibility.

Incompatible Materials

Incompatible with: Avoid strong oxidizing agents and acids.

Hazardous Decomposition Products

Under normal conditions of storage and use, Toxic oxides of carbon, nitrogen and sulphur are released when the product decomposes on heating.

SECTION 11: Toxicological Information**Information on likely routes of exposure****Toxicokinetics, metabolism and distribution:**

Non-human toxicological data: No Information available.

Method: No Information available.

Dosage: No Information available.

Routes of administration: No Information available.

Results: No Information available.

Absorption: No Information available.

Distribution: No Information available.

Metabolism: No Information available.

Excretion: No Information available.

Information on toxicological effects

Acute oral toxicity: Mono ethylene glycol & Metribuzin 95% Tech.

Warning! According to the harmonised classification and labelling (ATP01) approved by the European Union, this substance is harmful if swallowed.

LD50 Mono ethylene glycol: 7712 (Not classified) for rats., LD50 Metribuzin 95% Tech: 322 for rats.

LD50 (Calculated): 771.9 mg/kg for rats. Category 4.

Acute dermal toxicity: Does not meet the GHS Classification criteria.

Acute inhalation toxicity: Does not meet the GHS Classification criteria.

Skin corrosion/irritation: Does not meet the GHS Classification criteria.

Serious eye damage/irritation: Does not meet the GHS Classification criteria.

Respiratory or skin sensitization: Does not meet the GHS Classification criteria.

Germ cell mutagenicity: Does not meet the GHS Classification criteria.

Carcinogenicity: Does not meet the GHS Classification criteria.

Reproductive toxicity: Does not meet the GHS Classification criteria.

STOT-single exposure: Does not meet the GHS Classification criteria.

STOT-repeated exposure: May cause damage to organs (kidney), (oral) through prolonged or repeated exposure.

Aspiration hazard: Does not meet the GHS Classification criteria.

SECTION 12: Ecological Information

Ecotoxicity

Chronic Aquatic Toxicity: Metribuzin 95 % Tech

Toxic to aquatic life with long lasting effects: Metribuzin 95% Tech.

Crustacea (*Daphnia magna*): 2.62 gm/L for Water Flea.

Fish: 2.98 mg/L for Rainbow.

Algae and aquatic plants: 20.8 PPB (0.0208 mg/L) for *Pseudokirchneriella subcapitata*.

Very toxic to aquatic life with acute hazards: Metribuzin 95% Tech.

Crustacea (*Daphnia magna*): LC50 (48 h) 49, 6 mg/L.

Fish: LC50 (96 h) 74.6 mg/L for Rainbow Trout, 141.6 mg/L for Golden orfe and 85 mg/L for Sheepshead minnow.

Algae and aquatic plants: ErC50 0.021 mg/L for *Scenedesmus subspicatus*.

Toxicity to other species

Birds: LD50: 164 mg/kg for bobwhite quail, 460-680 mg/kg for mallard ducks.

Bees: Not toxic to bees; LD50: 35 µg/bee.

Worms: LC50 for *Eisenia foetida* 331.8 mg/kg dry soil.

Other Environmental and Adverse Effects:

Persistence and Degradability:

Moderate persistence in the soil environment. The half-life varies according to soil type and climatic conditions. The major mechanism by which Metribuzin is lost from soil is microbial degradation. Losses due to volatilization or photo degradation are not significant under field conditions.

Bioaccumulative Potential:

BCF (Aquatic Species): No data available.

Mobility in Soil:

Metribuzin is poorly bound to most soils and soluble in water, giving it a potential for leaching in many soil types.

Other Adverse Effects:

The half-life of Metribuzin in pond water is approximately 7 days. If present, Metribuzin would most likely be found in the water column rather than the sediment, due to its low binding affinity and high-water solubility.

SECTION 13: Disposal Considerations

Waste handling and disposal

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.

General container handling





Empty all pesticides from the container by placing it upside down over the spray tank and holding it there for at least 30 seconds. Puncture the rinsed container to render it useless and send to a recycler. Do not use empty containers for any other purpose.

Additional special precautions

The product and its container must always be disposed of in a safe manner.

Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport Information

	Land Transport (ADR/RID)	Inland Waterways (AND/ADNR)	See Transport (IMDG)	Air Transport (ICAO-TI/IATA-DGR)
UN Number	3082	3082	3082	3082
UN Proper Shipping Name	Environmentally hazardous substance, liquid, N.O.S (contains Herbicide metribuzin) -	Environmentally hazardous substance, liquid, N.O.S (contains Herbicide metribuzin) -	Environmentally hazardous substance, liquid, N.O.S (contains Herbicide metribuzin) -	Environmentally hazardous substance, liquid, N.O.S (contains Herbicide metribuzin) -
Transport Hazard Class	9	9	9	9
Transport Hazard Class Pictogram				
Transport Subsidiary Class	Not Available	Not Available	Not Available	Not Available
Packaging Group	III	III	III	III
Environmental Hazard	Yes	Yes	Yes	Yes

SECTION 15: Regulatory Information

Safety, health and environmental regulations/legislation for the mixture.

South Africa

Regulations for Hazardous Chemical Agents – 2021 – SA Occupational Health and Safety Act. Handling, labelling and Safety Data Sheets for hazardous and GHS classified substances and mixtures. Occupational Exposure Limits.

Hazardous Substances Act, 1973 (Act No.15 of 1973) - Requirements on the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of hazardous substances.

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. National Road Traffic Act, 1996 (ACT NO. 93 of 1996). - The identification and classification of dangerous goods for transport by road and rail modes.

Botswana

Pesticides and Toxic Substances Regulations. 1994 (2006) - Control and management of pesticides and other toxic substances.

Environmental and Pollution Control Act. 1990 - Hazardous waste disposal, hazardous substances, pesticides and effluent waste water/discharge.

Namibia

Labour Act 11 of 2007 - Hazardous substances classification, labelling, Chemical Safety Data Sheets and Occupational Exposure Limits. Notification of the use of carcinogens and other controlled substances.

Regulations relating to the Health and Safety of Employees at Work Government Notice 156 of 1997. Labour Act 11 of 2007 schedule, item 2(2). - Occupational Health and Safety Standards for employers and users working with and around hazardous chemical substances.

SECTION 16: Other Information

Indication of changes

Alignment to the GHS.

Relevant classification and H-Statements (Number and full text):

Acute Toxicity; Oral - category 4

H302: Harmful if swallowed

Specific Target Organ Toxicity Repeated Exposure- Category 2

H373: May cause damage to organs (kidney), (oral) through prolonged or repeated exposure

Hazardous to the Aquatic Environment, Acute Hazard- Category 1

H400: Very toxic to aquatic life

Hazardous to the aquatic environment, long-term hazards- Category 1

H410: Very toxic to aquatic life with long lasting effects

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
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 _{POW}	Logarithm of the octanol/water partition coefficient
LD ₅₀	Lethal Dose 50
LC ₅₀	Lethal Concentration 50
RID	The Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet

UN United Nations

Notice to Reader

The information contained in this Safety Data Sheet relate only to the specific product and do not relate to the use of the product in combination with any other product or process. Information in the SDS is supplied to the best of ROLFES AGRI (PTY) LTD's knowledge and are believed to be current and correct as of the date on this SDS. All reasonable efforts were exercised to compile this SDS in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

The SDS only provides information applicable to the health, safety and environmental hazards of this product at the date of issue in order to facilitate the safe use, handling, storage and transport of this product and does not replace any product information or product specifications.

It is not possible for ROLFES AGRI (PTY) LTD to anticipate or control all conditions under which this product may be used, handled, stored or transported. The obligation of the user, receiver, handler or transporter remains to review the content of the SDS prior to potentially exposing persons/employees to the product and to consider any risks that may associated with the hazards of the product during use, handlings, storage or transportation. Appropriate health, safety and environmental protection risk mitigating measures must be in place and such information must be communicated to all persons that might be involved with and exposed to this product.

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