Safety Data Sheet (SDS) MILANO

According to UN GHS 8th Ed
Revision Date: 28/08/2022

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Version: 1.1

SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

Product identifier:

Identification as on the label/Trade name: MILANO

Common Name: Metribuzin 480 g/ℓ SC

Relevant identification uses of the substance and uses advised against:

Identified uses: Fungicide

Uses advised against: Use only as directed.

Details of the supplier of the Safety Data Sheet:

Enviro Bio-Chem (Pty) Ltd, 44 Kerk Street,
Lichtenburg, North West, South Africa, 2740

Details of the Registration Holder:

Erintrade cc t/a RT Chemicals 44 Kerk Street,
Lichtenburg, North West, South Africa, 2740

Contact Details:

Telephone: +27 87 231 7261
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Website: www.envirobiochem.co.za

Emergency telephone numbers:

24 Hour Emergency Number: Bateleur: +27 83 123 3911
Griffon Poison Information Centre: +27 82 446 8946
Poisons Information Helpline: 0861 555 777
Tygerberg Hospital: +27 21 931 6129

SECTION 2. HAZARD IDENTIFICATION

Classification of the substances or mixture

The mixture is classified according to Regulation (EC) No 1272/2008 EU-GHS/CLP

Hazard classes/Hazard categories	Hazard statement
STOT SE (Category 3)	H335
Aquatic Toxicity Acute (Category 1)	H400
Aquatic Toxicity Chronic (Category 1)	H410

For full text of H statements see section 16

The most important adverse effects

The most important adverse physiochemical effects: None known

The most important adverse human health effects: May cause respiratory irritation.

Label elements

Hazard pictograms:
Signal Word: Warning

Hazard Statements:

H335	May cause respiratory irritation
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

Precautionary Statements:

P102	Keep out of reach of children
P201	Obtain special instructions before use.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release into the environment.
P391	Collect spillage.
P403/233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to suitable landfill in accordance with local regulations.

Other hazards: None known

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: **Mixture**

Ingredients:

Substance name (IUPAC)	CAS Number.	Concentration % by weight	Classification EC1272/2008
Metribuzin	21087-64-9	45.9%	Acute toxicity, (Category 4), H302 Aquatic Acute (Category 1)H400 Aquatic Chronic (Category 1) H410
Sodium dodecylbenzene sulfonate	2211-98-5	< 5%	Skin irritation (Category 2), H315 Eye irritation (Category 2), H319 STOT SE (Category 3), Respiratory system, H335
Sodium benzoate	532-32-1	< 1%	Eye Irritation (Category 2A) H319

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

SECTION 4. FIRST AID MEASURES

Description of first aid measures:

In case of inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a POISON CENTER or doctor/physician if you feel unwell..

In case of skin contact: In case of contact, Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.

In case of eye contact: Flush eyes with clean water for at least 15 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention immediately.

In case of ingestion Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.. Never give anything by mouth to an unconscious person. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

Most important symptoms and effects, both acute and delayed:

Inhalation: May cause respiratory irritation

Anticipated delayed effects: None known

Most important symptoms/effects: None known

Indication of any immediate medical attention and special treatment needed:

Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

SECTION 5. FIRE FIGHTING MEASURES

Extinguisher media:

Suitable extinguisher media: Foam. Dry powder. Carbon dioxide. Water spray.
Unsuitable extinguishing media**:** Do not use high volume water jet, due to contamination risk.

Specific hazards arising from the mixture:

Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous decomposition products in case of fire: Refer to Section 10: Stability and Reactivity.

Advice for fire-fighters:

Avoid inhaling hazardous vapours. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Use an approved/certified respirator or equivalent.
Contain fire control agents for later disposal according to Section 13.
Water can be used to cool unaffected containers.

SECTION 6. ACCIDENTAL RELEASE

Personal precautions, protective equipment, and emergency procedures:

Personal precautions: Avoid contact with eyes and skin. Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.
For emergency responders: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Use an approved/certified respirator or equivalent Avoid contact with eyes and skin. Do not breathe in fumes. Refer to section 8 for recommended personal protective equipment. Evacuate unnecessary personnel.

Environmental precautions:

Stop leak if without risk. Do not touch spilled material. Use a light water spray to reduce vapours.
Prevent entry into drains, watercourses, or confined areas; dike if needed.
If the product contaminates public water, inform appropriate authorities immediately in accordance with local regulations.
Dispose in a safe manner in accordance with local/national regulations.

Methods for containment and cleaning up:

Spills: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements, or confined areas. Contain and collect spillage with noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with eyes and skin. Use with adequate ventilation. Avoid breathing vapours or mist. Keep away from heat, sparks and flames. Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed.Workers should wash hands and face before eating, drinking, and smoking.

Remove contaminated clothing and protective equipment before entering eating areas.
Protective measures: Observe directions on label and instructions for use.
Advice on general occupational hygiene: Do not eat drink or smoke when handling this product.

Conditions for safe storage, including incompatibilities:

Store product in original container only .Store product in a segregated and approved area. Keep away from heat & sources of ignition. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use.

Specific end uses:

Use as directed. Use original container.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Acceptable Daily Intake (ADI): No data available
Exposure Limits: No data available

Exposure control:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. A Risk Assessment should be conducted before handling is to commence to determine specific exposure control.
Appropriate engineering controls: Use outdoors in a well-ventilated area. Provide exhaust ventilation or other engineering controls. Ensure that eyewashstations and safety showers are proximal to the work-station location.
Hygiene measures: Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection: Avoid contact with eyes. Wear a full-face shield when handling the product or spraying. The use of safety glasses with side shields (or goggles) are recommended if a face shield is not used.
Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.
Body protection: Appropriate impervious clothing is required to prevent skin contact with the product.
Respiratory protection: Avoid inhaling fumes or spray drift. Under normal conditions of use, no respiratory protection is required. During periods of abnormal exposure to heavy spay or mist, use a NIOSH approved mist respirator. Limitations of respirator use specified by the approving agency and the manufacturer must be observed
Environmental exposure controls: Prevent product from entry into sewers and water courses

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Free flowing homogenous Liquid
Colour	Beige
Odour	Musty odour.
Odour threshold	No data available
pH	No data available
Melting point / freezing point (°C)	No data available
Boiling point (°C)	No data available
Flash point (°C)	No data available
Evaporation rate	No data available
Flammability	Non-flannable
Upper /lower flammability limits	No data available

Vapour pressure	No data available
Vapour density	No data available
Relative Density (20°C)	1.15 g/cm3 at 20 ˚C.
Water solubility (g/l) at 20°C	Forms a suspension in water
Partition coefficient : n-octanol/water	No data available
Auto-ignition temperature (° C)	No data available
Viscosity, cps	No data available
Explosive properties	No data available
Oxidising properties	No data available
Explosive limits	No data available

SECTION 10. STABILTY AND REACTIVITY

Reactivity: None known

Chemical stability: Stable under normal storage conditions for 2 years. Avoid excessive heat sources. Store at low temperature conditions, preferably below 30˚C and not for prolonged periods in direct sunlight.

Possibility of hazardous reactions: None known

Conditions to avoid: Heat, sparks, open flames, and direct sunlight.

Incompatible materials: None known

Hazardous decomposition products: Toxic oxides of carbon, nitrogen and sulfur are released when the product decomposes on heating

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution: No data available

Information on toxicological effects:

Assessment of acute toxicity:

The product has not been tested. The data reported is for the main ingredients in the mixture.

Metribuzin tech CAS No. 21087-64-9	
Acute toxicity:	
Acute Oral LD50 (rat - female)	1100 mg/kg
Acute Dermal LD50 (rat):	>20000 mg/kg
Acute Inhalation LC50 - 4 h (rat)	>8.6 mg/l air
Skin irritation/ corrosion (rabbits)	Not a skin irritant
Eye damage / irritation (rabbits)	Not an eye irritant
Respiratory or skin sensitization (Guinea pig)	Not a skin sensitiser
Germ cell mutagenicity	No evidence of mutagenic effects
Carcinogenicity	No evidence of carcinogenicity in animal tests
Reproductive toxicity	No evidence of reproductive effects
Specific Target Organ Toxicity STOT single exposure	In single high dose studies, metribuzin appears to depress the central nervous system. Other studies indicate that the target organs of metribuzin are the thyroid gland and the liver
Specific Target Organ Toxicity STOT repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met

Additional Information:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Sodium Benzoate CAS No. 532-32-1	
Acute toxicity:	
Acute Oral LD50 (rat - male)	3450 mg/kg
Acute Dermal LD50 (rat):	2000 mg/kg
Acute Inhalation LC50 - 4 h (rat)	12.2 mg/l air
Skin irritation/ corrosion (rabbit)	Not a skin irritant
Eye damage / irritation (rabbit)	Eye irritant
Respiratory or skin sensitization (Guinea pig)	Not a respiratory or skin sensitizer
Germ cell mutagenicity Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative	
Carcinogenicity	No data available
Reproductive toxicity	No data available
Specific Target Organ Toxicity STOT single exposure	No data available
Specific Target Organ Toxicity STOT repeated exposure	No data available
Aspiration hazard	No data available

Additional Information:
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

Metribuzin tech CAS No. 21087-64-9	
Toxicity	
Birds Acute oral LD_{50}	164 mg/kg Bobwhite quail; 460-680 mg/kg Mallard ducks
Aquatic Toxicity Fish LC_{50} (96 hr) Aquatic Toxicity Daphnia EC_{50} (48 hr) Algae EC_{50} (72h) Bee Toxicity LC_{50}	74.6 mg/l rainbow trout; 141.6 mg/l Golden orfe 49.6 mg/l 0.021 mg/l *Scenedesmus subspicatus* 35 µg/ bee non-toxic to bees
Persistence and degradability	Metribuzin is of moderate persistence in the soil environment. The half-life varies according to soil type and climatic conditions. Soil half-lives of 30 to 120 days have been reported; a representative value may be approximately 60 days. Metribuzin is poorly bound to most soils and soluble in water, giving it a potential for leaching in many soil types. The major mechanism by which metribuzin is lost from soil is microbial degradation. Losses due to volatilization or photodegradation are not significant under field conditions. 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.
Bioaccumulation potential	Does not bioaccumulate
Mobility in soil	Mobile in soils

Sodium Benzoate CAS No. 532-32-1

Toxicity	
Aquatic Toxicity Fish flow through test LC_{50} (96 h) Aquatic Toxicity Daphnia static test LC_{50} (48h) Toxicity to algae – static test ErC50 (72h) Toxicity to bacteria static test EC50 (3h)	484 mg/l Pimephales promelas (fathead minnow) >100 mg/l Daphnia magna (Water flea) 100mg/l Pseudokirchneriella subcapitata (green algae) - No data available
Persistence and degradability	Readily biodegradable 94% (Aerobic)
Bioaccumulation potential	No data available
Mobility in Soil	No data available
Result of PBT and vPvB assessment	No data available
Other adverse effects	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Product:

Keep out of drains, sewers, ditches, and waterways. Open dumping or burning of this pesticide is prohibited.

Waste resulting from the use of this product cannot be re-used or reprocessed. Refer to container label for disposal information. Treat as hazardous waste and dispose of in accordance with local/ regional/ national/ international regulations.

Container:

Refer to container label for disposal information. Emptied containers retain vapour and product residues.

Observe all labelled safeguards until container is cleaned, reconditioned, or destroyed. Rinse empty container three times with a volume of water equal to at least one tenth of that of the container. Pour rinse water into spray tank

Dispose of as hazardous waste. Do not contaminate water when disposing of rinse water. Dispose of using an approved waste disposal service provider.

Follow all local/ regional/ national/ international regulations.

SECTION 14. TRANSPORT INFORMATION

UN Number	3082
UN proper shipping name	Environmentally Hazardous Substance; Liquid; N.O.S. (Metribuzin 480 g/l)
Transport hazard class	9
Packaging group	III
Marine pollutant	Yes

SECTION 15. REGULATORY INFORMATION

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

Relevant information regarding authorization: Occupational Health and Safety Act 1993. Regulation for Hazardous Chemical Agents, 2021.UN Recommendations on the Transport of Dangerous Goods Model Regulations Rev. 21 (2019), Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 8, 2019.

Relevant information regarding restrictions:

EU regulations: Regulation EC 1272/2008 [EU-GHS/CLP]

Other National regulations:

National Road Traffic Act, 1996 (ACT NO. 93 of 1996).

SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes.

National Environmental Management Waste Act 59 of 2008.

Act 36 of 1947 of the Republic of South Africa. This product is registered under it is a violation of South African

law to use this product in any manner inconsistent with its approved labelling. Read and follow all label directions
Chemical Safety Assessment carried out? No

SECTION 16. OTHER INFORMATION

Indication of changes:

Classification according to SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]
GHS aligned – all sections

Relevant H statements (number and full text):

H302-Harmful if swallowed
H315-Causes skin irritationH319-Causes serious eye irritation
STOT SE 3 H335- Specific Target Organ Toxicity single exposure (Category 3), Respiratory system
Aquatic acute toxicity (Category 1): Very toxic to aquatic life
Aquatic chronic toxicity (Category 1): Very toxic to aquatic life with long lasting effects

Training instructions:

Use as indicated on the label, special training may be required for application.

Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.
The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product, nor where instructions or recommendations are not followed.