

MATERIAL SAFETY DATA SHEET (MSDS)

METRIBUZIN 480SC

SECTION 1. IDENTIFICATION OF THE COMPANY / SUBSTANCE

SUPPLIER : NOVA AGRO (HK) LTD.
(Reg. No. 1023146)
6th Floor Wyndham Place
44 Wyndham Street
CENTRAL HONG KONG.

Date of this document: February, 2021

Emergency Telephone Numbers:

Poisonings

National Poison Centre: (+27)-21-938 6084 (office hours).

(South Africa): (+27)-21-931 6129 (after hours); (+27)-800 33444 (24 h)

Product name: METRIBUZIN 480SC

Chemical name: 4-amino-6-tert-butyl-4,5-dihydro-3-methylthio-1,2,4-triazin-5-one

Chemical type: Herbicide

Chemical family: Triazinone

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component: Metribuzin 480g/l

EEC classification: Xn, N

R Phrases: 22-50/53

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview: Caution! Avoid contact with skin, eyes and clothing. Harmful if swallowed or absorbed through skin.

Physical State: Liquid Suspension

Odour: Musty

Appearance: White

Routes of Exposure: Eye contact, Skin contact, Skin Absorption

Immediate Effects:

Eye Mildly irritating. Avoid contact with eyes.

Skin Slightly irritating. Mildly toxic. Do not get on skin or clothing.

Ingestion Harmful if swallowed. Mildly toxic. Do not take internally.



SECTION 4. FIRST AID MEASURES

General

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Ingestion

Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Notes to physician

Signs and Symptoms

The compound does not cause any definite symptoms that would be diagnostic.

Poisoning is accompanied by breathing difficulties and sedation.

Treatment

Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: Not applicable

Suitable Extinguishing Media: Water, Dry chemical

Fire Fighting Instructions

Keep out of smoke. Cool exposed containers with water spray. Fight fire from upwind position. Use self-contained breathing equipment. Contain runoff to prevent entry into sewers or waterways.

SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal

Keep unnecessary people away, isolate hazard area and deny entry. Avoid contact with spilled product or contaminated surfaces. For personal protection see section 8.



Land Spill or Leaks

Avoid breathing vapors and skin contact. Remove sources of ignition if combustible or flammable vapors may be present and ventilate area. Dike contaminated area with absorbent granules, soil, sand, etc.

Large Spill: Material should be recovered. Small spills can be absorbed with absorbent granules, spill control pads, or any absorbent material. Carefully sweep up absorbed spilled material. Place in covered container for reuse or disposal. Scrub contaminated area with soap and water. Rinse with water. Use dry absorbent material such as clay granules to absorb and collect wash solution for proper disposal. Contaminated soil may have to be removed and disposed. Do not allow material to enter streams, sewers or other waterways or contact vegetation.

SECTION 7. HANDLING AND STORAGE
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Handling Procedures

Handle and open container in a manner as to prevent spillage.

Storing Procedures

Do not contaminate water, food, or feed by storage or disposal.

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed.

Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as practical, wash thoroughly and change into clean clothing.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Maintain exposure levels below the applicable exposure limit through the use of general and local exhaust ventilation. When handlers use closed systems, enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Eye/Face Protection

Goggles Safety glasses

Hand Protection

Chemical resistant gloves Waterproof gloves.

Body Protection

Long-sleeved shirt and long pants. Coveralls shoes plus socks.

Respiratory Protection

When respiratory protection is necessary under the conditions of use, wear a respirator approved for pesticides by the National Institute for Occupational Safety and Health (NIOSH).

General Protection

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Clean water and soap should be available for washing in case of eye or skin contamination. Educate and train employees in safe use of the product. Follow all label instructions.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White

Physical State: Liquid Suspension

Odour: Musty

pH: 7.1 (1% in distilled water)

Specific Gravity: 1.16 at 20°C

Melting/Freezing Point: -10°C

SECTION 10. STABILITY AND REACTIVITY**Chemical Stability**

This material is stable under normal handling and storage conditions described in Section 7.

Conditions to Avoid

Heat

Moisture

Sustained temperatures above 100°F.

Incompatibility

Alkalies

Aldehydes

Ketones

Hazardous Products of Decomposition

Decomposition Type: thermal

Carbon dioxide (CO₂)

Sulfur dioxide

Mercaptans

Amines

Hazardous Polymerization (Conditions to avoid)

Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute studies have been performed on this product as formulated. The non-acute information pertains to the active ingredient, metribuzin.

Acute Oral Toxicity

Male Rat: LD50: 1,865 mg/kg

Female Rat: LD50: 1,078 mg/kg

Acute Dermal Toxicity

Male and Female Rat: LD50: > 2,000 mg/kg

Acute Inhalation Toxicity

Male and Female Rat: LC50: 4-hr exposure to liquid aerosol: 3.055 mg/l (analytical)

Male and Female Rat: 1-hr exposure to liquid aerosol (extrapolated from 4-hr LC50): 12.22 mg/l (analytical)

Skin Irritation

Rabbit: Slight dermal irritant.

Eye Irritation

Rabbit: Minimally irritating.

Sensitization

Guinea pig: Not a skin sensitizer.

Sub-Chronic Toxicity

Metribuzin caused increased cholesterol levels, liver enzyme induction and secondary effects on thyroxin levels in a subacute dermal toxicity study in rabbits.

In subacute inhalation studies, rats exposed to aerosol concentrations of metribuzin exhibited behavioral changes, liver enzyme induction and secondary effects on organ weights associated with decreased body weight gains.

Chronic Toxicity

Major effects in rats and dogs from long-term exposure to metribuzin included decreased body weight gains, decreased food consumption, anemia, mortality and/or organ effects (liver, kidney, thyroid, testis).

Assessment Carcinogenicity

In oncogenicity studies in rats and mice, metribuzin was not considered carcinogenic in either species.

Reproductive & Developmental Toxicity

REPRODUCTION: There was no evidence of reproductive toxicity in a 2-generation reproductive study in rats treated with metribuzin. Offspring at the highest dose exhibited reduced body weight gains starting a Day-14 lactation, an age correlating with the consumption of treated diets.

DEVELOPMENTAL TOXICITY: In developmental toxicity studies in rats and rabbits, there was no evidence of a teratogenic potential for metribuzin. In rats, secondary developmental effects were observed only at the high dose and in conjunction with maternal toxicity.

Neurotoxicity

Transient neurobehavioral symptoms were observed in an acute oral neurotoxicity screening study in rats treated with metribuzin. There were no correlating morphological changes observed in the neural tissues.

There was no evidence of neurotoxicity in a subchronic neurotoxicity screening study in rats treated with dietary concentrations of metribuzin.

Mutagenicity

Numerous in vitro and in vivo mutagenicity studies have been conducted with metribuzin. The data, taken collectively, demonstrates that metribuzin is not genotoxic.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment washwater.

SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal**Guidance**

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

RCRA Classification Not Regulated under this Statute

SECTION 14. TRANSPORT INFORMATION

IMDG shipping name:	Environmentally hazardous substance, liquid, n.o.s. (480g/ℓ metribuzin)
IMDG packaging group:	III
IATA shipping name:	Environmentally hazardous substance, liquid, n.o.s. (480g/ℓ metribuzin)
IATA class:	9 3082 III
ADNR class:	9 No. 11C

SECTION 15. REGULATORY INFORMATION

EEC Hazard classification: Labeling in accordance with directive 88/379/EEC (preparations) and its amendments and adaptations.

Symbol: Xn, Harmful.

Contains: 480g/L metribuzin

Risk phrases: R22: Harmful if swallowed
R36: Irritating to eyes

SECTION 16. OTHER INFORMATION

Suspension concentrate

Application: Herbicide

This information is provided in good faith and based on current knowledge and experience, but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions. The data does not signify any warranty with regard to the products' properties.
