Material Safety Data Sheet

METRIBUZIN 700 WP

1. IDENTIFICATION OF SUBSTANCE: Product Name:
Metribuzin 95%TC **Chemical Name:**
4-amino-6-tert-butyl-4,5-dihydro-3-methylthio-1,2,4-triazin-5-one
Molecular Formula: $C_8H_{14}N_4OS$
Molecular weight: 214.3
CAS Number: *21087–64–9*

2. COMPOSITION/DATA ON COMPONENTS:

Composition	CAS No.	Content
Metribuzin	*21087–64–9*	70%
Other ingredients	-	To 100%

3. HAZARDS IDENTIFICATION:
Harmful if swallowed. Toxic if inhaled.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. FIRST AID MEASURES: General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE FIGHTING MEASURES: Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides. **Advice for firefighters**

Wear self-contained breathing apparatus for fire-fighting if necessary.

Further information

no data available

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE: Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. **Conditions for safe storage, including any incompatibilities**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Specific end uses

no data available

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION: Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: white to off white powder
Odour: weak characteristic odor Vapor Pressure:
0.058 mPa (20°C) Melting point: 126°C
Density: 1.26 at 20°C

10. STABILITY AND REACTIVITY:

Chemical stability: Stable under recommended storage conditions. Stable to dilute acids and alkalies.
Conditions to avoid: Strong oxidizing condition
Incompatible materials: Strong oxidizing agents
Hazardous decomposition products: Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION:

Acute toxicity

Route of application	Animal	Active ingredient	Formulated product
Oral LD50	Rat (F) Mice	*322 mg /kg* *1215 mg /kg*	*437 mg/kg* *1650 mg/kg*
Dermal (LD50)	Rat	*> 5000 mg/kg*	*> 5000 mg/kg*
Inhalation (LC50)	Rat	*> 0.648mg/l air.*	*> 0.879 mg /l*
Skin irritation	Rabbit	*Not irritant*	*Not irritant*
Eye irritation	Rabbit	*not eye irritant*	*not eye irritant*
Skin sensitization	Guinea pig	*Not sensitising*	*Not sensitising*

Carcinogenicity

IARC:

No component of this product present at levels greater than or equal to 0.1% is identifi ed as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Developmental Toxicity - Rat - Oral

Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord).

12. <u>ECOLOGICAL INFORMATION:</u>

Bee toxicity:

Test LD50 24, 48 and 72 hour values - µg bee^{-1}

Contact > 100

Oral >76.7

Statement on bee toxicity: is considered Slightly Toxic to honeybees

Aquatic toxicity:

96-hour exposure resulted in the following LC50 values:

Species

Rainbow trout 74.6 LC50 mg/l (96 hr)

Golden orfe 141.6 LC50 mg/l (96 hr)

Statement on fish toxicity is considered Slightly Toxic to fish

Accumulation in aquatic organisms: 8.3. التراكم في الكائنات المائية

Bioaccumulation to be expected under practical conditions

Effect on natural enemies: 8.4. التأثير على الأعداء الطبيعية

No effects on carabid beetles; harmless to slightly harmful to green lacewing, parasite species, mites/spiders and insects, except moderately harmful to Bembidion lampros

Effect on earthworm:LC50 for worms 332 mg/kg soil;

Effect on Birds:

Species	Acute oral LD50 mg/l
bobwhite quail	1675 mg/kg
canaries	>2000 mg/kg

Statement on Birds toxicity: is considered Slightly Toxic to birds

13. DISPOSAL CONSIDERATION:

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION:

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Metribuzin)
UN NO.: 3077
Transport hazard class(es): 9
Packaging group: III
Environmental hazards: yes

15. REGULATIONS:

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: XN
Risk Phrases:

R 22 Harmful if swallowed.

Safety Phrases:

S 13 Keep away from food, drink and animal feeding stuffs.
S 25 Avoid contact with eyes.
S 46 If swallowed, seek medical advice immediately and show this container or label.

16. OTHER INFORMATION:

The information in this Material Safety Data Sheet intends to help with some general recommendations related to health and safety, based on our knowledge about handling, storage and use of product. The data correspond to current knowledge and do not represent warranty of the properties. The user of product should have observed under his responsibility, the regulations and rulings for local authorities.