

Preparation Date 06-Apr-2009

Revision Date 03-Jan-2017

Revision Number 02

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product Identifier

Product Description Metribuzin 480 g/L SC

### Other means of Identification

UN-No UN 3082

### Recommended use of the chemical and restriction on use

Recommended use Herbicide

Uses advised against Activities contrary to label recommendations

### Details of the Supplier of the Safety Data Sheet

#### Supplier Address

UPL Limited  
Uniphos House, Madhu Park,  
Khar (W), Mumbai, India  
Tel: +91-(022)- 2646-8000

E-mail address info.in@uniphos.com

### Emergency Telephone Number

Company Phone Number +91-(022)- 2646-8000  
Emergency telephone number +91-(022)- 2646-8000 (From 9.00 A.M. to 5.00 P.M.)

## 2. Hazard Identification

### Classification

Acute Oral Toxicity	Category 4 - (H302)
Acute Inhalation Toxicity	Category 4 - (H332)
Aquatic Acute Hazard	Category 1 - (H400)
Aquatic Chronic Hazard	Category 1 - (H410)

### Label elements



Signal word

Warning

#### Hazard Statements

H302 - Harmful if swallowed  
H332 - Harmful if inhaled  
H410 - Very toxic to aquatic organism with long lasting effects

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## Precautionary Statements

### Prevention

- P264 Wash ... thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.

### Response

- P301+P312 IF SWALLOWED: Call a POISON CENTER/ doctor or physician if you feel unwell.
- P330 Rinse mouth.
- P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTRE/doctor or physician if you feel unwell.
- P391 Collect spillage.

### Storage

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.

### Disposal

- P501 Dispose of contents/container to an approved waste disposal plant

## Other Information

No other hazards known.

## 3. Composition/Information on Ingredients

Chemical name	CAS-No	W/W %	W/V%
Metribuzin	21087-64-9	40-45	48

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

## 4. First aid measures

### First-aid measures

- Eye contact** Hold eyes open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.
- Skin contact** Remove contaminated clothing and shoes immediately, then wash with plenty of water. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned. If skin irritation or rash occurs, get medical attention.
- Ingestion** Rinse mouth. Never give anything by mouth to an unconscious person. Do not induce vomiting unless told by physician. If vomiting occurs ensure patient can breathe. If you feel unwell, get medical attention.
- Inhalation** IF INHALED: Immediately remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. If you feel unwell, get medical attention.

### Most Important Symptoms and Effects, Both Acute and Delayed

**Most Important Symptoms and Effects** The most important known symptoms and effects are described in the labelling (See section 2) and/or in section 11.

### Indication of immediate medical attention and special treatment needed

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Notes to physician      Treat symptomatically and supportively.

## 5. Fire-fighting measures

### Extinguishing media

Suitable extinguishing media      Water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Unsuitable extinguishing media      High pressure water jets may scatter spilled material

### Special hazards arising from the substance or mixture

Special Hazard      Thermal decomposition can lead to release of irritating or toxic fumes (or gases) in fire.

Hazardous combustion products      Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Oxides of Sulphur

### Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective suit. Use standard firefighting procedures and consider the hazards of involved material.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal Precautions      Do not eat, drink or smoke while using this product. Avoid contact with skin and eyes. Do not breathe dust/gas/fumes/mist/vapours/spray. Ensure adequate ventilation. Use only outdoors or in a well-ventilated area.

Environmental precautions      Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Keep material out of lakes, streams, ponds and sewer drains. Dike to confine spill and absorb with an absorbant such as clay, sand or soil. Local authorities should be advised if significant spillages cannot be contained.

### Methods and material for containment and cleaning up

Methods for Clean-Up      Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Follow all label instructions regarding spill clean-up and residual disposal methods.

Reference to other sections      Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

## 7. Handling and Storage

### Precautions for safe handling

Handling      While using do not eat drink or smoke. Do not breathe dust/fume/gas/vapours/spray/mist. Ensure adequate ventilation. Wash thoroughly after handling. Avoid contact with skin and eyes. Empty containers may contain hazardous residues. Keep away from sources of ignition - No smoking. Do not reuse empty container.

### Conditions for safe storage, including any incompatibilities

Storage      Store in accordance with local regulation. Store in original container. Keep containers tightly

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closed in a cool, well-ventilated place. Keep away from incompatible material. Do not store in unlabeled containers. Do not store material near food, feed or drinking water.

**Incompatible materials** Strong oxidizing agents

## 8. Exposure Controls/Personal Protection

**Exposure Guideline** Apply technical measures to comply with the occupational exposure limit.

Chemical Name	France	Spain	Indonesia	Singapore
Metribuzin	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	PEL: 5 mg/m <sup>3</sup>

**Engineering controls** Ensure adequate ventilation, especially in confined areas. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Personal protective equipment

**Eye/Face Protection** Avoid contact with eyes. Where there is potential for eye contact have eye flushing equipment available. Tightly fitting safety goggles. Face-shield.

**Skin/Hand protection** Wear protective gloves/clothing. Long-sleeved clothing

**Respiratory protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**Environmental exposure controls** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Local authorities should be advised if significant spillage cannot be contained.

### General hygiene considerations

Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

## 9. Physical and Chemical Properties

### Information on basic physical and chemical properties

**Appearance** White viscous liquid  
**Physical state** Liquid  
**Odor** Weak characteristic odor  
**Color** White  
**Odor threshold** No information available

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
pH	7-8	
Melting point/freezing point	No information available	
Boiling Point/Range	No information available	
Flash Point	>98°C	
Flammability (solid, gas)	Not highly flammable	
Upper/lower flammability or Explosive limit	No information available	
Density	1.16 ± 0.02 g/cm <sup>3</sup>	
Vapor density	No information available	
Vapor pressure	No information available	
Water solubility	Miscible with water	
Solubility in Other Solvents	No information available	

**Partition coefficient: n-octanol/water** No information available

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Autoignition temperature	No information available
Decomposition temperature	No information available
Dust Content	No information available
Kinematic Viscosity	250.259 ± 2.5 mm <sup>2</sup> /s
Oxidizing properties	No information available
Explosive properties	No information available
Surface Tension	46.3±0.1 mN/m at 20°C±1

## 10. Stability and Reactivity

### Reactivity

None known

### Chemical stability

Stable under normal temperature and conditions.

### Possibility of hazardous reaction

None under normal processing.

### Conditions to avoid

Exposure to elevated temperature can cause product to decompose. Avoid contact with incompatible materials.

### Incompatible Materials

Strong oxidizing agents.

### Hazardous decomposition products

Thermal decomposition can lead to release of irritating or toxic fumes (or gases) in fire.  
Thermal hazardous decomposition products: Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Oxides of Sulphur

## 11. Toxicological Information

### Information on Toxicological Effects

LD50 Oral = 1750 to 2000 mg/kg  
LD50 Dermal = >2,000 mg/kg  
LC50 Inhalation/4Hour (Aerosol) = >1.881 mg/L

#### Local effect

Inhalation	Harmful if inhaled
Eye contact	Non-irritant
Skin contact	Non-irritant
Ingestion	Harmful if swallowed

#### Chronic toxicity

Skin corrosion/Irritation	Non-irritant
Eye damage/Irritation	Non-irritant
Sensitization	Non-sensitizer
Mutagenic effects	Based on available data, classification criteria are not met.
Carcinogenic effects	Based on available data, classification criteria are not met.

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Reproductive effects  
STOT - Single Exposure  
STOT - repeated exposure  
Aspiration hazard

Based on available data, classification criteria are not met.  
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## 12. Ecological Information

### Ecotoxicity

Toxic to aquatic life with long lasting effects

Fish/LC50/96hr = 41.87 mg/L

Daphnia/EC50/48hr = 2.2 mg/L

Alga/EC50/72hr = 15.15 mg/L

### Persistence and Degradability

No information available.

### Bioaccumulative Potential

No information available.

### Other Adverse Effects

No information available.

## 13. Disposal Considerations

### Waste Treatment Methods

**Waste Disposal Method** Dispose of in accordance with applicable Federal, State, local laws and regulations.

**Contaminated packaging** Empty container should be taken for local recycling, recovery or waste disposal. Do not re-use container. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 14. Transport Information

### IMDG/IMO

UN-No	UN 3082
Proper Shipping name	Environmentally hazardous substances, liquid, n.o.s. (Metribuzin)
Hazard class	9
Packing group	III
EMS-No	F-A,S-F
Environmental Hazard	Marine pollutant

### IATA/ICAO

UN-No	UN 3082
Proper Shipping name	Environmentally hazardous substances, liquid, n.o.s. (Metribuzin)
Hazard class	9
Packing group	III
Environmental Hazard	Yes

## 15. Regulatory Information

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## International Inventories

(Metribuzin: CAS 21087-64-9)

USINV	Complies
TSCA	-
EINECS/ELINCS	Complies
DSL/NDSL	-
PICCS	-
ENCS	-
IECSC	Complies
AICS	Complies
KECL	Complies
- : Not listed/Determines	

### Legend

USINV - Total TSCA/FIFRA Inventory

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

## 16. Other Information

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End of Safety Data Sheet