



# SAFETY DATA SHEET

## Mistral 700 WG

Revision Date 23-Dec-2018

Version 1

Publish Date 23-Dec-2018

Product No HRB00978-27

AG-M1-700 WG 23074 FSG 01094 H-1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### Product identifier

#### Mistral 700 WG

Synonyms

Metribuzin 70 WG

Pure substance/mixture

Mixture

### Relevant identified uses of the substance or mixture and uses advised against

Recommended Use

Herbicide

Uses advised against

No information available

### Details of the supplier of the safety data sheet

Supplier Address

ADAMA SOUTH AFRICA (PTY) LTD  
Ground Floor, Simeka House  
The Vineyards Office Estate  
99 Jip de Jager Drive  
Bellville 7530

For further information, please contact

Email address

SDS@ADAMA.COM

Emergency Telephone

Emergency Telephone

+ 27 82 446 8946  
+ 27 86 155 5777  
+ 27 21 982 1460

## Section 2: HAZARDS IDENTIFICATION

### Classification of the substance or mixture

Acute aquatic toxicity

Category 1 - (H400)

Chronic aquatic toxicity

Category 1 - (H410)

### Label Elements

Hazard pictograms



<b>Signal word</b>	Warning
<b>Hazard Statements</b>	H410 - Very toxic to aquatic life with long lasting effects
<b>Precautionary Statements</b>	P102 - Keep out of reach of children P501 - Dispose of contents/ container to an approved waste disposal plant

**Other Hazards**  
No information available

### Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### Mixture

Chemical Name	Weight-%	CAS No	EC No	GHS Classification	M-Factor
Metribuzin	66-74	21087-64-9	244-209-7	Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	M=10 M=10
Reaction product of naphthalene, propan-2-ol, sulfonated and neutralized by caustic soda	1-3	N/A	939-368-0	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Eye Dam. 1 (H318) STOT SE 3 (H335)	
Citric acid monohydrate	< 2	5949-29-1		Eye Irrit. 2 (H319)	
disodium maleate	< 2	371-47-1	206-738-1	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)	

### Section 4: FIRST AID MEASURES

#### First aid measures

<b>General advice</b>	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!.
<b>Inhalation</b>	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration, Call a physician.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
<b>Ingestion</b>	Rinse mouth. Drink plenty of water, If symptoms persist, call a physician,
<b>Self-protection of the first aider</b>	Use personal protective equipment as required.

---

**Most important symptoms and effects, both acute and delayed**

**Symptoms** None known

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

**Section 5: FIRE-FIGHTING MEASURES**

**Extinguishing media**

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

No information available.

**Special hazards arising from the substance or mixture**

No specific hazard known.

**Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus

In the event of fire and/or explosion do not breathe fumes.

**Section 6: ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**

Use personal protective equipment as required.

**For emergency responders**

Use personal protection recommended in Section 8.

**Environmental precautions**

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

**Methods and material for containment and cleaning up**

**Methods for cleaning up**

Take up mechanically, placing in appropriate containers for disposal.

**Reference to other sections**

**Other Information**

See also section 8,13

**Section 7: HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling**

Avoid generation of dust. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

**General Hygiene Considerations**

When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

**Specific end use(s)**

**Risk Management Methods (RMM)**

The information required is contained in this Material Safety Data Sheet.

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**National occupational exposure limits**

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Metribuzin 21087-64-9			TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Metribuzin 21087-64-9		TWA: 5 mg/m <sup>3</sup>			TWA: 5 mg/m <sup>3</sup>
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Metribuzin 21087-64-9	STEL 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>				TWA: 5 mg/m <sup>3</sup>

**Exposure controls**

**Engineering Controls**

Ensure adequate ventilation, especially in confined areas.

**Personal protective equipment**

**Eye/face protection**

Tight sealing safety goggles.

**Hand Protection**

Gloves made of plastic or rubber.

**Body Protection**

Suitable protective clothing.

**Respiratory protection**

Use only with adequate ventilation.

**General Hygiene Considerations**

When using do not eat, drink or smoke. Wash contaminated clothing before reuse.

**Environmental exposure controls**

Do not allow into any sewer, on the ground or into any body of water.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Physical and Chemical Properties**

Property	Values	Method	Remarks
<b>Appearance</b>			
Physical state	: Solid		
Color	: beige		
Odor	: characteristic		
Odor threshold	: No data available		
pH	: 8.7-9.7	CIPAC MT 75.3	
Melting point/freezing point °C	: ---		Not Applicable
Boiling point/boiling range °C	: ---		Not Applicable
Flash point °C	: ---		Not Applicable
Evaporation rate	: Not Applicable		
Flammability (solid, gas)	: Not highly flammable	EEC A.10	

<b>Upper/lower flammability or explosive limits</b>	:	No data available	
<b>Vapor pressure</b> kPa	:	----	Not Applicable
<b>Vapor density</b>	:	No data available	
<b>Relative density</b>	:	----	Not Applicable
<b>Solubility(ies)</b> mg/l	:	----	Not Applicable
<b>Partition Coefficient (n-octanol/water) Log Pow</b>	:		See Section 12 for more information
<b>Autoignition temperature</b> °C	:	> 400	EEC A.16
<b>Decomposition temperature</b> °C	:	----	No data available
<b>Kinematic viscosity</b> mm <sup>2</sup> /s 40 °C	:	----	Not Applicable
<b>Explosive properties</b>	:	Not an explosive	
<b>Oxidizing properties</b>	:	No data available	

<b>Other Information</b>			
<b>Bulk density</b> g/ml	:	0.48-0.58	CIPAC MT 186
<b>Surface tension</b> mN/m	:	----	Not Applicable

## Section 10: STABILITY AND REACTIVITY

### Reactivity

Not available.

### Chemical stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Heat, flames and sparks.

### Incompatible Materials

No information available

### Hazardous Decomposition Products

None under normal use conditions.

## Section 11: TOXICOLOGY INFORMATION

### Information on toxicological effects

#### Acute toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
<b>Oral LD50</b> mg/kg	: > 2000	Rat	OECD 423	
<b>Dermal LD50</b> mg/kg	: > 2000	Rat	OECD 402	
<b>Inhalation LC50</b> mg/l/4h	: > 4.8	Rat	OECD 403	Maximum attainable concentration
<b>Skin corrosion/irritation</b>	: Non-irritating to the skin	Rabbit	OECD 404	
<b>Serious eye damage/eye irritation</b>	: Not irritating to eyes	Rabbit	OECD 405	
<b>Respiratory/skin sensitization</b>	: Not a skin sensitizer	Guinea pig	OECD 406	

#### Chronic toxicity

**Germ cell mutagenicity**

**Chemical Name**  
 Metribuzin : Not classified

**Carcinogenicity**

**Chemical Name**  
 Metribuzin : Not Carcinogenic

**Reproductive toxicity**

**Chemical Name**  
 Metribuzin : Not toxic for the reproductive system

**STOT - single exposure**

**Chemical Name**  
 Metribuzin : No data available

**STOT - repeated exposure**

**Chemical Name**  
 Metribuzin : No data available

**Aspiration hazard**

**Chemical Name**  
 Metribuzin : No data available

**Section 12: ECOLOGICAL INFORMATION**

**Toxicity**

**Aquatic toxicity**

<b>Acute toxicity</b>	<b><u>Values</u></b>	<b><u>Species</u></b>	<b><u>Method</u></b>	<b><u>Remarks</u></b>
Fish 96-hour LC50 mg/l	: > 100	Rainbow trout	OECD 203	No data available
Crustacea 48-hour EC50 mg/l	: > 100	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 0.0867	D. Subspicatus	OECD 201	
Other plants EC50 mg/l	: ---			

**Terrestrial Toxicity**

**Birds Oral LD50 mg/kg**  
**Chemical Name**  
 Metribuzin : 164

**Bees Oral LD50 µg/bee**  
**Chemical Name**  
 Metribuzin : 166

**Persistence and degradability**

<b>Abiotic Degradation</b>	<b><u>Values</u></b>	<b><u>Method</u></b>	<b><u>Remarks</u></b>
<b>Water DT50 days</b> <b>Chemical Name</b>			
Metribuzin	: 31.1-52.6		

**Soil DT50 days**  
**Chemical Name**  
 Metribuzin : 5.3-17.3

**Biodegradation**  
**Chemical Name**  
 Metribuzin : No data available

**Bioaccumulative potential**

<b>Partition Coefficient (n-octanol/water) Partition Coefficient (n-octanol/water) Log Pow</b>	<b>Values</b>	<b>Method</b>	<b>Remarks</b>
Chemical Name Metribuzin	: 1.7		25 °C
<b>Bioconcentration factor (BCF)</b>			
Chemical Name Metribuzin	:		Not available
<b>Mobility in soil</b>			
<b>Adsorption/Desorption</b>			
Chemical Name Metribuzin	: 3.14-81.5		Koc

**Results of PBT and vPvB assessment**

The components in this formulation do not meet the criteria for classification as PBT or vPvB

**Other adverse effects**

No information available.

**Section 13: DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

<b>Waste from residues/unused products</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated packaging</b>	Improper disposal or reuse of this container may be dangerous and illegal.
<b>Other Information</b>	Waste codes should be assigned by the user based on the application for which the product was used.

**Section 14: TRANSPORTATION INFORMATION**

**IMDG/IMO**

UN/ID No *	3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ( Metribuzin )
Hazard Class	9
Packing Group	III
Marine pollutant	Yes
Special precautions for user	

**RID/ADR**

UN/ID No *	3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ( Metribuzin )
Hazard Class	9
Packing Group	III
Environmental hazard	Yes
Special precautions for user	

**ICAO/IATA**

UN/ID No *	3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. ( Metribuzin )
Hazard Class	9

Packing Group	III
Environmental hazard	Yes
Special precautions for user	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not Applicable



\* Note: UN3077 & UN3082 – These products may be transported as non-dangerous goods under the special provisions of IMDG Code 2.10.2.7; ADR SP375 and ICAO/IATA A197 when packed in single or inner packaging of up to 5L for liquids or 5 kg or less for solids.

## Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

## Section 16: OTHER INFORMATION

**Revision Note** Changes made to the last version are labeled with this sign \*\*\*.

### List of Acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road  
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
CAS Number - Chemical Abstracts Service number  
EC Number - EINECS and ELINCS Number  
EINECS - European Inventory of Existing Commercial Substances  
ELINCS - European List of notified Chemical Substances  
IATA - International Air Transport Association  
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air  
IMDG - International Maritime Dangerous Goods  
LC50 - Lethal Concentration to 50 % of a test population  
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)  
OECD - Organization for Economic Co-operation and Development  
PBT - Persistent, Bioaccumulative and Toxic substance  
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
STOT - Specific Target Organ Toxicity  
vPvB - Very Persistent and Very Bioaccumulative

### Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet