



SAFETY DATA SHEET

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH) Annex II

Torero

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Version 1

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

1.1. Product identifier

Torero

Pure substance/mixture Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Herbicide
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier Address ADAMA Agricultural Solutions UK Ltd
Unit 15, Thatcham Buisness Village Colthrop Way,
Thatcham Berkshire RG19 4LW, UK : 01635 860555
Fax: 01635 861555

For further information, please contact

Email address ukenquiries@adama.com

1.4. Emergency telephone number

Emergency Telephone National Chemical Emergency Centre (UK):
Tel: 01865 407333 (24 hours)

Section 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the Aquatic Environment - Chronic Hazard Category 2 - (H411)

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms



Signal word	none
Hazard Statements	H411 - Toxic to aquatic life with long lasting effects
Precautionary Statements	P102 - Keep out of reach of children P391 - Collect spillage P501 - Dispose of contents/ container to an approved waste disposal plant
EU Specific Hazard Statements	EUH208 - Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction EUH401 - To avoid risks to human health and the environment, comply with the instructions for use
Additional phrases for PPP	SP1 - Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

2.3. Other hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Chemical Name	Weight-%	CAS No	EC No	Index No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	M-Factor	REACH Registration Number
Metamitron	29-33	41394-05-2	255-349-3	613-129-00-8	Acute Tox. 4 (H302) Aquatic Acute 1 (H400)	M=1	-
Ethofumesate	11-15	26225-79-6	247-525-3	607-314-00-2	Aquatic Acute 1 (H400) Aquatic Chronic 1(H410)	M=1 M=1	-
1,2-Benzisothiazolin-3-one	<0.05	2634-33-5	220-120-9	613-088-00-6	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)		-

Full text of H- and EUH-phrases: see section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	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!.
Inhalation	Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.
Eye contact	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.

Ingestion Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.

Self-protection of the first aider Use personal protective equipment as required.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms None known

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media

No information available.

5.2. Special hazards arising from the substance or mixture

No specific hazard known.

5.3. 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

6.1. 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.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Other Information

See also section 8,13

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling

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.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. 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

8.1. Control parameters

8.2. 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	In case of insufficient ventilation, wear suitable respiratory equipment.
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

9.1. Information on basic physical and chemical properties

<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Appearance			
Physical state	: Liquid		
Color	: white to beige		
Odor	: Sour		
Odor threshold	: No data available		
pH	: 6 - 7	CIPAC MT 75	solution (1 %)
Melting point/freezing point °C	: ----		Not Applicable
Boiling point/boiling range °C	: ----		Not Applicable
Flash point °C	: 104	EEC A.9	
Evaporation rate	: Not Applicable		
Flammability (solid, gas)	: Not applicable for liquids		
Upper/lower flammability or explosive limits	: No data available		
Vapor pressure kPa	: ----		Not Applicable
Vapor density	: No data available		
Relative density	: 1.09 - 1.19	OECD 109	20 °C
Solubility(ies) mg/l	: ----		Not Applicable
Partition Coefficient	:		See Section 12 for more information

(n-octanol/water) Log Pow

Autoignition temperature °C	: 485	EEC A.15	
Decomposition temperature °C	: ----		No data available
Kinematic viscosity mm²/s 40 °C	: 117.63	OECD 114	20 °C
Explosive properties	: Not an explosive		
Oxidizing properties	: Not oxidizing		

9.2. Other information

Bulk density g/ml	: ----		Not Applicable
Surface tension mN/m	: 39.3	EEC A.5	20 °C

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

No information available

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGY INFORMATION

11.1. Information on toxicological effects

Acute toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: > 2500	Rat	OECD 423	
Dermal LD50 mg/kg	: > 4000	Rat	OECD 402	
Inhalation LC50 mg/l/4h	: > 1.46	Rat	OECD 403	Maximum attainable concentration

Skin corrosion/irritation	: Non-irritating to the skin	Rabbit	OECD 404
Serious eye damage/eye irritation	: Not irritating to eyes	Rabbit	OECD 405
Respiratory/skin sensitization	: Not a skin sensitizer	Guinea pig	OECD 406

Chronic toxicity

Germ cell mutagenicity

Chemical Name	
Metamitron	: Not classified
Ethofumesate	: Not classified

Carcinogenicity

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Chemical Name

Metamitron : Not Carcinogenic
Ethofumesate : Not Carcinogenic

Reproductive toxicity .

Chemical Name

Metamitron : Not toxic for the reproductive system
Ethofumesate : Not toxic for the reproductive system

STOT - single exposure

Chemical Name

Metamitron : Not available
Ethofumesate : No data available

STOT - repeated exposure

Chemical Name

Metamitron : Not available
Ethofumesate : No data available

Aspiration hazard

Chemical Name

Metamitron : Not available
Ethofumesate : No data available

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity

Acute toxicity	Values	Species	Method	Remarks
Fish 96-hour LC50 mg/l	: 141	Oncorhynchus mykiss	OECD 203	
Crustacea 48-hour EC50 mg/l	: 62.4	Daphnia magna	OECD 202	
Algae 72-hour EC50 mg/l	: 6.53	P. subcapitata	OECD 201	
Other plants EC50 mg/l	: ----			No data available

Terrestrial Toxicity

Birds Oral LD50 mg/kg

Chemical Name

Metamitron : 1302 Japanese quail OECD 401
Ethofumesate : > 2000 A. platyrhynchos OECD 401

Bees Oral LD50 µg/bee

Chemical Name

Metamitron : > 97.2 OECD 213
Ethofumesate : > 50 OECD 213

12.2. Persistence and degradability

Abiotic Degradation

Water DT50 days

Chemical Name

Metamitron : 10.8 - 11.4 BBA IV: 5-1 pH 8, 20 ° C
Ethofumesate : 105 - 242

Soil DT50 days

Chemical Name

Metamitron : 2 - 45
Ethofumesate : 47 - 211

Biodegradation

Chemical Name

Metamitron : Not readily biodegradable OECD 301 D
 Ethofumesate : Not readily biodegradable

12.3. Bioaccumulative potential

Partition Coefficient (n-octanol/water) Log Pow

Chemical Name	Values	Method	Remarks
Metamitron	: 0.85	OECD 107	21 ° C
Ethofumesate	: 2.7		pH 6.4, 20-25 ° C

Bioconcentration factor (BCF)

Chemical Name

Metamitron : Not available
 Ethofumesate : --- No data available

12.4. Mobility in soil

Adsorption/Desorption

Chemical Name	Values	Method	Remarks
Metamitron	: 122.3		Koc
Ethofumesate	: 147 - 132		Koc

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Improper disposal or reuse of this container may be dangerous and illegal.

Other Information Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORTATION INFORMATION

IMDG/IMO

14.1 UN/ID No * 3082
 14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Metamitron Ethofumesate)
 14.3 Hazard Class 9
 14.4 Packing Group III
 14.5 Marine pollutant Yes
 14.6 Special precautions for user

RID/ADR

14.1 UN/ID No * 3082
 14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Metamitron Ethofumesate)

14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Environmental hazard	Yes
14.6 Special precautions for user	
14.7 Tunnel restriction code	-

ICAO/IATA

14.1 UN/ID No *	3082
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Metamitron Ethofumesate)
14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Environmental hazard	Yes
14.6 Special precautions for user	
14.7 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

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

15.2. Chemical safety assessment

A chemical safety assessment according to regulation (EC) No. 1907/2006 is not required. A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009.

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H411 - Toxic to aquatic life with long lasting effects

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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

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