SAFETY DATA SHEET

Sulcozine SC

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

Product identifier

Sulcozine SC

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

Section 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

- Skin sensitization: Category 1 - (H317)
- Reproductive toxicity: Category 2 - (H361)
- Specific target organ toxicity (repeated exposure): Category 2 - (H373)
- Acute aquatic toxicity: Category 1 - (H400)
- Chronic aquatic toxicity: Category 1 - (H410)

Label Elements

Hazard pictograms
Signal word Warning

Hazard Statements
H317 - May cause an allergic skin reaction
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements
P102 - Keep out of reach of children
P201 - Obtain special instructions before use
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P501 - Dispose of contents/container to an approved waste disposal plant

Other Hazards
No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight-%</th>
<th>CAS No</th>
<th>EC No</th>
<th>GHS Classification</th>
<th>M-Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine</td>
<td>26-29</td>
<td>1912-24-9</td>
<td>217-617-8</td>
<td>Skin Sens. 1 (H317) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)</td>
<td></td>
</tr>
<tr>
<td>Sulcotrione</td>
<td>10-13</td>
<td>99105-77-8</td>
<td></td>
<td>STOT RE 2 (H373) Skin Sens. 1A (H317) Repr. 2 (H361) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)</td>
<td>M=1 M=10</td>
</tr>
</tbody>
</table>

Section 4: FIRST AID MEASURES

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. Seek immediate medical attention/advice.

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.

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
Avoid contact with skin, eyes or clothing. 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
See also section 8,13

Section 7: HANDLING AND STORAGE

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

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. Keep containers tightly closed in a cool, well-ventilated place.

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>European Union</th>
<th>United Kingdom</th>
<th>France</th>
<th>Spain</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine 1912-24-9</td>
<td>TWA: 5 mg/m³</td>
<td>TWA: 5 mg/m³</td>
<td>TWA: 2 mg/m³</td>
<td>Ceiling / Peak: 16 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Atrazine 1912-24-9</td>
<td>TWA: 5 mg/m³</td>
<td>TWA: 10 mg/m³</td>
<td>STEL: 10 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atrazine 1912-24-9</td>
<td>TWA: 2 mg/m³</td>
<td>TWA: 2 mg/m³</td>
<td>TWA: 5 mg/m³</td>
<td>TWA: 10 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Exposure controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection
Tight sealing safety goggles.

Hand Protection
Suitable chemical resistant gloves (EN 374) also with prolonged, direct contact (recommendation: protection index 6, corresponding > 480 minutes Permeability time (permeation) according to EN 374): e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm).

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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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

<table>
<thead>
<tr>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50 mg/kg</td>
<td>Values : -----</td>
<td>No data available</td>
</tr>
<tr>
<td>Dermal LD50 mg/kg</td>
<td>Values : -----</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Chronic toxicity

Germ cell mutagenicity
Chemical Name
Atrazine : Not classified
Sulcotrione : Not classified

Carcinogenicity
Chemical Name
Atrazine : Not Carcinogenic
Sulcotrione : Not Carcinogenic

Reproductive toxicity
Chemical Name
Atrazine : Not toxic for the reproductive system
Sulcotrione : H361d - Suspected of damaging the unborn child

STOT - single exposure
Chemical Name
Atrazine : Not available
Sulcotrione : No data available

STOT - repeated exposure
Chemical Name
Atrazine : H373 - May cause damage to organs through prolonged or repeated exposure
Sulcotrione : H373 - May cause damage to organs through prolonged or repeated exposure

Aspiration hazard
Chemical Name
Atrazine : Not available
Sulcotrione : No data available

Section 12: ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity

Acute toxicity
Values | Species | Method | Remarks
--- | --- | --- | ---
Fish 96-hour LC50 mg/l : ---- | \( \text{No data available} \)
Crustacea 48-hour EC50 mg/l : ---- | \( \text{No data available} \)
Algae 72-hour EC50 mg/l : ---- | \( \text{No data available} \)
Other plants EC50 mg/l : ---- | \( \text{No data available} \)

Chronic aquatic toxicity
Values | Species | Method | Remarks
--- | --- | --- | ---
Fish NOEC mg/l : No data available | \( \text{No data available} \)
Crustacea NOEC mg/l : No data available | \( \text{No data available} \)
Algae NOEC mg/l : No data available | \( \text{No data available} \)
Other plants NOEC mg/l : No data available | \( \text{No data available} \)

Terrestrial Toxicity

Birds Oral LD50 mg/kg
Chemical Name
Atrazine : 940 Bobwhite quail | EPA-FIFRA 71-1
Sulcotrione : > 1350 Mallard duck |
Bees Oral LD50 μg/bee
Chemical Name
Atrazine : > 97
Sulcotrione : 50

Persistence and degradability

Abiotic Degradation

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water DT50 days</td>
<td>Atrazine : 14 - 105</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sulcotrione : 6 - 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil DT50 days</td>
<td>Atrazine : 16 - 117</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sulcotrione : 4.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biodegradation

Chemical Name
Atrazine : Not available
Sulcotrione : Not readily biodegradable

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partition Coefficient (n-octanol/water) Log Pow</td>
<td>Atrazine : 2.5</td>
<td>OECD 107</td>
<td>pH 7, 20 °C</td>
</tr>
<tr>
<td></td>
<td>Sulcotrione : - 1.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bioconcentration factor (BCF)

Chemical Name
Atrazine : No data available
Sulcotrione : Low

Mobility in soil

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adsorption/Desorption</td>
<td>Atrazine : 39 - 173</td>
<td>Koc</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sulcotrione : 36</td>
<td>Koc</td>
<td></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>IMDG/IMO</th>
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<tbody>
<tr>
<td>UN/ID No *</td>
<td>3082</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ( Atrazine Sulcotrione )</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>9</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
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<tr>
<td>Marine pollutant</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RID/ADR</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>UN/ID No *</td>
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<td>9</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazard</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICAO/IATA</th>
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</tr>
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<tbody>
<tr>
<td>UN/ID No *</td>
<td>3082</td>
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<td>Hazard Class</td>
<td>9</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
<tr>
<td>Environmental hazard</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Special precautions for user: Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code.

* 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

Full text of H-Statements referred to under sections 2 and 3
H317 - May cause an allergic skin reaction
Sulcozin SC - LSMH00086-27 Revision Date  31-Oct-2019

H373 - May cause damage to organs through prolonged or repeated exposure if inhaled
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H302 - Harmful if swallowed
H315 - Causes skin irritation
H318 - Causes serious eye damage
H361d - Suspected of damaging the unborn child

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