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

1.1 Product identifier
Trade name RACUMIN RAT AND MOUSE WAX BLOCKS U-ZA
Product code (UVP) 85835912

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

1.3 Details of the supplier of the safety data sheet
Supplier Bayer (Pty) Ltd.
27 Wrench Road, P.O. Box 143
1600 Isando
South Africa

Telephone +27 (011) 921 5911
Telefax +27 (011) 921 5766

Responsoble Department QHSE - Nigel, South Africa
+27 (011) 365 8675 (during business hours only)

1.4 Emergency telephone no.
Emergency telephone no. +27 (0861) 555 777 (Western Cape Poisons Helpline)
Global Incident Reponse +1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)
Hotline (24h)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification:
Acute toxicity: Category 4
H302 Harmful if swallowed.
Chronic aquatic toxicity: Category 3
H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements
Labelling:
Hazard label for supply/use required.

Hazardous components which must be listed on the label:
- Coumatetralyl
Signal word: Attention

Hazard statements

H302 Harmful if swallowed.
H412 Harmful to aquatic life with long lasting effects.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
Restricted to professional users.

Precautionary statements

P201 Obtain special instructions before use.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards
Because of antivitamin K properties of the active ingredient, absorption can inhibit blood coagulation and cause haemorrhagic syndrome.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature
Bait (ready for use) (RB)
Coumatetralyl 0,0375 %

Hazardous components
Hazard statements according to Regulation (EC) No. 1272/2008

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No. / EC-No. / REACH Reg. No.</th>
<th>Conc. [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coumatetralyl</td>
<td>5836-29-3 227-424-0</td>
<td>0.0375</td>
</tr>
</tbody>
</table>

Further information

Coumatetralyl 5836-29-3 M-Factor: 10 (chronic)

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Move out of dangerous area. When symptoms develop and persist, seek medical advice. Place and transport victim in stable position (lying sideways).

Inhalation
Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
Skin contact
Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. Call a physician or poison control center immediately.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

Ingestion
Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms
If large amounts are ingested, the following symptoms may occur: Internal and external bleeding, shock possible

Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s).

4.3 Indication of any immediate medical attention and special treatment needed

Risks
Because of antivitamin K properties of the active ingredient, absorption can inhibit blood coagulation and cause haemorrhagic syndrome.

Treatment
Treat symptomatically. Antidote: Vitamine K1. Cases of severe poisoning may require the usual measures like application of blood products or transfusions. Necessity and efficacy have to be assessed by INR. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Monitor: blood picture.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Dangerous gases are evolved in the event of a fire.

5.3 Advice for firefighters

Special protective equipment for firefighters
In the event of fire, wear self-contained breathing apparatus. In the event of fire and/or explosion do not breathe fumes.

Further information
Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.
SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Precautions Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

6.2 Environmental precautions
Do not allow to get into surface water, drains and ground water.

6.3 Methods and materials for containment and cleaning up
Methods for cleaning up Use mechanical handling equipment. Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Advice on safe handling No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.
Advice on protection against fire and explosion Keep away from heat and sources of ignition.
Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage areas and containers Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Do not store at a temperature above 40 °C.
Advice on common storage Keep away from food, drink and animal feedingstuffs.
7.3 Specific end use(s) Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coumatetralyl</td>
<td>5836-29-3</td>
<td>0,01 mg/m3 (TWA)</td>
<td>OES BCS*</td>
<td></td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Personal protective equipment
In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection**
Respiratory protection is not required under anticipated circumstances of exposure.
Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer’s instructions regarding wearing and maintenance.

**Hand protection**
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

<table>
<thead>
<tr>
<th>Material</th>
<th>Nitrile rubber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of permeability</td>
<td>&gt; 480 min</td>
</tr>
<tr>
<td>Glove thickness</td>
<td>&gt; 0.4 mm</td>
</tr>
<tr>
<td>Protective index</td>
<td>Class 6</td>
</tr>
<tr>
<td>Directive</td>
<td>Protective gloves complying with EN 374.</td>
</tr>
</tbody>
</table>

**Eye protection**
Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

**Skin and body protection**
Wear standard coveralls and Category 3 Type 5 suit.
If there is a risk of significant exposure, consider a higher protective type suit.
Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Form</th>
<th>pieces or block, wax</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour</td>
<td>green</td>
</tr>
<tr>
<td>Odour</td>
<td>weak, characteristic</td>
</tr>
</tbody>
</table>

**Partition coefficient: n-octanol/water**

Coumatetralyl: log Pow: 1.5 at 20 °C at pH 7

9.2 Other information
Further safety related physical-chemical data are not known.
SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Thermal decomposition
Stable under normal conditions.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No hazardous reactions when stored and handled according to prescribed instructions.

10.4 Conditions to avoid
Extremes of temperature and direct sunlight.

10.5 Incompatible materials
Store only in the original container.

10.6 Hazardous decomposition products
No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute oral toxicity
LD50 (Rat) 1.000 mg/kg
Test conducted with a similar formulation.

Acute inhalation toxicity
During intended and foreseen applications, no respirable aerosol is formed.

Acute dermal toxicity
LD50 (Rat) > 4.000 mg/kg
Test conducted with a similar formulation.

Skin irritation
No skin irritation (Rabbit)
Test conducted with a similar formulation.

Eye irritation
No eye irritation (Rabbit)
Test conducted with a similar formulation.

Sensitisation
Non-sensitizing. (Mouse)
Test conducted with a similar formulation.

Assessment STOT Specific target organ toxicity – single exposure
Coumatetralyl: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure
Coumatetralyl caused inhibition of blood coagulation possibly causing hemorrhagic syndrome in animal studies. The toxic effects of Coumatetralyl are related to antivitamin K properties.

Assessment mutagenicity
Coumatetralyl was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity
Coumatetralyl is not considered carcinogenic.

Assessment toxicity to reproduction
Coumatetralyl is not considered a reproductive toxicant at non-maternally toxic dose levels.
**Assessment developmental toxicity**
Coumatetralyl: May damage the unborn child.

**Aspiration hazard**
Based on available data, the classification criteria are not met.

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1 Toxicity

**Toxicity to fish**
- LC50 (Oncorhynchus mykiss (rainbow trout)) = 53 mg/l
  - Exposure time: 96 h
  - The value mentioned relates to the active ingredient.

**Chronic toxicity to fish**
- ONcorhynchus mykiss (rainbow trout)
  - NOEC: 5 µg/l
  - Exposure time: 21 d
  - The value mentioned relates to the active ingredient.

**Toxicity to aquatic invertebrates**
- EC50 (Daphnia magna (Water flea)) > 14 mg/l
  - Exposure time: 48 h
  - The value mentioned relates to the active ingredient.

**Chronic toxicity to aquatic invertebrates**
- NOEC (Daphnia magna (Water flea)): 0,1 mg/l
  - Exposure time: 21 d
  - The value mentioned relates to the active ingredient.

**Toxicity to aquatic plants**
- IC50 (Desmodesmus subspicatus (green algae)) > 18 mg/l
  - Growth rate; Exposure time: 96 h
  - The value mentioned relates to the active ingredient.

#### 12.2 Persistence and degradability

**Biodegradability**
Coumatetralyl: < 60 %,
Not readily biodegradable.

**Koc**
Coumatetralyl: Koc: 258

#### 12.3 Bioaccumulative potential

**Bioaccumulation**
Coumatetralyl: Bioconcentration factor (BCF) 11,4
Does not bioaccumulate.

#### 12.4 Mobility in soil

**Mobility in soil**
Coumatetralyl: Moderately mobile in soils

#### 12.5 Results of PBT and vPvB assessment

**PBT and vPvB assessment**
Coumatetralyl: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

#### 12.6 Other adverse effects

**Additional ecological information**
No other effects to be mentioned.
SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Contaminated packaging
Not completely emptied packagings should be disposed of as hazardous waste.

Waste key for the unused product
20 01 19* pesticides

SECTION 14: TRANSPORT INFORMATION

According to ADN/ADR/RID/IMDG/IATA not classified as dangerous goods.

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

14.1 – 14.5 Not applicable.

14.6 Special precautions for user
See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

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

Further information
WHO-classification: III (Slightly hazardous)

15.2 Chemical safety assessment
A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms
ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE Acute toxicity estimate
CAS-Nr. Chemical Abstracts Service number
Conc. Concentration
EC-No. European community number
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECx</td>
<td>Effective concentration to x %</td>
</tr>
<tr>
<td>EINECS</td>
<td>European inventory of existing commercial substances</td>
</tr>
<tr>
<td>ELINCS</td>
<td>European list of notified chemical substances</td>
</tr>
<tr>
<td>EN</td>
<td>European Standard</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
</tr>
<tr>
<td>IBC</td>
<td>International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)</td>
</tr>
<tr>
<td>ICx</td>
<td>Inhibition concentration to x %</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods</td>
</tr>
<tr>
<td>LCx</td>
<td>Lethal concentration to x %</td>
</tr>
<tr>
<td>LDx</td>
<td>Lethal dose to x %</td>
</tr>
<tr>
<td>LOEC/LOEL</td>
<td>Lowest observed effect concentration/level</td>
</tr>
<tr>
<td>MARPOL</td>
<td>MARPOL: International Convention for the prevention of marine pollution from ships</td>
</tr>
<tr>
<td>N.O.S.</td>
<td>Not otherwise specified</td>
</tr>
<tr>
<td>NOEC/NOEL</td>
<td>No observed effect concentration/level</td>
</tr>
<tr>
<td>OECD</td>
<td>Organization for Economic Co-operation and Development</td>
</tr>
<tr>
<td>RID</td>
<td>Regulations concerning the International Carriage of Dangerous Goods by Rail</td>
</tr>
<tr>
<td>TWA</td>
<td>Time weighted average</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>WHO</td>
<td>World health organisation</td>
</tr>
</tbody>
</table>

Changes since the last version are highlighted in the margin. This version replaces all previous versions.