



Racumin® Sure (BROMADIOLONE 0,005%)

Version 1 / IND
102000027198

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Revision Date: 07.01.2021
Print Date: 07.01.2021

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

1.1 Product identifier

Trade name Racumin® Sure

Product code (UVP) 80991878

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 CropScience Limited
Bayer House, Central Avenue
Hiranandani Estate
400607 Thane (W)
Maharashtra
India

Telephone +91-22-25311826 / 25311234

Telefax +91-22-25455116

1.4 Emergency telephone no.

Indian Emergency Number 022-25311885 (24 hours/day)

Global Incident Response Hotline (24h) +1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Acute toxicity: Category 4
H302 Harmful if swallowed.

Eye irritation: Category 2
H319 Causes serious eye irritation.

Specific target organ toxicity - repeated exposure: Category 1
H372 Causes damage to organs through prolonged or repeated exposure.

Reproductive toxicity: Category 1B
H360D May damage the unborn child.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.


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Hazardous components which must be listed on the label:

- Bromadiolone


Signal word: Danger

Hazard statements

H302 Harmful if swallowed.
 H319 Causes serious eye irritation.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H360D May damage the unborn child.
 Restricted to professional users.

Precautionary statements

P201 Obtain special instructions before use.
 P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
 P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
3.2 Mixtures
Chemical nature

 Bait (ready for use) (RB)
 Bromadiolone 50 mg/kg

Hazardous components

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

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Bromadiolone	28772-56-7	Acute Tox. 1, H300 Acute Tox. 1, H330 STOT RE 1, H372 Aquatic Acute 1, H400 Repr. 1B, H360D Aquatic Chronic 1, H410 Acute Tox. 1, H310	0.005

Further information

Bromadiolone	28772-56-7	M-Factor: 1 (acute), 1 (chronic)
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For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely. Symptoms of poisoning may appear several hours later.
Inhalation	Move to fresh air in case of accidental inhalation of vapours or decomposition products. Oxygen or artificial respiration if needed. 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: Hematoma, Nose bleeding, Bruising and haemorrhage formation, Bloody vomiting Symptoms and hazards refer to effects observed after intake of significant amounts of the active ingredient(s).
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4.3 Indication of any immediate medical attention and special treatment needed

Risks	Delayed toxic effects (anticoagulation) of 36 to 72 hours.
Treatment	Systemic treatment: Symptoms of poisoning may appear several hours later. 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. Oxygen or artificial respiration if needed. Monitor: prothrombin time/ INR. Antidote: Vitamine K1. Cases of severe poisoning may require the usual measures like application of blood products or transfusions.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Hazchem Code	2X

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5.2 Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Carbon monoxide (CO), Bromine
5.3 Advice for firefighters	
Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
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. Collect and transfer the product into a properly labelled and tightly closed container.

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 Use only in area provided with appropriate exhaust ventilation. Avoid dust formation.

Advice on protection against fire and explosion No special precautions required.

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. Protect from freezing.



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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

No known occupational limit values.

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 in case of insufficient exhaust ventilation or prolonged exposure: Wear respirator with a particle filter mask (protection factor 4) conforming to European norm EN149FFP1 or equivalent. 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.
Eye protection	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).
Skin and body protection	Wear standard coveralls and Category 3 Type 4 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

Form	solid, wax
Colour	dark green
Odour	sweet, cereals-like
Odour Threshold	No data available
pH	No data available
Melting point/range	56 °C
Boiling Point	No data available
Flash point	No data available
Flammability	No data available
Auto-ignition temperature	No data available
Self-accelarating	No data available

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Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Density	No data available
Water solubility	insoluble
Partition coefficient: n-octanol/water	Bromadiolone: log Pow: 4.07
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	No data available
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., Strong oxidizing agents, Bases**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) 1.75 mg/kg The value mentioned relates to the active ingredient. LD50 (Mouse) 0.53 mg/kg The value mentioned relates to the active ingredient.
Acute inhalation toxicity	LC50 0.2 mg/l Exposure time: 1 h The value mentioned relates to the active ingredient.

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Acute dermal toxicity	LD50 (Rabbit) 0.49 mg/kg The value mentioned relates to the active ingredient. LD50 (Rat) 3.29 mg/kg The value mentioned relates to the active ingredient.
Skin corrosion/irritation	No skin irritation (Rabbit) The value mentioned relates to the active ingredient.
Serious eye damage/eye irritation	slight irritation (Rabbit) The value mentioned relates to the active ingredient.
Respiratory or skin sensitisation	Non-sensitizing. The value mentioned relates to the active ingredient.

Assessment STOT Specific target organ toxicity – single exposure

Bromadiolone: This information is not available.

Assessment STOT Specific target organ toxicity – repeated exposure

Bromadiolone caused inhibition of blood coagulation possibly causing hemorrhagic syndrome in animal studies. The toxic effects of Bromadiolone are related to antivitamin K properties.

Assessment mutagenicity

Bromadiolone was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Bromadiolone is not considered carcinogenic.

Assessment toxicity to reproduction

The reproduction toxicity seen with Bromadiolone is related to parental toxicity.

Assessment developmental toxicity

Bromadiolone caused developmental toxicity in Rabbit only at dose levels toxic to the dams.

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)) > 2.89 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient.
Toxicity to aquatic invertebrates	LC50 (Daphnia magna (Water flea)) 2 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient.
Toxicity to aquatic plants	EC50 (Desmodesmus subspicatus (green algae)) 0.17 mg/l Biomass; Exposure time: 96 h The value mentioned relates to the active ingredient.

12.2 Persistence and degradability

Biodegradability	Bromadiolone: Not rapidly biodegradable
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Koc Bromadiolone: Koc: 41600

12.3 Bioaccumulative potential

Bioaccumulation Bromadiolone: Bioconcentration factor (BCF) 339 - 575
Potential bioaccumulation

12.4 Mobility in soil

Mobility in soil Bromadiolone: Immobile in soil

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Bromadiolone: This substance is 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.

Legal basis

Waste key in accordance with Schedule I of the Hazardous Waste Rules, 2008 as amended (India - EP Act):

29.1 Process wastes/residues
29.3 Date-expired and off-specification pesticides

SECTION 14: TRANSPORT INFORMATION

ADR/RID/ADN

14.1 UN number	3027
14.2 Proper shipping name	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC (BROMADIOLONE MIXTURE)
14.3 Transport hazard class(es)	6.1
14.4 Packaging Group	I
14.5 Environm. Hazardous Mark	NO
Hazard no.	66
Hazchem Code	2X
Tunnel Code	C/E

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

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IMDG

14.1 UN number	3027
14.2 Proper shipping name	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC (BROMADIOLONE MIXTURE)
14.3 Transport hazard class(es)	6.1
14.4 Packaging Group	I
14.5 Marine pollutant	NO

IATA

14.1 UN number	3027
14.2 Proper shipping name	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC (BROMADIOLONE MIXTURE)
14.3 Transport hazard class(es)	6.1
14.4 Packaging Group	I
14.5 Environm. Hazardous Mark	NO

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)

SECTION 16: OTHER INFORMATION

Note :

This data sheet has been generated according to the safety data sheet supplied by the manufacturer of the product.

GAIAGEN TECHNOLOGIES

Text of the hazard statements mentioned in Section 3

H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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

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

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

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