



**Racumin® Sure (BROMADIOLONE 0,005%)**

Version 1 / IND  
102000027198

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Revision Date: 11.01.2023  
Print Date: 11.01.2023

**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**


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

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 additional hazards known beside those mentioned.

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).

**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, H310 Acute Tox. 1, H330 Repr. 1B, H360D STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	0.005



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**Further information**

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**

<b>General advice</b>	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.
<b>Inhalation</b>	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.
<b>Skin contact</b>	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.
<b>Eye contact</b>	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.
<b>Ingestion</b>	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**

<b>Symptoms</b>	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**

<b>Risks</b>	Delayed toxic effects (anticoagulation) of 36 to 72 hours.
<b>Treatment</b>	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.

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**SECTION 5: FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

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

**Hazchem Code** 2X

**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.

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**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.

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**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



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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.

**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.

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**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.

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**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

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<b>Boiling Point</b>	No data available
<b>Flash point</b>	No data available
<b>Flammability</b>	No data available
<b>Auto-ignition temperature</b>	No data available
<b>Minimum ignition energy</b>	No data available
<b>Self-accelarating decomposition temperature (SADT)</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Relative density</b>	No data available
<b>Density</b>	No data available
<b>Water solubility</b>	insoluble
<b>Partition coefficient: n-octanol/water</b>	Bromadiolone: log Pow: 4.07
<b>Viscosity, dynamic</b>	No data available
<b>Viscosity, kinematic</b>	No data available
<b>Oxidizing properties</b>	No data available
<b>Explosivity</b>	No data available
<b>9.2 Other information</b>	Further safety related physical-chemical data are not known.

**SECTION 10: STABILITY AND REACTIVITY**

<b>10.1 Reactivity</b>	Stable under normal conditions.
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.



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- 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.
- 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.



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**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

**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.

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**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):**





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

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**SECTION 14: TRANSPORT INFORMATION**

**ADR/RID/ADN**

14.1 UN number	<b>3027</b>
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.

**IMDG**

14.1 UN number	<b>3027</b>
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	<b>3027</b>
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.

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**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)

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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 Road
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) 2020/878 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

**SAFETY DATA SHEET** according to Regulation (EC) No. 1907/2006



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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.