

# SAFETY DATA SHEET ACCORDING TO REGULATION (EC) 1907/2006



**Product name: Ratimor Brodifacoum Fresh Bait**

**Creation date: 27.03.2023, Revision: 27.06.2023, version: 2.0**

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

### 1.1 Product identifier

**Product name**

Ratimor Brodifacoum Fresh Bait



<https://my.chemius.net/p/CQaE9U/en/pd/en>

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

**Relevant identified uses**

Rodenticide for the extermination of mice and rats

Type of biocidal product: PT14

**Uses advised against**

To use only for the purposes stated in this Safety Data Sheet or on the product label. Any other use is prohibited. Do not use rodenticide unprotected in places where other animals or people move or stay.

### 1.3 Details of the supplier of the safety data sheet

**Supplier**

UNICHEM D.O.O.

Sinja Gorica 2

1360 Vrhnika, Slovenia

+386 1 755 81 50

unicchem@unicchem.si

### 1.4 Emergency Telephone Number

**Emergency**

112

**Supplier**

+386 1 755 81 50

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

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

STOT RE 2; H373 May cause damage to organs (blood) through prolonged or repeated exposure.

### 2.2 Label elements

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

**Signal word: WARNING**

H373 May cause damage to organs (blood) through prolonged or repeated exposure.

P260 Do not breathe dust.

P314 Get medical advice/attention if you feel unwell.

P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

**Contains:**

brodifacoum (ISO)

**Special provisions**

—

**2.3 Other hazards****PBT/vPvB**

No information.

**Endocrine disrupting properties**

No information.

**Additional information**

No information.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

For mixtures see 3.2.

**3.2 Mixtures**

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits	Notes for substances
brodifacoum (ISO)	56073-10-0 259-980-5 607-172-00-1	0,0029	Acute Tox. 1; H300 Acute Tox. 1; H310 Acute Tox. 1; H330 Repr. 1A; H360D STOT RE 1; H372 Aquatic Acute 1; H400; M = 10 Aquatic Chronic 1; H410; M = 10	Repr. 1A; H360D; C ≥ 0.003% STOT RE 1; H372; C ≥ 0.02% STOT RE 2; H373; 0.002% ≤ C < 0.02%	/
denatonium benzoate	3734-33-6 223-095-2 -	0,001	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335	/	/

**SECTION 4: FIRST AID MEASURES****4.1 Description of first aid measures****General notes**

Remove affected person from the contaminated area to fresh air or well-ventilated area, providing her basic life functions and protect it from the cold or heat. Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency.

**Following inhalation**

Remove patient to fresh air - move out of dangerous area. If symptoms develop and persist, seek medical attention.

**Following skin contact**

Take off all contaminated clothing. Wash affected skin areas thoroughly with plenty of water and soap. If symptoms develop and persist, seek medical attention.

**Following eye contact**

Immediately flush eyes with plenty of water while keeping eyelids apart (at least 15 minutes). After 5 minutes of rinsing, remove contact lenses, if present, and continue rinsing. If irritation persists, seek professional medical attention.

**Following ingestion**

Do not induce vomiting! Rinse mouth thoroughly with water. In case of doubt or if feeling unwell seek medical help. Show the physician the safety data sheet or label.

**4.2 Most important symptoms and effects, both acute and delayed****Following inhalation**

Breathing dust can irritate the respiratory tract. Coughing, sneezing, nasal discharge, labored breathing.

**Following skin contact**

Powder can cause localised skin irritation in folds of the skin or under tight clothing. Contact with skin may cause irritation (redness, itching).

**Following eye contact**

Dust irritates the eyes (by mechanical means). Contact with eyes can cause irritation (redness, tearing, pain).

**Following ingestion**

The product contains an anticoagulant which may produce bleeding. Symptoms may be delayed for several days after exposure. In case of poisoning bleeding disorders and increased bleeding tendency may occur. In severe poisoning a strong internal bleeding can cause circulatory collapse and consequent death.

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

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). **ADVICE FOR DOCTORS:** Brodifacoum is an indirect anti-coagulant. Phytomenadione, Vitamin K1, is antidotal. Determine prothrombin time not less than 18 hours after consumption. If elevated, administer Vitamin K1 until prothrombin time normalises. Continue determination of prothrombin time for two weeks after withdrawal of antidote and resume treatment if elevation occurs in that time.

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media**

Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

**Unsuitable extinguishing media**

Full water jet.

**5.2 Special hazards arising from the substance or mixture****Hazardous combustion products**

In case of heating harmful vapours/gases can be generated.

**5.3 Advice for firefighters****Protective actions**

In case of fire or heating do not breathe fumes/vapours. Cool containers at risk with water spray. If possible remove containers from endangered area.

**Special protective equipment for fire-fighters**

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

**Additional information**

Contaminated firefighting water must be disposed of in accordance with the regulations; do not allow to reach the sewage system.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel

**Protective equipment**

Use personal protective equipment (Section 8). Refer to protective measures listed in Sections 7 and 8.

**Precautionary measures**

Ensure adequate ventilation.

**Emergency procedures**

Prevent access to unprotected personnel. Do not breathe vapour or mist. Avoid contact with skin and eyes.

For emergency responders

Use personal protective equipment.

**6.2 Environmental precautions**

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental large entry into water or ground occurs, inform responsible authorities.

**6.3 Methods and material for containment and cleaning up**

For containment

No information.

For cleaning up

Collect in a suitable container and dispose of according to regulations.

**OTHER INFORMATION**

No information.

**6.4 Reference to other sections**

See also sections 8 and 13.

**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for safe handling**

**Protective measures**

**Measures to prevent fire**

Ensure adequate ventilation.

**Measures to prevent aerosol and dust generation**

Avoid formation of dust.

**Measures to protect the environment**

No information.

**Other measures**

No information.

**Advice on general occupational hygiene**

Refer to instructions on label and regulations for safety and health at work. Use personal protective equipment. Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Do not breathe dust.

## 7.2 Conditions for safe storage, including any incompatibilities

### Technical measures and storage conditions

Store in original, tightly closed container in a dry place. Store at room temperature. Keep container in a well ventilated place. Keep away from food, drink and animal feeding stuffs. Keep out of the reach of children. Keep away from animals. Protect from open fire, heat and direct sunlight. Keep in a locked place. The bait should be stored between 5 – 20 °C (41 – 68 °F). At higher temperatures the leak of the oil from the bait may occur.

### Packaging materials

No information.

### Requirements for storage rooms and vessels

No information.

### Storage class

No information.

### Further information on storage conditions

No information.

## 7.3 Specific end use(s)

### Recommendations

The product is intended for use as a rodenticide (biocidal agent). Before using this product read the instructions for use.

### Industrial sector specific solutions

No information.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational Exposure limit values

No information.

#### Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

#### DNEL/DMEL values

##### For product

No information.

##### For components

No information.

#### PNEC values

##### For product

No information.

##### For components

No information.

### 8.2 Exposure controls

#### Appropriate engineering control

##### Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices – wash hands at breaks and when done working with material. Avoid contact with eyes and skin. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

##### Structural measures to prevent exposure

No information.

##### Organisational measures to prevent exposure

No information.

**Technical measures to prevent exposure**

Provide good ventilation and local exhaust in areas with increased concentration. Keep away from food, drink and animal feeding stuffs.

**Personal protective equipment****Eye and face protection**

Safety glasses with side protection (EN 166).

**Hand protection**

Protective gloves (EN 374).

**Appropriate materials**

Material	Thickness	Penetration Time	Remark
PVC	/	/	/
Butyl rubber	/	/	/

**Skin protection**

Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345).

**Respiratory protection**

Not needed under normal use and adequate ventilation. In case of dusting use respiratory protection. Use a half-mask (EN 140:1998/AC:1999 or EN EN 149:2001+A1:2009) with a particle filter P (EN 143:2021).

**Thermal hazards**

No information.

**Environmental exposure controls****Substance/mixture related measures to prevent exposure**

No information.

**Instruction measures to prevent exposure**

No information.

**Organisational measures to prevent exposure**

No information.

**Technical measures to prevent exposure**

No information.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties****Physical state**

solid - paste

**Colour**

blue or red

**Odour**

mild characteristic

**Important health, safety and environmental information**

Odour threshold	No information.
Melting point/Freezing point	No information.
Boiling point or initial boiling point and boiling range	No information.
Flammability	No information.
Lower and upper explosion limit	No information.
Flash point	(not highly flammable (EEC Method A.10))
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	No information.
Viscosity	No information.
Solubility	Water: Insoluble
Partition coefficient	No information.
Vapour pressure	No information.

Density and/or relative density	No information.
Relative vapour density	No information.
Particle characteristics	No information.

## 9.2 OTHER INFORMATION

Oxidising properties	Not oxidising.
Explosive properties	Product is not explosive. Product is not self igniting.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No information.

### 10.2 Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

### 10.3 Possibility of hazardous reactions

No information.

### 10.4 Conditions to avoid

Avoid high temperatures.

### 10.5 Incompatible materials

Strong oxidising agents.

### 10.6 Hazardous decomposition products

Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### (a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
brodifacoum (ISO)	oral	LD <sub>50</sub>	rat	/	0.4 mg/kg bw	/	/
brodifacoum (ISO)	dermal	LD <sub>50</sub>	rat	/	3.16 mg/kg bw	/	/
denatonium benzoate	oral	LD <sub>50</sub>	rat	/	584 mg/kg	/	/
denatonium benzoate	dermal	LD <sub>50</sub>	rabbit	/	> 2000 mg/kg	/	/

#### (b) Skin corrosion/irritation

No information.

(c) Serious eye damage/irritation

No information.

(d) Respiratory or skin sensitisation

No information.

(e) (Germ cell) mutagenicity

No information.

(f) Carcinogenicity

No information.

(g) Reproductive toxicity

No information.

Summary of evaluation of the CMR properties

No information.

(h) STOT-single exposure

No information.

(i) STOT-repeated exposure

No information.

Additional information

May cause damage to organs (blood) through prolonged or repeated exposure.

(j) Aspiration hazard

No information.

Symptoms related to the physical, chemical and toxicological characteristics

No information.

Interactive effects

No information.

## 11.2 Information on other hazards

Endocrine disrupting properties

No information.

Other information

No information.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Acute (short-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
brodifacoum (ISO)	EC <sub>50</sub>	0.04 mg/L	72 h	algae	/	/	/
brodifacoum (ISO)	EC <sub>50</sub>	0.25 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	/
brodifacoum (ISO)	LC <sub>50</sub>	0.042 mg/L	96 h	fish	<i>Oncorhynchus mykiss</i>	/	/
denatonium benzoate	LC <sub>50</sub>	> 1000 mg/L	96 h	fish	<i>Oncorhynchus mykiss</i>	/	/
denatonium benzoate	LC <sub>50</sub>	> 1000 mg/L	96 h	fish	<i>Salmo gairdneri</i>	/	/
denatonium benzoate	EC <sub>50</sub>	13 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	/

Chronic (long-term) toxicity



No information.

## 12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination

No information.

Biodegradation

No information.

## 12.3 Bioaccumulative potential

Partition coefficient

For components

Name	Media	value	Temperature °C	pH	Concentration	Method
brodifacoum (ISO)	Octanol-water (log Pow)	4.9	20	7	/	/
denatonium benzoate	Octanol-water (log Pow)	1.78	/	/	/	/

Bioconcentration factor (BCF)

No information.

## 12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

Surface tension

No information.

Adsorption/Desorption

For components

Name	Type	Criterion	value	Evaluation	Method	Remark
denatonium benzoate	Soil	Henry constant (H)	- 1.63E-21 atm m <sup>3</sup> /mol	/	/	25 °C

## 12.5 Results of PBT and vPvB assessment

No evaluation.

## 12.6 Endocrine disrupting properties

No information.

## 12.7 Other adverse effects

No information.

## 12.8 Additional information

For product

No ecotoxicological data available. Avoid release to the environment.

For components

**brodifacoum (ISO)**

The substance is not readily biodegradable. High potential for bioaccumulation.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product / Packaging disposal

##### Waste chemical

Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste. Any disposal in the environment or discharging into water is prohibited.

#### Waste codes / waste designations according to LoW

No information.

#### Packaging

Deliver completely emptied containers to approved waste disposal authorities.

#### Waste codes / waste designations according to LoW

No information.

#### Waste treatment-relevant information

No information.

#### Sewage disposal-relevant information

No information.

#### Other disposal recommendations

No information.

## SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
<b>14.1 UN number or ID number</b>			
Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.
<b>14.2 UN proper shipping name</b>			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
<b>14.3 Transport hazard class(es)</b>			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
<b>14.4 Packing group</b>			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
<b>14.5 Environmental hazards</b>			
NO	NO	NO	NO
<b>14.6 Special precautions for user</b>			
Limited quantities Not given/not applicable	Limited quantities Not given/not applicable		Limited quantities Not given/not applicable
<b>14.7 Maritime transport in bulk according to IMO instruments</b>			
	Not given/not applicable		

## SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline) not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents

No information.

Special instructions

No information.

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## SECTION 16: OTHER INFORMATION

### Indication of changes

3.2 Mixtures 8.2 Exposure controls 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

### Key literature references and sources for data

No information.

### Abbreviations and acronyms

ATE - Acute Toxicity Estimate

ADR - Agreement concerning the International Carriage of Dangerous Goods by Road

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

CEN - European Committee for Standardisation

C&L - Classification and Labelling

CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

CAS# - Chemical Abstracts Service number

CMR - Carcinogen, Mutagen, or Reproductive Toxicant

CSA - Chemical Safety Assessment

CSR - Chemical Safety Report

DMEL - Derived Minimal Effect Level

DNEL - Derived No Effect Level

DPD - Dangerous Preparations Directive 1999/45/EC

DSD - Dangerous Substances Directive 67/548/EEC

DU - Downstream User

EC - European Community

ECHA - European Chemicals Agency

EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)

EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)

EEC - European Economic Community

EINECS - European Inventory of Existing Commercial Substances

ELINCS - European List of notified Chemical Substances

EN - European Standard

EQS - Environmental Quality Standard

EU - European Union

Euphrac - European Phrase Catalogue

EW - European Waste Catalogue (replaced by LoW – see below)

GES - Generic Exposure Scenario

GHS - Globally Harmonized System

IATA - International Air Transport Association

ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air

IMDG - International Maritime Dangerous Goods

IMSBC - International Maritime Solid Bulk Cargoes

IT - Information Technology

IUCLID - International Uniform Chemical Information Database

IUPAC - International Union for Pure Applied Chemistry  
 JRC - Joint Research Centre  
 Kow - octanol-water partition coefficient  
 LC50 - Lethal Concentration to 50 % of a test population  
 LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)  
 LE - Legal Entity  
 LoW - List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)  
 LR - Lead Registrant  
 M/I - Manufacturer / Importer  
 MS - Member States  
 MSDS - Material Safety Data Sheet  
 OC - Operational Conditions  
 OECD - Organization for Economic Co-operation and Development  
 OEL - Occupational Exposure Limit  
 OJ - Official Journal  
 OR - Only Representative  
 OSHA - European Agency for Safety and Health at work  
 PBT - Persistent, Bioaccumulative and Toxic substance  
 PEC - Predicted Effect Concentration  
 PNEC(s) - Predicted No Effect Concentration(s)  
 PPE - Personal Protection Equipment  
 (Q)SAR - Qualitative Structure Activity Relationship  
 REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006  
 RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RIP - REACH Implementation Project  
 RMM - Risk Management Measure  
 SCBA - Self-Contained Breathing Apparatus  
 SDS - Safety data sheet  
 SIEF - Substance Information Exchange Forum  
 SME - Small and Medium sized Enterprises  
 STOT - Specific Target Organ Toxicity  
 (STOT) RE - Repeated Exposure  
 (STOT) SE - Single Exposure  
 SVHC - Substances of Very High Concern  
 UN - United Nations  
 vPvB - Very Persistent and Very Bioaccumulative

#### List of relevant H phrases

H300 Fatal if swallowed.  
 H302 Harmful if swallowed.  
 H310 Fatal in contact with skin.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H330 Fatal if inhaled.  
 H335 May cause respiratory irritation.  
 H360D May damage the unborn child.  
 H372 Causes damage to organs through prolonged or repeated exposure.  
 H373 May cause damage to organs (blood) through prolonged or repeated exposure.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.



- Provided correct labelling of the product
- Compliance with the local legislation
- Provided correct classification of the product
- Provided adequate transport data

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*The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.*