

SAFETY DATA SHEET IN ACCORDANCE WITH REGULATION (EU) NO. 1907/2006

Trade name: **Ratimor Brodifacoum paste** Date of preparation: **17/02/2023**, Date of verification: **11/04/2023**, Version: **2.0**

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

1.1 Product identifier Trade

name **Ratimor**
Brodifacoum paste



<https://my.chemius.net/p/bpd7Kc/en/pd/pl>

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

Significant identified uses

Rodenticide for controlling mice and rats.

Uses advised against

It should only be used for the purposes specified in this safety data sheet or on the product label.

Any other use is prohibited. Do not apply unprotected rodenticide in areas where other animals or people move or reside.

1.3 Details of the supplier of the safety data sheet

Supplier

UNICHEM DOO
Sinja Gorica 2
1360 Vrhnik, Slovenia +386
1 755 81 50
unichem@unichem.si

1.4 Emergency telephone number

General emergency telephone number
112

Supplier

+386 1 755 81 50

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification of the substance according to Regulation 1272/2008/EC

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

2.2 Signage elements

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



Signal words: WARNING

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

P314 Get medical advice/attention if you feel unwell.

P501 Dispose of contents/container to authorized hazardous waste disposal companies.

Contains:

brodifacoum (ISO)

Special warnings

2.3 Other hazards

PBT/vPvB

No data available

Endocrine disrupting properties

No data available

Additional information

The product does not contain any substances classified as persistent, toxic or bioaccumulative (PBT) or very persistent, very toxic or very bioaccumulative (vPvB).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Mixtures – see 3.2

3.2 Mixtures

Chemical name	CAS EC Index Reach	%	Classification of substances in accordance with the regulation 1272/2008/EC	Specific concentration limits	Notes on ingredients
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

remarks The injured person should be moved from the contaminated area to fresh air or a well-ventilated room, basic vital functions should be monitored and protection against hypothermia or overheating should be ensured.

Do not give an unconscious person anything to eat or drink. Lay the injured person on their side and try to

clearing the airways.

After inhalation exposure

The injured person should be evacuated to fresh air and left the hazardous area. If symptoms persist, seek medical attention.

After skin contact

Remove contaminated clothing. Wash any exposed skin with plenty of soap and water. If symptoms persist, seek medical attention.

After contact with eyes

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

After ingestion: Do not induce vomiting! Rinse

mouth thoroughly with water. If in doubt or if you feel unwell, seek medical attention. Show the safety data sheet or label to the doctor.

4.2 Most important acute and delayed symptoms and effects of exposure

After inhalation exposure

Inhalation of dust may irritate the respiratory tract. Causes respiratory irritation.

After skin contact

The powder may cause local irritation in skin folds or under tight clothing. It may cause irritation upon contact with skin.

After contact with eyes

The powder irritates the eyes (mechanically). Contact with eyes may cause irritation (redness, tearing, pain).

This product contains an anticoagulant agent that

may cause bleeding following gastrointestinal exposure. Symptoms may appear several days after exposure. Poisoning can lead to impaired blood clotting and an increased tendency to bleed. In severe poisoning, severe internal bleeding can lead to circulatory collapse and, ultimately, death.

4.3 Indications of any immediate medical attention and special treatment needed for the injured person

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

ADVICE FOR PHYSICIANS: Brodifacoum is a direct anticoagulant. Phytomenadione, vitamin K1, acts as an antidote. Monitor prothrombin time no less than 18 hours after ingestion. If prothrombin time is prolonged, administer vitamin K1 until normalization. Continue monitoring prothrombin time for two weeks after discontinuing the antidote and resume treatment if prothrombin time increases during this period.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing

media Suitable extinguishing media

Carbon dioxide. Fire extinguishing powder. Water spray. Alcohol-resistant foam.

Inappropriate extinguishing media

Direct water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Harmful fumes/gases may be produced when heated.

5.3 Information for the fire brigade

Protective measures

Do not breathe fumes/vapours generated during fire or heating. Cool exposed containers with water spray. If possible, remove from the hazardous area.

Special protective equipment for firefighters

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

Additional information

Contaminated fire extinguishing water must be collected and disposed of in accordance with applicable regulations; it must not be discharged into the sewer system.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment

Wear personal protective equipment (Section 8). Follow the provisions in sections 7 and 8 of this Safety Data Sheet.

Accident prevention measures

Provide adequate ventilation.

Emergency procedures

Prevent access by personnel without appropriate protective equipment. Do not inhale vapors or mists. Avoid contact with eyes and skin.

For persons providing assistance

Use personal protective equipment.

6.2 Environmental precautions

Prevent the product from entering waterways/sewers/drains or permeable soil. In case of accidental spillage into waterways or the ground, notify the appropriate authorities.

6.3 Methods and materials for containment and cleaning up

Contamination containment No data available

Removing contamination

Collect in a suitable container and hand over to an authorized waste collector.

OTHER INFORMATION

No data available

6.4 References to other sections

See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

7.1 Precautions for safe handling

Protective measures

Fire prevention

measures

Ensure adequate ventilation.

Measures to prevent aerosol and dust formation

Avoid dust formation.

Environmental precautions:

No data available.

Other

measures No

data available Recommendations for general

occupational hygiene Follow the recommendations on the label and the regulations regarding health and safety at work.

Wear appropriate personal protective equipment. Maintain good personal hygiene (wash hands during breaks and after working with the material). Do not eat, drink, or smoke while working. Avoid inhaling dust.

7.2 Conditions for safe storage, including information on any incompatibilities

Technical measures and storage conditions : **Store**

in the original, tightly closed container in a dry place. Store at room temperature.

Store in a well-ventilated area. Keep away from food, drink, and feed. Keep out of reach of children. Keep away from animals. Keep away from open flames, heat, and direct sunlight. Store in a closed place. The bait should be stored at a temperature of 5–20°C (41–68°F).

At higher temperatures, oil may leak from the bait.

Packaging materials

No data available

Requirements for storage rooms and tanks

No data available

Storage class

No data available

Additional information on storage conditions

No data available

7.3 Specific end use(s)

Recommendations: This product is intended for use as a rodenticide (biocide). It is essential to read the instructions before using the product.

Industry-specific solutions

No data available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Binding limit values for occupational exposure to factors

No data available

Information about monitoring procedures

PN-EN 482:2021-08 Exposure at work stations - Procedures for determining the concentration of chemical agents -

Basic requirements for procedure parameters PN-EN 689+AC:2019-06 Exposure at workplaces --

Measurements of inhalation exposure to chemical agents - Strategy for testing compliance with limit values

DNEL/DMEL values

For the product

No data available

For ingredients

No data available

PNEC values

For the product

No data available

For ingredients

No data available

8.2 Exposure Controls

Appropriate technical control measures

Measures related to the substance/mixture to prevent exposure during identified uses

Maintain good personal hygiene – wash your hands during breaks and after working with the material. Avoid contact with eyes and skin.

Avoid inhaling dust. Follow occupational health and safety practices.

Structural measures to prevent exposure

No data available

Organizational measures to prevent exposure

No data available

Technical measures to prevent exposure

Ensure good ventilation and local exhaustion in areas of increased concentration. Store away from food, drink and feed.

Personal protective equipment such as personal protective equipment

Eye and face protection

Safety glasses with side protection (EN 166).

Hand protection

Protective gloves (EN 374).

Suitable materials

material	thickness	penetration time	Attention
PVC	/	/	/
butyl rubber	/	/	/

Protecting the rest of the skin

Cotton protective clothing (EN ISO 13688) and footwear that covers the entire foot (EN ISO 20345).

Respiratory protection

Not necessary with normal use and proper ventilation. If dust is formed, use masks (EN 149:2001; EN 140:1999) with dust filter "P" (EN 143:2001).

Thermal hazards

No data available

Environmental exposure control

Measures related to the substance/mixture to prevent exposure

No data available

Structural measures to prevent exposure

No data available

Organizational measures to prevent exposure

No data available

Technical measures to prevent exposure

No data available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical condition

solid - paste

Color

blue or red

Smell

mild characteristic

Information important for human health, safety and the environment

Odor threshold	No data available
Melting point	No data available
Boiling point	No data available
Flash-point	No data available
Explosive limits	No data available
Flash-point	(the product is not highly flammable (method according to EEC Directive A.10))

Autoignition temperature	No data available
Decomposition temperature	No data available
pH value	No data available
Viscosity	No data available
Solubility	water: insoluble
Partition coefficient	No data available
Vapor pressure	No data available
Density / weight	No data available
Vapor density	No data available
Characteristics of molecules	No data available

9.2 OTHER INFORMATION

Oxidizing properties	It has no oxidizing properties
Explosive properties	The product is not explosive. The product is not spontaneously flammable.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

The product is stable under normal handling and storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Do not expose to high temperatures.

10.5 Incompatible Materials

Strong oxidizers.

10.6 Hazardous decomposition products

No hazardous decomposition products are expected under normal use. In the event of a fire/explosion, hazardous decomposition products may be produced. fumes/gases that pose a health hazard.

SECTION 11: TOXICOLOGICAL INFORMATION

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

(a) Acute toxicity
For ingredients

Name chemical	type of exposure		Species	Time	Value	method	Attention
brodifacoum (ISO)	oral	LD50	rat	/	0.4 mg/kg bw	/	/
brodifacoum (ISO)	skin	LD50	rat	/	3.16 mg/kg bw	/	/
Benzoate denatonium	oral	LD50	rat	/	584 mg/kg	/	/
Benzoate denatonium	skin	LD50	rabbit	/	> 2000 mg/kg	/	/

(b) Skin corrosion/irritation

No data available

(c) Serious eye damage/eye irritation

No data available

(d) Respiratory or skin sensitisation

No data available

(e) Mutagenic effect (on germ cells)

No data available

(f) Carcinogenicity

No data available

(g) Reproductive toxicity

No data available

Summary of CMR assessment

No data available

(h) Specific target organ toxicity - single exposure

No data available

(i) Specific target organ toxicity - repeated exposure

No data available

Additional information

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

(j) Aspiration hazard

No data available

Symptoms related to physical, chemical and toxicological properties

No data available

The effects of mutual interaction

No data available

11.2 Information about other threats

Endocrine disrupting properties

No data available

Other information

No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute toxicity

For ingredients

Name chemical	type	Value	Exposure time	Species	organism	method	Attention
brodifacoum (ISO)	EC50	0.04 mg/l	72 hours	algae	/	/	/

brodifacoum (ISO) EC50		0.25 mg/l	48 hours	cartilaginous	Daphnia magna	/	/
brodifacoum (ISO) LC50		0.042 mg/l	96 hours	fish	Oncorhynchus mykiss	/	/
Benzoate denatonium	LC50	> 1000 mg/l	96 hours	fish	Oncorhynchus mykiss	/	/
Benzoate denatonium	LC50	> 1000 mg/l	96 hours	fish	Salmo gairdneri	/	/
Benzoate denatonium	EC50	13 mg/l	48 hours	cartilaginous	Daphnia magna	/	/

Chronic toxicity

No data available

12.2 Persistence and degradability

Abiotic decomposition, physical and photochemical elimination

No data available

Biodegradation

No data available

12.3 Bioaccumulative potential

Partition coefficient

For ingredients

Chemical name	medium	Value	Temperature °C	pH value	Concentration	method
brodifacoum (ISO)	octanol-water (log Pow)	4.9	20	7	/	/
Benzoate denatonium	octanol-water (log Pow)	1.78	/	/	/	/

Bioconcentration factor (BCF)

No data available

12.4 Mobility in soil

Known or predicted distribution in environmental compartments

No data available

Surface tension

No data available

Adsorption/desorption

For ingredients

Chemical name	type	Criterion	Value	Result	method	Attention
Benzoate denatonium	earth	Henry's constant (H)	- 1.63E-21 atm m ³ /mol	/	/	25 °C

12.5 Results of PBT and vPvB assessment

The substances contained in the preparation are not classified as PBT or vPvB.

12.6 Endocrine disrupting properties

No data available

12.7 Other harmful effects

No data available

12.8 Additional information

For the product:

No toxicological data available for the mixture. Prevent release into the environment.

For **brodifacoum**

components (ISO)

Not readily biodegradable. High bioaccumulation potential.

SECTION 13: WASTE CONSIDERATIONS

13.1 Waste disposal methods

Product/Packaging Disposal: Product Disposal

should be

carried out in accordance with official regulations: delivered to a person authorized to collect/remove/process hazardous waste. Discharge into the environment or into water is prohibited.

Waste code

No data available

Packaging

Deliver the completely emptied packaging to an authorized waste collector.

Waste code

No data available

Waste treatment methods

No data available

Possibility of pouring into the sewer system

No data available

Comments

No data available

SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
The mixture is not considered a dangerous good according to the regulations on the transport of dangerous goods.	The mixture is not considered a dangerous good according to the regulations on the transport of dangerous goods.	The mixture is not considered a dangerous good according to the regulations on the transport of dangerous goods.	The mixture is not considered a dangerous good according to the regulations on the transport of dangerous goods.
14.2 UN proper shipping name			
no equivalent given	no equivalent given	no equivalent given	no equivalent given
14.3 Transport hazard class(es)			
no equivalent given	no equivalent given	no equivalent given	no equivalent given
14.4 Packing group			
no equivalent given	no equivalent given	no equivalent given	no equivalent given
14.5 Environmental hazards			

NO	NO	NO	NO
14.6 Special precautions for users			
Limited quantities not specified/no equivalent	Limited quantities not specified/no equivalent		Limited quantities not specified/no equivalent
14.7 Bulk maritime transport in accordance with IMO instruments			
no equivalent given			

SECTION 15: REGULATORY INFORMATION

15.1 Legal provisions regarding safety, health and environmental protection specific for the substance or mixture - Act of 25 February 2011 on chemical substances and their mixtures (Journal of Laws No. 63, item 322, as amended).

- Regulation of the Minister of Labour and Social Policy of 6 June 2014 on the highest permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2014, item 817, as amended).
- Waste Act of 14 December 2012 (Journal of Laws of 2013, item 21, as amended).
- Act of 13 June 2013 on the management of packaging and packaging waste (Journal of Laws of 2013, item 888, as amended).
- Regulation of the Minister of the Environment of 9 December 2014 on the waste catalogue (Journal of Laws of 2014, item 1923).
- Regulation of the Minister of Economy of 21 December 2005 on essential requirements for personal protective equipment (Journal of Laws No. 259, item 2173).
- Regulation of the Minister of Health of 2 February 2011 on tests and measurements of factors harmful to health in the work environment (Journal of Laws No. 33, item 166).
- European Agreement on the International Carriage of Dangerous Goods by Road (ADR).
- **1907/2006/EC** Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended.
- **1272/2008/EC** Regulation of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006, as amended.
- **2020/878/EU** COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- **2008/98/EC** Directive of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.
- **94/62/EC** Directive of the European Parliament and of the Council of 20 December 1994 on packaging and packaging waste.

Directive 2004/42/EC does
not apply

Ingredients in accordance with the Detergents Regulation EC 648/2004

No data available

Specific guidelines

No data available

15.2 Chemical safety assessment

Chemical safety assessment not available.

SECTION 16: OTHER INFORMATION

Changes compared to the previous version

No data

available Safety Data Sheet Measures

No data available

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 Standardization C&L -

Classification and

Labeling CLP - Classification, Labeling and

Packaging Regulation; Regulation

(EC) No. 1272/2008 CAS# - Chemical Abstracts Service number (CAS number)

CMR - Carcinogenic, Mutagenic or Reproductive Toxicant CSA - Chemical Safety

Assessment CSR - Chemical Safety Report DMEL

- Derived 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 Chemical Substances ELINCS - European List of Notified Chemical Substances EN - European Standard EQS -

Environmental Quality

Standard EU - European Union

Euphrac - European

Phrase Catalogue EKO - European

Waste Catalogue (replaced by the List of Waste - 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 Transport of Dangerous Goods IMSBC - International

Maritime Transport of Solid Bulk Cargoes IT - Information Technology IUCLID -

International Uniform Chemical Information Database IUPAC - International Union of Pure and Applied Chemistry

JRC - Joint Research Centre Kow - Octanol-water partition coefficient LC50 - Lethal

Concentration for 50% of the test population LD50 - Lethal Dose for

50% of the 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 PC -

Member States MSDS - Safety

Data Sheet OC - Operational Conditions OECD - Organisation

for Economic Co-operation

and Development OEL - Occupational Exposure Limit OJ - Official

Journal WP - Only Representative OSHA - European Agency

for Safety and Health at Work

PBT - Persistent, Bioaccumulative

and Toxic PEC - Predicted Environmental Concentration PNEC - Predicted No Effect Concentration

PPE - Personal Protective Equipment (Q)SAR - Quantitative Structure Activity Relationship

REACH - Regulation (EC) No 1907/2006 concerning

the Registration, Evaluation, Authorisation and Restriction of Chemicals

- 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
- SMEs - small and medium-sized enterprises
- STOT - target organ toxicity
- (STOT) RE - repeated exposure
- (STOT) SE - single exposure
- SVHC - Substances of concern

Full text of H phrases from point 3

H300 Fatal if swallowed.

H302 Harmful if swallowed.

H310 Fatal in contact with skin.

H315 Causes skin irritation

H319 Causes serious eye damage

H319 Causes serious eye irritation

H330 Fatal if inhaled
H335 M

H335 May cause respiratory irritation.
H360D May damage the unborn child.

H360D May damage the unborn child.

H372 Causes damage to organs

H373 May cause damage to organs

H400 Very toxic to aquatic life.



- ÿ Correct product labeling ensured
- ÿ Coordinated with local law
- ÿ Correct product classification ensured
- ÿ Relevant data provided regarding transport

BENS

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The information quoted relates to the current state of knowledge and experience and the condition of the product upon delivery.

This information provides a **product at the point of acquisition**. The **expirability** of a safety obligation of the offer is

legal point

It is not

necessary to know and comply with the provisions of the regulations regarding the transport and use of the product. Properties

product are presented in technical information