SAFETY DATASHEET

Prepared in accordance with Regulation (EC) No 1907/2006 as amendedby Regulation (EU) 2020/878

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier: **LANIRAT impegnated whole grain bait**
UFI-code: H110-K018-R000-SHKW

1.2 Identified use: **Biocidal product, product type 14 (PT14).**
Rodenticides (used for the control of mice, rats, and other rodents, excluding repellents and attractants)
Distribution category: II. – for professional use only, by trained personnel
Uses advised against: Any use other than those specified above.

1.3. Details of the supplier of the safety data sheet:
METATOX PeszticidGyártó- ésForgalmazóKft.
H-5520 Szeghalom, Kossuth u. 8.
Telephone: +3666 371 168
Contact of the competent person responsible for the SDS: info@metatox.hu

1.4. Emergency telephone number: Health Toxicology Information Service (ETTSZ):
Available during working hours (8:00-16:00): +361 476 6464
24-hour, toll-free number: +3680 20 1199

Section 2: Hazards identification

2.1. Classification of the substance or mixture: According to the manufacturer and applicable EU regulations, including Regulation (EC) No 1272/2008 and its amendments, **the product is classified as a hazardous mixture.**

Classification:

Health hazard:

	Hazard class	Hazard category
Repr. 1B	Reproductive toxicity	1B
STOT RE 1	Specific target organ toxicity – repeated exposure	1

Physical and environmental hazards: Not classified for physical or environmental hazards.

2.2. Label elements
Pictogram: GHS08 **Signal word:** DANGER

DANGER

Hazard statements:
H360D May damage the unborn child.
H372 Causes damage to organs (blood) through prolonged or repeated exposure.

Precautionary statements:
P102 Keep out of reach of children.
P201 Obtain special instructions before use.
P260 Do not breathe dust.
P280 Wear protective gloves and face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P501 Dispose of contents/container in accordance with local regulations.

Biocidal active substance content: 0,005% Bromadiolone

Notes: This is a biocidal product and must be packaged and labelled in accordance with Regulation (EU) No 528/2012 on the making available on the market and use of biocidal products.

2.3. Other hazards: The active substance in the product is an anticoagulant. Ingestion of large quantities may lead to coagulation disorders, bleeding tendency, and internal bleeding. The rodenticide contains a bittering agent (denatonium benzoate) to help prevent accidental human consumption.

To protect public health and prevent secondary poisoning, dead rodents must be removed during treatment.
Rodent carcasses must be collected using protective gloves and an inverted plastic bag, then placed into a second bag, which must be tied securely.
The double-bagged carcass must be placed into a sealed waste container; it shall be disposed of as municipal waste. See also Section 13.

The product has no other known specific hazards for human health or the environment.
The active substance bromadiolone is classified as a PBT substance. For further information on **PBT and vPvB** assessment, see Section 12.

Endocrine-disrupting properties: Based on available data, the product does not contain substances with endocrine-disrupting or endocrine system-damaging properties.

Section 3.: Composition/information on ingredients

3.1. Substances: not applicable.
3.2. Mixtures: the product is a mixture.

Hazardous component	Concentration	Classification – hazard class and category; Hazard statement
Bromadiolone* CAS-number:28772-56-7 EK-number: 249-205-9 Index-number:607-716-008	0,005%	Acute Tox. 1 (oral, dermal, inhal.), H300, H310, H330; Repr. 1B, H360D, STOT RE 1, H372 (blood) Aquatic Acute 1, H400, $M_{(acute)}$: 1; Aquatic Chronic 1, H410, $M_{(chronic)}$: 1 Specific concentration limits: If concentration is ≥ 0,003%, thenRepr. 1B, H360D, If concentration is ≥ 0,005%, then STOT RE 1, H372 If 0,0005% ≤ concentration<0,005%, then STOT RE 2, H373
Denatoniumbenzoate** CAS-number: 3734-33-6 EK-number: 223-095-2	0,001%	Acute Tox. 4 (oral, inhal.), H302, H332; Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Chronic 3, H412

* Chemical name:3-[(1RS,3RS;1RS,3SR)-3-(4'-brombiphenyl-4-yl)-3-hydroxy-1-phenylprophyl]-4-hidroxicoumarin
** Not harmonised at EU level; classification according to supplier data

Other components not listed are either not classified as hazardous under applicable legislation or are present at concentrations below the threshold levels requiring declaration for classification purposes.

The hazard classes, categories, and H-statements listed above refer to the pure substances. The classification of the mixture is provided in Section 2.
For the full wording of hazard statements and explanations of abbreviations, see Section 16.

Section 4.: First aid measures

4.1. Description of first aid measures
General information: The effectiveness and promptness of first aid can significantly reduce the onset and severity of symptoms. Do not give anything to drink or induce vomiting in an unconscious or convulsing person.

Inhalation: Inhalation of the product is not a realistic route of exposure. Standard measures: move the affected person to fresh air. In case of symptoms or suspected poisoning, seek medical advice.
Skin contact: Wash the affected skin area thoroughly with soap and plenty of water. In case of irritation, consult a physician.
Eye contact: Immediately rinse the eye with plenty of water for at least 10 minutes, keeping the eyelids open and moving the eyeball. If the person is wearing contact lenses, remove them and continue rinsing. If complaints or symptoms persist, consult an ophthalmologist.
Ingestion: In case of ingestion, seek medical attention immediately and show the product packaging, label, or this safety data sheet. Induce vomiting only if explicitly instructed by medical personnel. Rinse the mouth with water.
4.2. Most important symptoms and effects, both acute and delayed: The active substance in the product is the anticoagulant bromadiolone. Following ingestion, blood clotting ability may be reduced, and internal bleeding may occur. There may be a delay of several days between poisoning and the appearance of symptoms.
4.3. Indication of any immediate medical attention and special treatment needed: In the event of poisoning by ingestion, if characteristic symptoms are observed (e.g. nosebleeds, bleeding gums, in severe cases haemoptysis, haematuria, prolonged clotting time, extensive or multiple hematomas, sudden and unusual visceral pain), administer vitamin K_1.
If no bleeding is observed, measure prothrombin activity (INR), and repeat the measurement 48–72 hours after exposure.
If the prothrombin activity value is >4, vitamin K_1 must be administered intravenously. Repeated treatment may be necessary.

Note to physician: The active substance of the product is a coumarin-derived anticoagulant, **antidote: vitamin K_1.**
Prothrombin activity should be monitored over several days, especially if a larger amount of rodenticide has been ingested.

Section 5: Firefighting measures

The product is not flammable, but it is combustible.

5.1 Suitable extinguishing media: Use standard extinguishing agents: carbon dioxide, dry chemical powder, water spray, foam. Choose extinguishing media based on the surrounding materials. Unsuitable extinguishing media: High-pressure water jet.

5.2 Special hazards arising from the mixture: At high temperatures, toxic and irritating gases or vapours may be released during combustion or decomposition, such as carbon monoxide and carbon dioxide.

5.3 Advice for firefighters: In case of exposure to vapours or combustion products, use full protective equipment and a self-contained breathing apparatus independent of ambient air.

Section 6.: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
The spilled product must be collected mechanically. Wear protective gloves and avoid exposure to the product. In the event of large-scale spillage, use of a dust mask is recommended.

6.1.1. For non-emergency personnel: Notify the relevant authorities. Remove unauthorized personnel from the area.

6.1.2. For emergency responders: Personal protective equipment is required. Decontamination should only be carried out by trained personnel.

6.2. Environmental precautions: Prevent the spilled product from entering drains, watercourses, or soil. Waste disposal must be carried out in accordance with local regulations. If the product has entered a drain or watercourse, notify the Disaster Management Authority.

6.3. Methods and material for containment and cleaning up: Sweep or shovel up the scattered product mechanically, preferably completely and without generating dust. Place the collected material in a suitable container and dispose of it. Disposal must be performed by an appropriately licensed hazardous waste handler, in accordance with local regulations. Clean the contaminated area with water or water containing a suitable detergent.

6.4. Reference to other sections: See also Sections 8 and 13.

Section 7: Handling and storage

7.1. Precautions for safe handling

This product must be used exclusively for rodent control and only as specified in the instructions for use.

Before use, read and follow the product information provided on the label as well as any instructions, product leaflets, or brochures accompanying the product or provided at the time of sale.

Avoid exposure to the product through careful handling: prevent contact with skin and eyes, and avoid ingestion.

Do not eat, drink, or smoke while using the product.

Contaminated clothing and protective equipment must be removed before entering areas where food is consumed.

After placing the bait, wash hands thoroughly with soap.

7.2. Conditions for safe storage, including any incompatibilities

Store the product in its original container, in a dry, cool, and well-ventilated area, protected from direct sunlight and moisture.

Keep away from food, drink, animal feed, and incompatible substances.

Ensure the product is inaccessible to children, unauthorized persons, birds, livestock, and pets.

Shelf life: if properly stored, the product retains its quality for 2 years from the date of manufacture.

7.3. Specific end use(s): Biocidal product – rodenticide – for use by trained professional users only. Users must always read the instructions for use and follow the safety guidelines for handling and application.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values: No occupational exposure limits have been established for the components of this product in workplace air.

Periodic medical check-ups are recommended for professional users, as repeated and unintended exposure to the product may reduce blood coagulation ability.

8.2. Exposure controls

Technical measures: Not required.

Hygiene measures:

- Do not eat, drink, or smoke during use.
- After application, wash hands thoroughly with warm soapy water.
- Avoid contact with skin and clothing.

Personal protective equipment:

- **Respiratory protection:** Not required under normal use conditions.
- **Hand protection:**During placement of the bait, wear chemical-resistant protective gloves complying with EN 374.Replace gloves if damaged. When selecting glove material, consider not only the substance but also manufacturer-specific quality indicators.

Take into account the breakthrough time, degradation characteristics, and workplace factors such as duration and frequency of use, risk of contact with other chemicals, and physical demands (e.g. protection against cuts or punctures).

- **Eye protection:** not required.
- **Skin protection:** Wear appropriate work clothing.

Environmental protection measures

To avoid secondary poisoning, the product must be placed in locations inaccessible to pets, livestock, birds, and non-target organisms. Pets and other predators and/or scavenging non-target animals may be poisoned if they consume rodents that have died after ingesting the rodenticide.

Do not release the product or its packaging into drains or water bodies.

The above instructions apply to professional use under normal conditions and intended use. If work is carried out under different or exceptional circumstances, it is recommended to consult an expert to determine any additional necessary measures and personal protective equipment.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Solid
Appearance:	Non-homogeneous, impregnated cereal grains
Color:	Red
Taste:	Bitter (contains denatonium benzoate)
Odour:	Neutral
Odour threshold:	Not relevant
pH at 20°C:	6,3 ± 0,1 (1% aqueous suspension)
Bulk density at 20°C:	0,721±0,014 g/cm^3
Melting point / boiling point:	Not relevant
Decomposition temperature:	No data available
Flash point:	Not relevant
Auto-ignition temperature:	No data available
Flammability (solid, gas):	not flammable
Vapour pressure:	No data available
Evaporation rate:	Not relevant
Water solubility:	Suspendable in water
Partition coefficient:	Not relevant, the product is mixture
Viscosity:	Not relevant
Explosive properties:	Not characteristic; no explosion hazard
Explosion limits:	Not relevant
Oxidising properties:	Not oxidising

9.2. Other information

Information regarding physical hazard classes: Based on available data, the product is not classified in any physical hazard class.

Other safety characteristics: No additional parameters are identified as relevant for the safe use of the mixture.

Section 10: Stability and reactivity

10.1. Reactivity: Not reactive undernormal conditions.

10.2. Chemical stability: The product is stable under normal conditions of temperature and pressure, as well as under storage conditions specified in Section 7.

10.3. Possibility of hazardous reactions: No known hazardous reactions.

10.4. Conditions to avoid: High temperatures, heat, heating, frost, moisture.

10.5. Incompatible materials: Strong acids, bases, oxidising agents.

10.6. Hazardous decomposition products: None under normal conditions. In case of fire, toxic and irritating gases or vapours may be released. See Section 5.

Section 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008:
Acute toxicity (oral, dermal, inhalation): Based on estimated ATE_{mix}values, the product is not classified under acute toxicity hazard classes.
Measured acute oral LD_{50} for the product (rat): >2000 mg/kg bw, OECD 423
Measured dermal LD_{50} for the product (rabbit): >2000 mg/kg bw
The product does not irritate the eyes or skin and does not cause sensitisation.
Skin corrosion/irritation: Based on composition and available data, the product is not corrosive and does not cause skin irritation.
Serious eye damage/eye irritation:B ased on composition and available data, the product does not cause serious eye damage or irritation.
Respiratory or skin sensitisation: The product is not sensitising.
Germ cell mutagenicity: Based on available data and information, the product is not classified as a germ cell mutagen.
Carcinogenicity: Based on available data and information, the product is not classified as a carcinogenic mixture.
Reproductive toxicity: Based on the specific concentration limit established for bromadiolone, the classification criteria are met. The product is classified as toxic to reproduction (Repr. 1B); may damage the unborn child.
Specific target organ toxicity – single exposure (STOT SE): The product does not meet the criteria for classification under this hazard class.
Specific target organ toxicity – repeated exposure (STOT RE): Based on the specific concentration limit established for bromadiolone and its presence in the product at 0.005%, the product is classified under STOT RE 1.
Aspiration hazard: The product is not classified as presenting an aspiration hazard.

11.2. Information on other hazards
This product contains a second-generation anticoagulant active substance. Due to the low active substance content in the product, the toxic dose for a person of normal body weight would require the ingestion of several kilograms. Such ingestion is considered highly unlikely due to the presence of a bittering agent in the formulation.
Poisoning caused by second-generation anticoagulants can be effectively treated with vitamin K_1 administration and is easily monitored by measuring blood coagulation factors.
Ingestion of large amounts may cause coagulation disorders, reduced blood clotting ability, haemorrhaging, and internal bleeding. Repeated unintended exposure to the product may reduce blood coagulation capacity. See also Sections 4.2 and 4.3.
Endocrine-disrupting properties:
Based on available data, the mixture does not contain substances identified as endocrine disruptors or as having endocrine-disrupting effects.

Section 12: Ecological information

12.1. Toxicity: Bromadiolone is very toxic to aquatic organisms and causes long-term adverse effects in the aquatic environment. However, the product itself is not classified as hazardous to the aquatic environment, as the bromadiolone concentration in the product is only 0.005%, and both the acute and chronic M-factor for bromadiolone is 1.
Bromadiolone (ISO) (CAS: 28772-56-7):
LC_{50} (Oncorhynchus mykiss): 1.4 mg/l/96 hours

LC_{50} (Lepomis macrochirus): 3.0 mg/l/96 hours
EC_{50} (daphnia): 5.8 mg/l/48 hours

12.2. Persistence and degradability: Bromadiolone is poorly biodegradable and hydrolytically stable.

12.3. Bioaccumulative potential: Bromadiolone is bioaccumulative, as indicated by its high bioconcentration factor and high partition coefficient.

12.4. Mobility in soil: Based on its Koc value, bromadiolone is non-mobile to slightly mobile in soil.

12.5. Results of PBT and vPvB assessment: Bromadiolone is considered a PBT substance (persistent, bioaccumulative, and toxic) and a potential vPvB substance (very persistent and very bioaccumulative). Experimental data confirm that bromadiolone is bioaccumulative and possibly very bioaccumulative.

12.6. Endocrine disrupting properties: Bromadiolone has not been identified as an endocrine-disrupting substance.*(Source: Opinion on the application for renewal of the approval of bromadiolone, ECHA/BPC/111/2016 https://echa.europa.eu/documents/10162/06ef03f0-2b42-453a-9fc1-cc3b667465c9)*

12.7. Other adverse effects: Avoid release of product residues and packaging into soil, water bodies, or drains.
Risk mitigation measures must be implemented to minimise both primary and secondary exposure of non-target animals and the environment.

Section 13.: Disposal considerations

The disposal of product residues and waste shall be carried out in accordance with Government Decree No. 225/2015 (VIII.7), and the disposal of packaging waste in accordance with Government Decree No. 442/2012 (XII.29).

After the treatment period, bait stations must be removed, and any remaining rodenticide, as well as baiting equipment and stations, must be collected.
Any spilled product must be thoroughly cleaned up.
Rodenticide that can no longer be used for its intended purpose must be treated as hazardous waste and delivered to an authorized hazardous waste collection facility (e.g., waste collection yard).

Classification of the product waste has been carried out in accordance with Ministerial Decree No. 72/2013 (VIII.27.) of the Ministry of Rural Development.
Waste classification of the product (Waste key / EWC code):

07 04	Wastes from manufacture, formulation, supply and use (MFSU) of organic pesticides (except 02 01 08 and 02 01 09), wood preservatives and biocides
07 04 13*	Solid waste containing hazardous substances

Section 14: Transport information

The product is **not classified as dangerous goodsunder** international transport regulations, including **ADR/RID, IMDG, and IATA.**

14.1. UN number or ID number: Not applicable.

14.2. UN proper shipping name: Not applicable.

14.3. Transport hazard class(es): Not relevant.

14.4. Packing group: Not relevant.

14.5. Environmental hazards: Not relevant.

14.6. Special precautions for user: Not relevant.

14.7. Maritime transport in bulk according to IMO instruments: Not relevant.

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the mixture
The use of bromadiolone as an active substance in rodenticidal products was approved under Directive 2009/92/EC, and its approval was renewed by Regulation (EU) 2017/1380.
The product does not contain substances listed in Annex XIV or Annex XVII of the REACH Regulation.
The product does not contain any substances identified as SVHC on the Candidate List.

Applicable EU legislation:
Biocidal Products Regulation (BPR): 528/2012/EU and its amendments;
REACH regulation: 1907/2006/EK and its amendments;
CLP regulation: 1272/2008/EK and its amendments;
Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Applicable national legislation:

Biocides:	Government Decree No. 316/2013 (VIII.28.) on certain rules for the authorisation and placing on the market of biocidal products.
Occupational safety:	Act XCIII of 1993 on occupational safety and health;Decree No. 5/2020 (II.6.) of the Ministry for Innovation and Technology on the protection of workers exposed to chemical agents;Decree No. 33/1998 (VI.24.) of the Ministry of Welfare on medical examinations and opinions concerning occupational, professional, and personal hygiene suitability;Joint Decree No. 3/2002 (II.8.) of the Ministry of Social and Family Affairs and the Ministry of Health on minimum occupational safety requirements at workplaces
Chemical safety:	Act XXV of 2000 on chemical safety and its amendments;Decree No. 44/2000 (XII.27.) of the Ministry of Health on detailed rules of certain procedures and activities concerning hazardous substances and mixtures and its amendments.
Environmental protection:	Act LIII of 1995 on the general rules of environmental protection;Act CLXXXV of 2012 on waste;Government Decree No. 225/2015 (VIII.7.) on detailed rules concerning hazardous waste activities;Ministerial Decree No. 72/2013 (VIII.27.) of the Ministry of Rural Development on the waste catalogue.
Fire safety:	Act XXXI of 1996 on fire protection, technical rescue, and fire services;Decree No. 54/2014 (XII.5.) of the Ministry of the Interior on the National Fire Safety Regulation.

15.2. Chemical safety assessment: Has not been prepared for this mixture.

Section 16: Additional information

The safety data sheet is not intended to guarantee specific properties of the product and does not replace the product specification.
The information, data, and recommendations contained in this safety data sheet are based on our best knowledge and understanding at the time of issue and are believed to be accurate and reliable. They are provided solely to support the safe use of the product.

The product may only be stored, handled, and used in accordance with the instructions for use.
It is the responsibility of the user to take all necessary precautions when handling the product.
This safety data sheet does not constitute any legal obligation or acceptance of liability for consequences arising from improper use or use under inappropriate conditions, as the circumstances of use (handling, application, storage, disposal, etc.) are beyond our control.

Training recommendation: Persons working with the product in a professional capacity (trained professional users) must be informed about the hazards associated with handling chemicals. They must also receive annual occupational safety training on general safety and protective measures.

THE SAFETY DATA SHEET MUST BE MADE AVAILABLE TO USERS.

Classification of the mixture: The classification was carried out using the calculation method, based on the concentration and classification of the components.

Indicated H-statements and other abbreviations: The numbers following the abbreviations in Section 3 indicate the category within the respective hazard class; higher numbers correspond to lower levels of hazard:

Acute Tox.: Acute toxicity; oral: via oral route; dermal: via dermal route; inhal.: via inhalation; Repr.: Reproductive toxicity; STOT RE: Specific target organ toxicity, repeated exposure; Skin Irrit: Skin irritation; Eye Dam.: Serious eye damage; Aquatic Acute: Hazardous to the aquatic environment, acute hazard;Aquatic Chronic: Hazardous to the aquatic environment, chronic hazard.

H300 Fatal if swallowed.
H302 Harmful if swallowed.
H310 Fatal in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H330 Fatal if inhaled.
H332 Harmful if inhaled.
H360D May damage fertility or the unborn child
H372 Causes damage to organs (blood) 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.
H412 Harmful to aquatic life with long lasting effects.

ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road
ATE_{mix} Acute Toxicity Estimate (mixture)
BPC Biocidal Product Committee
CAS Chemical Abstract Service
CLP Classification, Labelling and Packaging –regulation 1272/2008/EK
ECHA European Chemicals Agency - Az EurópaiVegyianyag-ügynökség
EK-numberIdentification number of the substance in the European Union
GHS Globally Harmonized System of Classification and Labelling of Chemicals
IATA International Air Transport Association
ICAO International Civil Aviation Organization Technical Instruction for the Safe Transport of Dangerous Goods by Air
INR International Normalized Ratio
IMDG International Maritime Dangerous Goods Code
K_{oc} Adsorption coefficient normalized to organic carbon
M Multiplication factor applicable for determining acute and chronic aquatic environmental hazard using the weighted summation method
OECD Organisation for Economic Co-operation and Development
PBT Persistent, Bioaccumulative, Toxic
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals regulation /2006/EK
RID Regulations concerning the International Carriage of Dangerous Goods by Rail – Technical Instructions for Safety
SVHC Substance of Very High Concern
UFI Unique Formula Identifier
vPvB very Persistent, very Bioaccumulative

The product falls under Distribution Category II and may be sold exclusively to trained professional users.

When using biocidal products, ensure safety at all times.
Always read the label, instructions for use, and safety recommendations carefully before each application.
To avoid risks to human health and the environment, the instructions for use must be followed precisely.

The product's safety data sheet is available free of charge and can be downloaded at:
http://www.metatox.com

SDS history: This safety data sheet was prepared based on the manufacturer's data on 15 June 2025, and it supersedes the previous version.
The purpose of the revision is to ensure continued compliance with Regulation (EU) 2020/878.