

Deeval International Ltd	Rev. nr. 1 Rev date: 29/11/2019
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Safety Data Sheet

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Code: **RATTO MORTO BLOCK**
Product Name: **RATTO MORTO BLOCK**

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

Intended use **READY TO USE RODENTICIDE BAIT**

1.3. Details of the supplier of the safety data sheet

Name	Deeval International Ltd
Full address	Unit 45, 1st Avenue, Deeside Industrial Park
District and Country	CH5 2NU, Flintshire, UK
	tel. +44 1244 833 951 - fax. //
e-mail address of the competent person responsible for the Safety Data Sheet	info@deeval.co.uk

1.4. Emergency telephone number

For urgent inquiries refer to:
National Poisons Information Service (www.npis.org)

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Specific target organ toxicity - repeated exposure, category 2	H373	May cause damage to organs (Blood) through prolonged or repeated exposure.
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2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words: **Warning**

Hazard statements:

H373 May cause damage to organs (Blood) through prolonged or repeated exposure. Restricted to professional users.

Precautionary statements:

P102	Keep out of reach of children.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or a doctor.
P308+P313	IF exposed or concerned: Get medical advice / attention.
P501	Dispose of contents and container in special waste according to national regulations.

Contains: **BRODIFACOUM TECNICO**

2.3. Other hazards

PBT substances contained: **BRODIFACOUM TECNICO**

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SECTION 3. Composition/information on ingredients

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
TRIETANOLAMMINA 99%		
CAS 102-71-6 EC 203-049-8 INDEX -	0,3 ≤ x < 0,35	Substance with a community workplace exposure limit.
Reg. no. 01-2119486482-31		
BRODIFACOUM TECNICO		
CAS 56073-10-0 EC 259-980-5 INDEX 607-172-00-1	0,002 ≤ x < 0,003	Repr. 1A H360D, Acute Tox. 1 H300, Acute Tox. 1 H310, Acute Tox. 1 H330, STOT RE 1 H372, Aquatic Acute 1 H400 M=10, Aquatic Chronic 1 H410 M=10

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: rinse eyes with eyes-rinse liquid or water, keep eyes lids open at least 10 minutes.

SKIN: Remove contaminated clothing. Wash skin with water and then with water and soap.

INGESTION: rinse mouth carefully with water. Never give anything by mouth to unconscious person. Do not provoke vomiting. If swallowed, seek medical advice immediately and show the product's container or label. Contact a veterinary surgeon in case of ingestion by a pet.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

4.2. Most important symptoms and effects, both acute and delayed

Brodifacoum a so-called second-generation anticoagulant rodenticide, like other coumarin derivatives, is a vitamin K antagonist Stops the normal mechanisms of blood coagulation resulting in profuse internal bleeding and death.

- Harmful in case of skin contact, may absorbed and cause internal haemorrhage.
- Harmful if ingested, there is a serious risk of internal haemorrhage.
- Lethal if ingested, there is a serious risk of internal haemorrhage.
- The symptoms may be associated with increased bleeding tendency.

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

General recommendations: In case of doubt or in case of persistent symptoms, call a doctor and show him the label information present in the safety data sheet. In case of accident, the first aid must be provided by qualified personnel to avoid further complications.

Note to physician:

Rodenticides anticoagulants, as Brodifacoum work by blocking the regeneration of vitamin K 2,3-epoxide to vitamin K hydroquinone by inhibiting the action of vitamin K epoxide reductase.

Vitamin K is required for the synthesis of important proteins such as prothrombin, protein essential for the process of blood clotting. So the progressive decrease in vitamin K causes an increase of the probability of fatal bleeding.

1. Check prothrombin activity several times, even after a few days, in particular if the amount ingested is high. Diagnosis: changes in prothrombin time (symptoms and coagulation tests)
2. Treatment: Vitamin K1.
3. In animals and particularly in pets, vitamin K1 can also be administered in the absence of bleeding disorders, due to the severity of the bleeding that may appear in case of ingestion.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder.

UNSUITABLE EXTINGUISHING EQUIPMENT

Not defined.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

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As for all organic materials, combustion may lead to formation of hazardous oxides of carbon, nitrogen and other toxic fumes.

5.3. Advice for firefighters

GENERAL INFORMATION

Take away unnecessary and unprotected personnel. Interrupt the supply, if possible. If possible, move containers to a safe place. Keep the containers and the surrounding area cool by spraying water on containers and adjacent areas. Fight fire overhead.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General information: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible and mention the authorization number).

Avoid access to children and pets. Do not contaminate food with the product.

First aid measures:

- Inhalation: Unlikely to present an inhalation hazard.
- Contact with skin: wash skin with water and then with soap and water.
- Eye contact: rinse with eye or water eyes, keeping your eyes open for at least 10 minutes.
- Ingestion: Wash the mouth thoroughly with water. Do not give anything by mouth to the unconscious person. Do not induce vomiting. In case of ingestion, seek medical advice immediately and show the container or label of the product. Contact a veterinarian if ingested by a pet.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. If the product is flammable, use explosion-proof equipment. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Collect the material thoroughly into suitable containers. Wash the contaminated area with a soapy solution; collect waste waters for treatment.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep out of reach of children and pets. Keep away from food, drink and animal feed. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

The product is used as rodenticide bait. Any other use is not permitted.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

EU OEL EU Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 91/322/EEC.

TLV-ACGIH ACGIH 2017

TRIETANOLAMMINA 99%

Threshold Limit Value

Type	Country	TWA/8h	STEL/15min
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	mg/m3	ppm	mg/m3	ppm
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OEL	EU	5		
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Predicted no-effect concentration - PNEC				
Normal value in fresh water			0,32	mg/l
Normal value in marine water			0,032	mg/l
Normal value for fresh water sediment			1,7	mg/kg
Normal value for marine water sediment			0,17	mg/kg
Normal value for water, intermittent release			5,12	mg/l
Normal value of STP microorganisms			10	mg/l
Normal value for the terrestrial compartment			0,151	mg/kg

Health - Derived no-effect level - DNEL / DMEL								
	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				13 mg/kg/d				
Inhalation				1,25 mg/m3				5 mg/m3
Skin				3,1 mg/kg/d				6,3 mg/kg/d

BRODIFACOUM TECNICO
Threshold Limit Value

Type	Country	TWA/8h	STEL/15min
		mg/m3	ppm
		mg/m3	ppm

OEL	EU	0,002
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TLV-ACGIH	0,002
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Predicted no-effect concentration - PNEC				
Normal value in fresh water			0,00004	mg/l
Normal value for fresh water sediment			0,043	mg/kg
Normal value of STP microorganisms			0,0058	mg/l

Health - Derived no-effect level - DNEL / DMEL								
	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral	0,0000033 mg/kg/d		0,0000033 mg/kg/d					

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Directive 89/686/EEC and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

Not necessary, unless otherwise indicated in the assessment of chemical risk.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	solid
Colour	blue
Odour	characteristic
Odour threshold	Not available
pH	7,2
Melting point / freezing point	Not available
Initial boiling point	Not available
Boiling range	Not available
Flash point	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	1,09 g/ml
Solubility	Not available
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	313°C
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not explosive
Oxidising properties	Not available

9.2. Other information

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

Information not available

10.5. Incompatible materials

Information not available

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10.6. Hazardous decomposition products

Information not available

SECTION 11. Toxicological information

11.1. Information on toxicological effects

ACUTE TOXICITY

LC50 (Inhalation - vapours) of the mixture: Not classified (no significant component)
 LC50 (Inhalation - mists / powders) of the mixture: Not classified (no significant component)
 LD50 (Oral) of the mixture: Not classified (no significant component)
 LD50 (Dermal) of the mixture: Not classified (no significant component)

TRIETANOLAMMINA 99%

LD50 (Oral) LD50 (Dermal)

BRODIFACOUM TECNICO

LD50 (Oral) LD50 (Dermal) LC50 (Inhalation)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

May cause damage to organs

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

No specific data are available for this product. Handle it according to good working practices. Avoid littering. Do not contaminate soil and waterways. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation. Please take all the proper measures to reduce harmful effects on aquifers.

12.1. Toxicity

TRIETANOLAMMINA 99%

LC50 - for Fish 11800 mg/l/96h

EC50 - for Crustacea 609,88 mg/l/48h

EC50 - for Algae / Aquatic Plants 512 mg/l/72h

BRODIFACOUM TECNICO

LC50 - for Fish 0,04 mg/l/96h

EC50 - for Crustacea 0,25 mg/l/48h

EC50 - for Algae / Aquatic Plants 0,04 mg/l/72h

12.2. Persistence and degradability

TRIETANOLAMMINA 99%

Rapidly degradable

BRODIFACOUM TECNICO

NOT rapidly degradable

12.3. Bioaccumulative potential

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BRODIFACOUM TECNICO

BCF 35134

12.4. Mobility in soil

BRODIFACOUM TECNICO

Partition coefficient: soil/water 6,12

12.5. Results of PBT and vPvB assessment

PBT substances contained:

BRODIFACOUM TECNICO

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special not dangerous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point

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Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

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Substances subject to authorisation (Annex XIV REACH)
None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

No chemical safety assessment has been processed for the mixture and the substances it contains.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Repr. 1A	Reproductive toxicity, category 1A
Acute Tox. 1	Acute toxicity, category 1
Acute Tox. 4	Acute toxicity, category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
H360D	May damage the unborn child.
H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level

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- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.