SAFETY DATA SHEET

Protect® wax block extruded

Date: 24/10/2017 **Version no. 5**

SECTION 1: Identification of the substance and of the company

1.1 Mixture identifier:
Protect® wax block extruded

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

To be used for rat and mouse control.

Uses advised against:

use in accordance with the label, other application is forbidden

1.3. Details of the supplier of the safety data sheet:

Babolna Bioenvironmental Centre Ltd.

Address: H-1107 Budapest, Szállás u. 6.
Tel.: (36-1) 43-20-400
Fax.: (36-1) 43-20-401
e-mail: info@babolna-bio.com

1.4. Emergency call (0-24): +36 70 637 5436

SECTION 2: Hazards identification

2.1. Classification of the mixture:

According to Regulation (EC) No 1272/2008:

Hazard classification and category: Reproduction 1b, STOT RE 1

Hazard symbol:

Signal word: Danger

Hazard statements: H360D May damage the unborn child

H372 Causes damage to the blood system through prolonged or repeated exposure

2.2. Label elements

Hazard symbol:

Signal word: Danger

Hazard statements: H360D May damage the unborn child

H372 Causes damage to the blood system through prolonged or repeated exposure

Precautionary statements:

P102 Keep out of reach of children.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood
P262 Do not get in eyes, on skin, or on clothing.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor
P308+313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents and container in accordance with the local requirements / the instruction of the label

2.3. Other hazards

Not known. According the Annex XIII. the mixture do not match the criteria of persistent and bioaccumulative and toxic (PBT) substances nor very persistent and very bioaccumulative (vPvB) substances.

SECTION 3: Composition/information on ingredients

3.1: substance: NA

3.2: mixture:

Ingredients	%	EC number	CAS number	Classification according to 1272/2008/EC regulation	
				Hazard class and category code	Hazard identification codes
Bromadiolone	0.005	249-205-9	28772-56-7	Repr. 1B Acute Tox. 1 oral Acute Tox. 1 dermal, Acute Tox 1 inhalation, STOT RE. 1 Aquatic Acut 1 M-factor 1 Aquatic Chronic1	H360D C ≥ 0,003 % H372 C ≥ 0,005 %, H300, H310, H330 H400 M=1 H410 M=1

The full text of hazard statements can be found in Section16.

SECTION 4: First aid measures

4.1. Description of first aid measures

4.1.1.

Inhalation: Not relevant

Skin: Remove any contaminated clothing items and wash them before wearing them again. Wash skin with large amount of water and soap. Consult a physician if symptoms persist.

Eye: Keep the eye open by using your fingers and wash your eye thoroughly with large amount of water for a couple of minutes. If you wear contact lenses, remove them immediately. Consult a physician if symptoms persist.

Ingestion: Due to bitter taste, swallowing is unlikely.
Seek medical advice immediately and show the container, label or safety data sheet of the product. Induce vomiting only if your physician ordered you to do so. Wash your mouth thoroughly. Do not eat or drink! Rest in a warm place and consult your doctor.
Do not give anything by mouth to an unconscious person.
Do not administer large quantities (1-2 litres) of liquid at once, milk or substances containing fat and alcohol.

4.1.2.

As the mixture contains anticoagulant active ingredient, blood coagulation disorders may occur when ingested. The bitter additive considerably reduces the probability of incidental consumption. Symptoms of intoxications: Sickness, pale skin, vomiting, haemophilia, bleeding mycoderm, melaena and haematuria, diarrhea, bleeding of nose and gums, internal haemorrhage. The effects appear progressively, within 12-18 hours from ingestion.

In case of possible intoxication or suspicion thereof get immediate medical attention!

ANTIDOTE: K_1-vitamin / Konakion inj./

Only in UK: The advice of the National Poisons Information Service (http://www.npis.org/) should be sought, particularly if active bleeding occurs

Removal and treatment of the shoes and clothes of the exposed person are not necessary immediately. After the first aid treatment wash the contaminated clothes.

Protective clothes and equipment is not necessary for the first-aider.

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

See 4.1.2.

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

Instructions to physicians:

Pharmacodynamic action: the active substance of the product is a competitive antagonist of Vitamin K and reduces the hepatic synthesis of Vitamin K-dependent factors. Following ingestion, the product may reduce coagulation and cause internal bleeding. There may be several days between the exposure and the appearance of symptoms. Give Vitamin K1 to the patient, if you notice the characteristic symptoms of bromadiolone poisoning (nasal bleeding, gum bleeding, haematuria (blood in urine), longer coagulation time, hematomas of bigger extent or of greater frequencies, suddenly appearing, unusual visceral pain). If bleeding is not noticeable, the prothrombin time (INR) needs to be measured within 48-72 hours following expositionIf the prothrombin time is greater than 4 hours, the patient needs to get Vitamin K1 intravenously.

Treatment: in case of ingestion of large quantities, induce vomiting, perform gastric lavage and monitor prothrombin activity; if it reduces, give Vitamin K. The efficacy of the treatment needs to be monitored by laboratory measurements.
Contraindications: anticoagulants.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: dry powder, CO_2 and foam

If necessary, fire-fighting can be done with water as well.

Unsuitable extinguishing media for safety: -

5.2. Special hazards arising from the substance or mixture

As during combustion of any substance, toxic fumes containing carbon monoxide may form.No special fire-fighting measures are necessary.

5.3. Advice for fire-fighters

Wear the usual protective equipment and use self-contained breathing apparatus in indoor areas.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. In case of non-emergency personnel

- Use of protective gloves is recommended.

- Evacuation of the area, experts' consultancy are not necessary.

6.1.2. In case of emergency personnel:

Emergency attendance is not necessary.

6.2. Environmental precautions

Avoid contamination of natural waters.

6.3. Methods and material for containment and cleaning up

6.3.1. Demarcation of the area is not necessary.

6.3.2 Shovel into lockup and labelled container.

6.4.: Reference to other Sections: disposal instructions see Section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Keep out of reach of the children and domestic animals.

7.1.2 It is prohibited to eat, drink or smoke during work.
Wash you hands thoroughly after work.

7.2 Conditions for safe storage, including any incompatibilities

- in a cool and dry place, away from sunlight and moisture
- keep away from children and animals
- keep away from food, drink and animal feeding stuffs

7.3 Specific end use(s): the mixture should be used as rodenticide product
See on the label text for instruction.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Occupational Exposure Limit is not established.

8.2. Personal precautions, personal protective equipment

Eye / face protection: not necessary

Hand protection: For professional users, wearing of protective gloves in obligatory.
No special regulation as for the material of the gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance: Red coloured wax block
b) Odour: slightly fruit, sweetish
c) Odour threshold: NA
d) pH: 6.53 (in 1 g mixture /100 ml water) at 20^0C
e) Melting point/freezing point: NA
f) Initial boiling point and boiling range: NA
g) Flash point: NA

h) Evaporation rate: NA
i) Flammability (solid, gas); Not highly flammable
j) Upper/lower flammability or explosive limits: NA
k) Vapour pressure: NA
l) Vapour density: NA
m) Relative density: 1.15
n) Solubility(ies): NA
o) Partition coefficient: n-octanol/water; NA
p) Auto-ignition temperature: NA
q) Decomposition temperature: NA
r) Viscosity: NA
s) Explosive properties: Not expected
t) Oxidising properties: Not expected

9.2, Other information: NA

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

The mixture has no such property which would represent hazards resulting from reactivity. Hazardous incompatibility does not typical between the mixture and other material during transport, storage or usage.

10.2. Chemical stability

It is stable under normal temperature and pressure during storage and handling.

10.3. Possibility of hazardous reactions

The mixture will not enter into hazardous reaction even under excessive pressure or heat.

10.4. Conditions to avoid

High temperature, light and moisture may decline the quality of the mixture but will not induce dangerous situation.

10.5. Incompatible materials

Not known

10.6. Hazardous decomposition mixtures

Not known

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects:

(a) acute toxicity(oral and dermal):	>2000 mg/kg
(b) skin irritation:	Non irritating
(c) serious eye damage/irritation:	Non irritating
(d) skin sensitisation:	Non sensitizer
(e) germ cell mutagenicity:	NA
(f) carcinogenicity:	NA
(g) reproductive toxicity	NA

Active substance- bromadiolone:

Rat LD_{50} oral: 1.31 mg/bwkg

Rat LD_{50} dermal: 23.31 mg/bwkg

Rat LC50 inhalation 0.43 µg/L (males and females combined)

Skin irritation: not irritating

Eye irritation: not irritating

Skin sensitization: not skin sensitizer

Repeated dose toxicity:

NOAEL 2.5 µg/ kg bw/day (rat) NOAEL 0.5 µg/kg bw/day (rabbit)

Reproductive toxicity:

Maternal toxicity (rabbit): LOAEL 2 µg/kg bw/day/ NOAEL < 2 µg/kg bw/day
Developmental toxicity (rabbit): LOAEL 2 µg/kg bw/day/NOAEL 4 µg/kg bw/day

SECTION 12: ECOLOGICAL INFORMATION

No data are available for the mixture.

12. Ecological information : NA

12.1 Toxicity : NA

12.2 Persistence and degradability : NA

12.3 Bioaccumulative potential : NA

12.4 Mobility in soil : NA

12.5 Results of PBT and vPvB assessment : NA

12.6 Other adverse effects: NA

Toxicity of bromadiolone active ingredient:

Fish rainbow trout	LC_{50} (96 h)	2.86 mg/l
Daphnia	EC_{50} (48 h)	5.8 mg/l
Algae growth inhibition		
Pseudokirchneriella subcapitata	E_rC_{50} (72h)	1.14 mg/L

Bioaccumulative potential

Octanol/water partition coefficient (log K_{ow}) = 3.8

BCF (calculated from a log K_{ow} of 3.8) = 339

SECTION 13: DISPOSAL CONSIDERATIONS

13.1.Waste treatment methods

The mixture and its container should be disposed according to the national requirements. In large quantity it should be treated and disposed of as hazardous waste.

In UK only: In the UK for information on disposal contact the Environment Agency (http://www.environment-agency.gov.uk) or SEPA (http://www.sepa.org.uk).
Suggested disposal method: incineration

SECTION 14: TRANSPORT INFORMATION

14. Transport information: Non dangerous goods!

14.1 UN number:-

14.2 UN proper shipping name:-

14.3 Transport hazard class(es):-

14.4 Packing group:-

14.5 Environmental hazards:-

14.6 Special precautions for user:-

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:-

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the mixture

-1907/2006/EC Regulation of the European Parliament and of the Council concerning the registration, evaluation, authorization and restriction of chemicals (REACH)

-1272/2008/EC : Regulation 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

-528/2012/EC :Regulation concerning the making available on the market and use of biocidal products

SECTION 16: OTHER INFORMATION

Full text of hazard identification (H) phrases listed in Section 3

Hazard identification (H) phrases
300 Fatal if swallowed
310 Fatal in contact with skin
330 Fatal if inhaled
H360d May damage the unborn child
372 Causes damage to organs through prolonged or repeated exposure
400 Very toxic to aquatic life
410 Very toxic to aquatic life with long lasting effects

Reason of the new version:

23/08/2013: Section 2 and Section 4 have been updated in line with the conditions of the First Authorisation of the product UK-2013-0772

17/03/2014: Section 2 has been updated in accordance with Regulation (EC) No 1272/2008 (CLP) and Section 7 has been completed with the following sentence:

“keep away from food, drink and animal feeding stuffs”

12/11/2015: update according to the COMMISSION REGULATION (EU) 2015/830

of 28 May 2015 amending Regulation (EC) No 1907/2006

24/10/2017: update of bromadiolone and mixture classification in accordance with COMMISSION REGULATION (EU) 2016/1179 of 19 July 2016 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

END OF SAFETY DATA SHEET